



National Grid Smart Energy Action Plan

nationalgrid



 Centre for
Sustainable
Energy



Your smart energy action plan

You've had some energy improvements made to your home by Bristol City Council. This is great news – these improvements can help you save money on your energy bills and keep your home more comfortable.

This pack explains how to use what's been installed and gives you some ideas for saving even more money.

What's been installed in your home

- Heat pump



Your heat pump

Heat pumps run on electricity and they absorb warmth from the outdoor air, ground or water (even when the air, ground or water feel cold). They use this warmth to heat your home and hot water.

Having a heat pump could significantly reduce your carbon emissions and might reduce your running costs (depending on your existing heating system and property).

Why heat pumps are efficient

Heat pumps are very efficient. They can generate three to five units of heat for every one unit of electricity they use.

How efficient your system is will depend on:

- The heat pump make and model.
- How the system is designed.
- The temperature of water running through your radiators.
- How you set your heating temperature and hot water timings.



Heat pump controls

Heat pumps are cheapest and most efficient to run when they are on all the time.

How to set your heat pump controls

Set your heat pump to provide:

- A steady daytime temperature (between 18°C and 21°C is recommended).
- A steady night-time temperature that's one to two degrees lower – if you prefer it cooler at night.



Why you shouldn't turn your heat pump off

It is likely to cost you **more** to run your heat pump if you turn it off during the day and then turn it on again in the evening (or the other way around). This is because the heat pump has to work harder to increase temperatures quickly, rather than slowly heating your home all day.

Heat pumps work efficiently by warming the fabric of the property slowly and then maintaining your set temperature, with lower flow temperature water in the radiators or underfloor heating than would be required with a gas boiler.



Don't turn down radiators in unused rooms

Keep all your radiator valves (TRVs) open or on full.

It might seem like turning off radiators in rooms you don't use would save money. But with heat pumps, it actually costs you more.

This is because when you close off rooms, heat still escapes from the rooms you're heating into those closed-off rooms (because the walls between rooms aren't insulated). This means:

- The closed-off rooms get cold.
- Heat from your warm rooms leaks into the cold rooms.
- Your heat pump has to work harder to keep your heated rooms warm.
- It has fewer radiators to work with (because some are turned off).
- This uses more energy and costs more money.

Heat pumps work best by slowly heating your whole property and then keeping it at a steady temperature. This is the most efficient and cheapest way to run them.

What if some rooms get too hot?

If some rooms are too hot while others are comfortable, you can slightly turn down the radiator valves in the hot rooms. But don't turn them off completely – just adjust them a little.



Setting your hot water heating times

When you heat your hot water can affect how efficiently your heat pump runs and how much you pay for energy:

- **If you don't have solar panels or a time-of-use tariff:** Set water heating times to early afternoon. This is when outdoor temperatures are highest, making it the most efficient time for your heat pump to work.
- **If you have solar panels:** Set water heating times to the middle of the day, when your panels are generating the most electricity.
- **If you have a time-of-use tariff:** Set water heating times to periods when electricity is cheapest.

Hot water temperature

Your hot water doesn't generally need to be above 50°C. You can adjust this in your heat pump settings if needed.

If you're going away

For a few days: Leave your heat pump running as normal.

For a week or more: Turn the thermostat down to your overnight temperature (avoid going under 16°C to prevent damp and mould). Many heat pumps have a 'holiday mode' that does this for you.



Heat pump troubleshooting

If your heat pump is costing a lot to run or you can't heat parts of your home enough, there might be a problem with how the system was designed or set up.

What to do if your heat pump isn't working

1. Make sure you follow the above guidance on controls.
2. Contact your housing provider and ask them to investigate. They will likely bring in the original installer as the system should be under warranty.
3. If they aren't able to identify the issue, consider asking them to contact a Heat Geek accredited installer. They have special training to maximise heat pump efficiency, reduce running costs, and make sure your home is warm.



Getting set up



Your smart meter and display

You have a smart meter at your property. This is great because it means you can monitor how much energy you're using and see how much it's costing you.

Smart meters measure how much gas and electricity you're using and send those readings automatically to your energy supplier. They come with an in-home display screen to help you monitor and reduce your energy use.

