centre for sustainable energy

Smart meters

For smarter living ...

Smart meters are modern gas and electricity meters designed to give you more information about your energy use and and make topping up more convenient.

Smart meters are being installed by energy suppliers across the UK. They come in two parts: firstly, there's the meter itself (below, left) which replaces your existing meter and records how much gas or electricity you use (and when you use it) and sends this information to your energy supplier. The second part is the 'in-home display' (below, right) that gives you near-real-time information about your energy use.

The financial benefits

Smart meters offer several financial benefits, both for people who have credit meters (which means you pay for energy after you have used it) or prepayment meters (you pay for your energy in advance).

When smart meters are fitted they will replace your existing electricity meter

This photo: an in-home display unit. Below left: the smart meter itself

Credit meters: Smart meters send readings to your energy supplier automatically, so they no longer need to visit your home to take meter readings. Nor will they ask you to take meter readings yourself, or send you bills and statements based on estimated readings. This should mean that you are always charged the right amount for the gas or electricity you've used.

Prepayment meters: Smart prepayment meters give you the option to top-up remotely by phone, text, app or online, so you won't need to visit a local paypoint as before (although topping up this way is still possible). This means that you won't run out of gas or electricity if you have no credit left and the local paypoint is closed, or if you lose your prepayment key or card. Some suppliers might also give you the option of automatically topping-up if your credit drops below a certain amount or include an emergency credit button on your in-home display.

Smart meters can operate in both a prepay and credit mode. This makes it much easier to swap from pay-as-you-go to monthly or quarterly bills, or back. Your meter won't need to be changed to do this, although your supplier may still need to visit to make the adjustment.

Finally, smart meters help the energy system to better predict how much electricity the country needs, when and where it needs it. This helps conserve energy, makes usage more efficient across the UK network, and helps us make better use of the renewable energy we generate.

centre for sustainable energy

Dynamic time of use tariffs

If you have a smart meter, you will also be able to take advantage of a new kind of electricity tariff – the dynamic time of use tariff. With these tariffs, electricity is cheaper when less people are using electricity or when there is a large amount of renewable generation. Therefore, using these tariffs can both help you to save money and help the grid to reduce carbon dioxide emissions!

Smart meters can send meter readings to suppliers every 30 minutes and these tariffs can have different prices for each half hour of the day. You can take advantage of these tariffs by using smart appliances which can be set to use electricity when it is at its cheapest. One typical example of this is a smart washing machine that turns itself on during cheap hours during the night, or during high solar generation during the day, rather than during times of peak electricity demand between 4-7pm.

The in-home display

All smart meters should come with an in-home display. This is a separate small device with a screen that you can put wherever you want in your home (preferably where you can see it).

The in-home display receives data from the meter and so lets you see your energy usage and costs in real-time. It shows you how much energy you are using (in kilowatts) or how much you are spending (in pounds and pence) at any moment, or you can view your usage or spending for the whole day, week, month or year.

This allows you to keep an eye on keep on your gas or electricity usage and costs. You can use it to help you work out how much energy different appliances and devices are using and to identify situations where you're using a lot of energy, enabling you to make changes and reduce your bills.

For prepayment meters, in-home displays should show how much credit you have left, if there is any debt and allows you to set goals and budgets.

Common smart meter myths

There are many misconceptions around about smart meters. We have addressed some of the common ones below ...

"Not all homes can have smart meters"

Installation is possible in 99% of homes since connectivity has been improved for the newest generation of smart meters, and no longer relies on the mobile network.

"You can't switch supplier"

The latest generation of smart meters allow uninterrupted switching between suppliers with no loss of functionality. This is because they use the new shared Data Communications Company (DCC) network.

"Smart meters can spy on you"

Smart meters only record overall energy usage per half hour, and share these readings with your supplier through a secure network. They do not store personal information such as your name, address and bank details. If you have concerns about this, visit www.smartenergygb.org/en/faqs. You can also ask to see your energy supplier's privacy policy which explains how it handles data it collects.

"Economy 7 and 10 are not supported"

SMETS2 and some SMETS1 smart meters are capable of being used as Economy 7 meters. Most suppliers are offering now offering this or intend to soon.

"Renters can't get a smart meter"

If you pay the energy bills and the meter belongs to your supplier, then you have the right to request a smart meter.

"Smart meters are dangerous"

Public Health England say that smart meters "do not pose a health risk" and that "exposure to the radio waves produced by smart meters is likely to be much lower than that from other everyday devices such as mobile phones and wi-fi".

Different energy suppliers may use different in-home displays, but they all provide similar information. Some suppliers also allow you to monitor usage through an account on their website or a smart phone app.

