

efergy

the energy saving meter



How to monitor your energy use

Why monitor energy?

You can't manage what you don't measure. By monitoring your energy use through accurate metering you can target inefficiency and achieve significant energy savings. Good energy monitoring allows you to:

- Understand where and how energy is being used
- Identify areas where you can reduce energy consumption and save money
- Confirm whether energy-saving measures are working

This leaflet will show you how the efergy meter can be used to in the home or office to monitor energy use, and outline some simple techniques to help you to use that data to spot money saving opportunities.

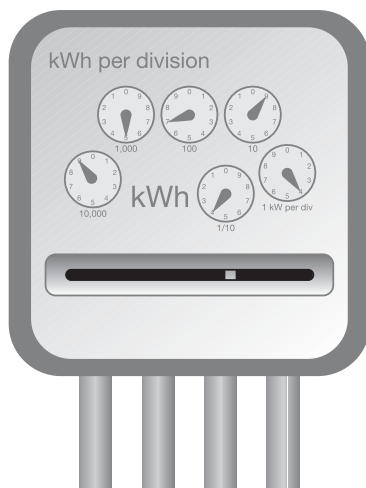
Smart metering

1. Gathering Data

Most of us have older analogue meters in the home. Learning simply how to read the meter and understanding what the data means is the first step in smart metering.

Reading an analogue meter

Start with the smallest unit first and read the dials in order. In this example that is left to right. For electricity, record the units in kWh. When the hand is between two numbers, write down the number it has just passed.



The reading on this example meter is 95794 kWh.
The 1/10 reading is generally ignored

Reading the efergy meter

A smarter way to measure your energy consumption is through use of the efergy meter. Daily consumption data is sent to a wireless display, which can be displayed anywhere in the home. This data is saved and can be viewed anytime. Simply installing one of the smart meters and all the measurements can be made for you.



Did you know?

Using a smart meter to help monitor your energy typically identifies energy savings of more 10-15%.

2. Understand your energy use

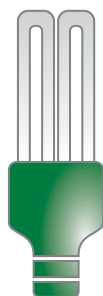
Knowing how much electricity you are using, and having the information in front of you can make a real difference. Instant power feedback lets you adjust your behaviour to suit.

It's worth looking at how many watts an appliance uses, but more importantly, how you can reduce your usage of high-wattage appliances. Keep in mind that the annual running costs are only a guide.

High wattage appliances like a 7500Watt electric shower can become very costly if you take long showers. Cutting down the time you spend in the shower is always a good idea. On the other hand, watching a 70W television every night would not account for much on your overall bill as it has a relatively low wattage.



Remember that large savings can be made if you cut down how often you use high wattage appliances and the length of time you use them. These items include heaters, air conditioners and electric hot water systems. Where possible, try to use energy efficient light bulbs and trade-in your spare fridge if you have one. When replacing old appliances or buying new appliances, always purchase the highest star rating.



3. Using the efergy meter

By taking some simple measures and changing your daily routine, you will soon see the savings reflected in your bill. Knowing how much electricity appliances use will help you make the biggest savings. Electricity consumption is measured in kilowatt (kWh). So, 1 kWh means that you use 1000 Watts of electricity for 1 hour.

By using the efergy meter you can quickly make an estimate for how much power any device is using. For example, when you switch the kettle on, within a few seconds you will see the instant power consumption on the meter jump. The increase will be how much energy the kettle is using. Switching modes to cost of kgCO₂, you'll get a rough idea of the costs.

How Costs are Calculated

The formula for estimating an hourly running cost is shown below:

Watts / 1000 x electricity tariff (per kWh) = hourly cost (in £s)

For example, a 2000 Watt kettle is;

2000 Watts / 1000 x £0.11 = £0.22 per hour.

Prices are based on a tariff of £0.11 per kWh, which is an approximate average taken of electrical suppliers in the UK

How CO₂ is Calculated

For each kWh of electricity used in the home, it's emitted 0.43kg of CO₂ (this is the factor for electricity from the grid or also called carbon ration for homes). Each kWh of power you use has an equivalent of CO₂ emissions factor. By changing mode on the efergy meter to monitor carbon emissions you can calculate your estimated emissions.

Example: The average household emits approximately 43 kgCO₂ each day – use the memory on the efergy meter to look at how your home compares to average.

4. Using the memory

You can use the efergy meter to flick through the previous days, or weeks power use. This helps as you can compare daily habits, highlight which days you use more power, and help identify days of high power use.

Changing Habits

Look at your energy consumption and think about how this fits in with the pattern of production/occupancy of your building.

Investigate any suspicious areas, for example, has the energy use continued at a high rate during periods of low production? Or, is energy still being used when you go out or to bed?

Also, consider other factors which might affect your energy consumption: Did you change your usage patterns, or did you need extra heating due to cold weather?

Investigate potential waste areas and make changes.

One of the easiest ways to improve energy use is to compare the energy profile of different days with each other. Identify whether energy consumption is higher on certain days, or at particular times from day to day. For example, why is Wednesday's profile so high? Perhaps there is a straightforward explanation, such as a dinner party, or having guest around. Or perhaps there were inefficiencies that should be investigated.

Efergy helps citizens, businesses and institutions cut their energy costs to combat climate change through the provision of smart products and professional advice.

Efergy is a team of engineers, environmental consultants and business managers, who formed a partnership to develop a special range of products designed to maximize energy efficiency and increase awareness to energy saving ideas. Whilst we have taken reasonable steps to ensure that the information contained within this leaflet is correct we give no warranty to the results that may be achieved from following its instructions. If you have any doubt about the instructions given in this leaflet, seek professional advice.