What's an in-home display?

You should have received an 'in-home display' when your meter was installed. This is a type of energy monitor, a small device that tells you how much energy you're using in near real-time. It can also show you how much energy you've used in previous days, weeks or months. This can help you budget and avoid surprisingly high bills.



If yours is missing or you'd like a replacement, here's what to do:

Call your energy supplier

Call your energy supplier and see if they can send another for free or for low cost.

Try the free ivie app

If you have a smart phone or tablet, you can use the free ivie app instead of a physical display. Just search for 'ivie - smart meter app' in your app store to download. You can link your phone to your smart meter data, and view your energy use on your phone for free. You won't see it in real time - you may only be able to see the previous day's energy use - but it will help you keep an eye on the energy you're using.

Buy an ivie Bud display (costs £50)

If neither option above works for you, you could buy a new display. You can check if your smart meter is compatible and buy the display via the ivie Bud webpage.

If you have a disability

If you have a disability, you may benefit from asking your supplier for an accessible in-home display. These have larger typefaces, larger buttons, text-to-speech functionality and more.



Understanding peak and off-peak times

Some of the advice in this pack talks about ‘peak’ and ‘off-peak’ times. Here’s what that means.

Most electricity tariffs have the same cost 24 hours a day, but some are split into ‘peak’ and ‘off-peak’ times during which electricity costs different amounts.

Peak times are when lots of people are using electricity at the same time – usually late afternoons and early evenings – and electricity costs more during these times on some tariffs.

Off-peak times are quieter times when fewer people are using electricity – like overnight or during the middle of the day. Electricity costs less during these times on some tariffs.

If you’re on a tariff with different peak and off-peak rates, you can reduce your energy bills by setting your storage heaters to charge during off-peak times, and using high-power appliances (like washing machines) during off-peak times.

Test if shifting your electricity use works for you

You could try moving a high electricity use activity (like running the washing machine) to a different time of day – either earlier in the day or later in the evening (after 8pm).

If you think you could move a lot of your electricity use out of peak hours, you could sign up to a time-of-use tariff or demand shifting scheme. We explain these later in this pack.



Monitoring

The best way to know if changes to your energy use are working is to monitor them.

Try different approaches for a week and see how your usage compares using your smart meter in-home display. For example:

- Changing your heating temperature.
- Using a timer plug.
- Using appliances during off-peak times.

Remember that weather and other factors can affect your energy use, so compare similar days when possible. For example, on colder days you would use more energy to heat your home to the same temperature than on warmer days. See our advice leaflet on energy monitors for more information.



Learn how much electricity different appliances use

Everything around your home uses energy differently. It's a good idea to know which devices or appliances use the most energy. This will help if you want to shift when you use electricity or just use less overall.

Ways to find out

- **Use your in-home display or energy monitor** to track how much individual appliances or devices use. Turn them on and off and watch the display to see the difference.
- **Use an online calculator.** The Sust-it website has an electricity costs calculator, which lets you find out the running costs of specific appliances or devices.
- **Read our** 'How much electricity am I using?' advice sheet.



Ways to save money



Time-of-use heat pump tariffs

There are electricity tariffs designed for people with heat pumps. These could save you money, but you need to be careful.

Some tariffs have peak periods where electricity is more expensive. If you use a lot of energy during these peak windows, your bills might increase rather than decrease. However, if you can move some of your usual electricity use to off-peak periods, your bills should be lower.



Don't change your heat pump programme

Don't change your heat pump programme to try to avoid peak periods. Heat pumps work most efficiently when they run steadily throughout the day. Keep your heat pump settings as they are, and focus on shifting other electricity use instead - like running your washing machine, tumble dryer or dishwasher during off-peak times. At most, experiment by lowering the temperature 1 or 2 degrees during peak periods.



A safer option: EDF's heat pump tracker tariff

EDF's heat pump tracker tariff gives you two off-peak periods of cheaper electricity:

1. 4am-7am.
2. 1pm-4pm.

This tariff doesn't have a period of higher rate electricity. This means you should save money compared to a standard flat rate tariff, even without changing anything. You could save even more by:

- Setting your water heating times to one of these off-peak periods.
- Using other electrical appliances during these times.