Accessibility

Accessible in-home displays are being developed for partially-sighted and blind customers. Features include tactile buttons, a high-contrast screen, and speech output options. If your energy supplier is offering accessible in-home displays, they should be able to provide one free of charge.

Some things to be aware of

These are two generations of smart meters: SMETS1 (1st generation) and the newer SMETS2 (2nd generation). Most suppliers are only installing the newer models, though some were still installing SMETS1 meters as late as 2021. An issue with SMETS1 is that if you switched supplier, the meter stopped sending automatic readings. This problem is due to be resolved by an automatic upgrade of all SMETS1 meters which will be done remotely. If you are not sure whether your meter has been upgraded yet, speak to your energy supplier.. If you already have a SMETS1 meter that your supplier says cannot be updated remotely, they should offer to install a SMETS2 meter.

Not all energy suppliers are currently offering smart prepayment meters, and you may need to call your supplier or check online to see if they are. However, all energy suppliers will be offering them soon.

If you really don't want a smart meter, you don't have to accept one. However, some suppliers are now offering energy tariffs that include a compulsory smart meter installation, so by choosing to not accept one you may be limiting your choice of tariffs.

Having a smart meter installed

Smart meter installation is a straightforward process and should take less than an hour, depending on what kind of building you live in and where your meter is situated. Note that the gas or electricity will have to be switched off temporarily during installation.

Your energy supplier will arrange with you a date and approximate time for an engineer to visit. They will confirm with you what to expect, how long it will take, whether there's anything you need to do (such as clear access to the meter) and what support is available for customers with hearing or vision impairment.

You can also request that the engineer calls you 30 minutes before they expect to arrive. For added security, you can ask your energy supplier for a password which the engineer must repeat when they arrive at your home. If you have any concerns, check the engineer's ID card and, if you're still in doubt, ask them to wait outside while you call your energy supplier.

The engineer will advise you on how the smart meter and in-home display work. They will also carry out safety checks on gas appliances if a gas smart meter is being installed.

Requesting a smart meter

There is no charge for having a smart meter installed. Contact your energy supplier and ask for a smart meter, or type your supplier name into this web tool: **www.smartenergygb.org/en/get-a-smart-meter**

Smart Energy GB (www.smartenergygb.org) is the national campaign for the smart meter rollout. It's independent of government, not an energy supplier and it doesn't fit smart meters. It's role is to make sure people understand smart meters and how to use them to get their gas and electricity under control.

centre for sustainable energy

A few ways to cut your electricity and gas use, and save money ...

Give your clothes a day in the sun; and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.

When you're cooking, keep the oven door shut as much as possible; every time you open it, nearly a quarter of the heat escapes.

Food in the oven cooks faster when the air inside flows freely, so don't put foil on the racks.

Don't leave your phone on charge all night. It only needs three hours – and try not to leave the TV and other kit on stand-by.

Catch 'em young. Encourage your children to switch off electric toys and lights that they're not using. They'll soon get the hang of saving energy.

Cup of tea or coffee? Only fill the kettle with as much water as you'll actually use (but make sure you cover the metal element at the base).

Dodge the draught! Fit draught-excluders to your front door, letter box and key hole, and draw your curtains at dusk to keep the heat in.

Buying a new appliance? Check the energy label and buy A-rated goods for the most efficient.

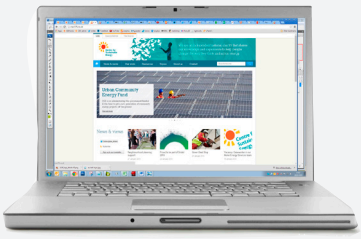
Be a friend to your freezer. Defrost it regularly to help it run more efficiently.

Turn your heating down by just 1 degree. You'll hardly notice the change in temperature, but it'll make a big difference to your heating bill.

Wait until you have a full load before running the dishwasher or washing machine. One full load uses less energy (and water) than two half-loads.

Sleep tight. Make sure all the lights are turned off when you go to bed, or use a low-wattage night light if you do need to leave one on.

New computer? Laptops typically use around 85% less energy than a new desktop PC.



centre for sustainable energy

St James Court
St James Parade
Bristol BS1 3LH

0117 934 1400
cse.org.uk
info@cse.org.uk

We're a charity (298740) supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes.

Our Home Energy Team offers free advice on domestic energy use to people in Bristol, Somerset, Wiltshire, South Gloucestershire, Dorset, Berkshire, Hampshire and Oxfordshire.

Contact us:

PHONE 0800 082 2234
EMAIL home.energy@cse.org.uk
WEB www.cse.org.uk
TWITTER @HelloCSE