

# Stay in control with an energy monitor display

## Your energy use in real time

An energy monitor will accurately measure and display a household's electricity (and sometimes gas) usage in real time. This can help you understand how to cut your bills.

An energy monitor display will show the impact of turning a particular light or appliance on or off. It can tell you which things in your house use the most energy. And this can help you decide which energy-hungry appliances to use sparingly in order to cut your fuel costs.

If you have a smart meter you should have been offered one of these energy monitors (also called an 'in-home display') by your energy supplier. The monitor will show electricity usage, and gas if you have it. If you can't have or don't want a smart meter, you can still buy a standalone energy monitor, but it will only monitor electricity.

Monitors should be plugged in somewhere visible, such as the kitchen or sitting room, so that you can keep an eye on them.

### Using an energy monitor

You can set your energy monitor to display your energy consumption in pounds (£) or kilowatt hours (kWh), depending on what works for you. To accurately know

### Fitting a stand-alone energy monitor

An energy monitor costs around £30–40, and is easy to install yourself. They come in two parts: 1) a sensor which clips onto the power cable of your electricity meter and measures the amount of electricity passing through it and 2) a visual display unit, which this factsheet covers.

If your home has solar PV be aware that not all monitor clamps can tell the difference between in-coming and outgoing energy flow. Make sure your energy monitor has LED sensors, as these will operate correctly.



**In yer face! Energy monitors appeal to children who can become quite motivated to save electricity**

your usage in pounds you need to make sure the energy monitor is set to the correct price for your tariff. Your bill, online account or prepayment meter display will list your daily standing charge and price per kWh unit.

Energy monitor features vary, but common options are:

- Viewing how much electricity and gas you are using at this moment, as well as how much you have used today or in the last week or month.
- Setting a daily electricity or gas usage target, giving you an energy 'budget' to try and stick to.
- If you have a smart pay-as-you-go meter, the display may show how much credit you have left.
- You may also be able to access your energy monitor display on your computer or smart phone, including viewing analysis charts.

### Changing your habits

You may want to just use the monitor to predict your energy bills, but their main benefit is the greater control it gives you from the information it provides, as you can assess your energy use and work out ways to save money.

First off, see how much electricity your home uses 'at rest', i.e. the amount used during the night or if everyone was out. This is often referred to as the 'base load'. It can be a fun exercise to get children involved in. Turn off everything that doesn't need to be on, e.g. all lights, and appliances like TVs, washing machines etc. If an appliance is on stand-by, switch it off at the wall socket.

See all our energy advice leaflets at [www.cse.org.uk/advice-leaflets](http://www.cse.org.uk/advice-leaflets)

Things you can't turn off are your fridge freezer, electric clocks, medical equipment, certain home-entertainment set-top boxes and so on. The total usage of these will be displayed on the monitor, and is your 'base load'.

Now try turning things on one by one, and you'll get a good idea of which gadgets or appliances use the most electricity. You will notice that some use a lot of electricity but are on for a short amount of time (e.g. a kettle), while others use a lot of electricity because of how long they are on for (e.g. tumble driers or halogen lights). You can use this information to get an accurate idea of the greatest savings you can make, or where energy is being wasted.

Are lots of appliances being left on standby, or can you use energy-hungry devices less frequently or for shorter periods? If everyone in the household gets involved you can work together to bring your electricity use down and save you money, and it is beneficial to do this long term, and not just when you first get the energy monitor.

## Monitoring gas

If you have a smart gas meter you can also use your energy monitor to save gas and cut your bills, but you won't have a 'base load' in the same way you do with electricity. Instead you can assess how much it is costing you for heating, hot water or cooking.

Firstly, find your normal weekly gas usage, bearing in mind that you'll use much more in the winter than in summer. You can then find out how much you save by e.g. turning down your room thermostat by one degree or adjusting the amount of time that your heating is on.

You could also use the monitor to calculate if your heating costs more when the weather turns particularly cold, or how much it costs you to have a shower or cook a meal by taking readings before and after.



Standalone energy monitors do a similar job to the in-home displays that come with the new smart meters.



## Cost of a cuppa ...

If you want to know how much everyday appliances are costing you, you can do this easy test:

- 1) Select the screen of your energy monitor which shows your total usage for today in terms of pounds and pence. Make a note of the figure.
- 2) Fill the kettle with enough water for one cup of tea, and boil.
- 3) Check your monitor again, and see how much the figure for what you've spent on electricity that day has gone up. This is what making a cup of tea has cost you.
- 4) Now enjoy your cuppa. What other activities can you measure using your energy monitor? Your Xbox? Dish washer?



Our 'What uses Watt?' factsheet covers the average cost of common appliances



We have lots more fact sheets like this on electricity use in the home: Smart meters, Lighting; Understanding your electricity bill; Switching energy supplier; Economy 7; Night storage heaters; Room heaters; and more. See them all at [www.cse.org.uk/advice-leaflets](http://www.cse.org.uk/advice-leaflets)



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The Centre for Sustainable Energy is a national charity that helps people change the way they think and act on energy.

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



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