Find out more by searching online for EDF's heat pump tracker tariff.

Some other heat pump time-of-use tariffs

- Cosy Octopus
- EON Next Pumped
- Scottish Power Heat Pump Saver
- Good Energy Heat Pump Tariff
- British Gas Heat Pump Tariff



What you need to know

Check each tariff's terms and conditions to see if they're available for your type of heat pump. Some tariffs offer better rates if you have a specific brand of heat pump or installation.

Help managing your heat pump with these tariffs

Some special heat pump thermostats can help manage your heat pump's usage with these tariffs, such as Homely and Passiv.





Join a demand shifting scheme

These schemes reward you for reducing your electricity use during periods when the electricity grid is under the most stress or encourage you to use more electricity when there is less demand.

Peak times are generally in the evening when lots of people want to use electricity.

Depending on your supplier's scheme, you might:

- Get free electricity at other times (like weekends).
- Receive rewards like shopping vouchers.
- Get money off your bills.

The idea is that by offering you incentives to use electricity at quieter times, you'll naturally use less during peak periods.



Check with your supplier

Ask your supplier if they offer a demand shifting scheme. Some examples include:

- British Gas' PeakSave
- EDF Sunday Saver Scheme
- OVO's Power Move
- Power Saver by Scottish Power
- Octopus

Apps that offer rewards

Some apps offer shopping vouchers and other rewards for reducing your electricity consumption at specific times. Equiwatt and Loop are two examples.



Timer plugs

Timer plugs control when your appliances are turned on and off.

You set the times you want using buttons on the plug itself or a remote control (depending on the model). They can be used with any appliance that plugs into a wall socket.

When are timer plugs useful?

Timer plugs can be useful for:

- Hard-to-reach sockets (like behind a washing machine).
- Using appliances during off-peak times when electricity is cheaper.
- Using appliances during the day when solar panels are producing free electricity.

These devices are very simple to use – you don't need to be a tech expert. They're easily found online or in hardware shops.



Smart plugs

Smart plugs are very similar to timer plugs and they can be used to set times when your appliances turn on and off.

The key difference is that smart plugs are controlled through your smart phone, tablet, or computer, not buttons on the plug. When combined with a time-of-use electricity tariff, demand shifting scheme or solar PV electricity, you could save money by setting your appliances to run during periods of cheaper electricity.

Extra benefits of smart plugs

Smart plugs can be useful if you have disabilities relating to sight or mobility. Some connect to home assistants (such as Alexa or Siri) so you can control appliances using voice activation. Some models monitor how much energy the appliances plugged into them are using, helping you to budget. For more information, see our advice sheet on smart plugs.



If you need more help

Some of the tools and tariffs mentioned in this pack come with apps that you control with a smartphone, tablet or computer.

If you don't have a smartphone

If you don't have any of these devices, it may be useful to get one so you can use some of the smart energy offers.

New but cheap smartphones are available for prices as low as £40. Or you could explore options for a grant to pay for a smartphone through Glasspool's Flexible Frontline Fund. You can't apply for this directly – you have to speak with your local Citizens Advice, who will apply on your behalf.

If you need help with digital skills

To use some smart energy offers, you'll need to feel confident downloading apps, setting up an online account, and making changes to apps and accounts.

If you need help, you could:

- Ask a friend or family member to help.
- Check with your local library for support available in your area – they often have computers and learning resources.
- Find a Digital Inclusion Network centre near you.
- If you're older, Age UK offers digital skills training in some areas (or call their advice line: 0800 678 1602).



We'd love to hear your feedback

As this is a new service, we'd love to hear from you about how useful this leaflet has been through a short survey.

The survey will take you about five minutes to complete and there is a chance to enter a £50 prize draw as a thank you at the end. There is also an option to sign up for a follow-up interview and receive a further £20 voucher.

Take our survey

Visit www.smartsurvey.co.uk/s/EOS8HX or scan the QR code to access the survey.



Thank you for your feedback!







Contact us for more advice

- Call **0800 082 2234**
- Email **home.energy@cse.org.uk**
- Visit **www.cse.org.uk/advice**

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