

Home Energy Monitors and Smart Meters – Monitoring Energy Usage

Home Energy Monitors

A home energy monitor lets the householder see how much electricity they are using at a given time. They work by clipping a device to one of the cables coming from the electricity meter. This device wirelessly transmits a signal to a display device plugged in anywhere in the home.

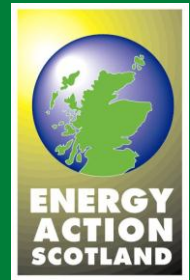
The amount of electricity being consumed will likely be given in kilowatt hours (kWh). If the monitor is programmed with the current electricity tariff being paid by the householder it can also provide a good indication of how much their electricity is costing at any given moment.

The monitors may also be called real-time displays and the information displayed is continuously updated so that if an appliance is turned on or off the display will update, usually within a few seconds.

Many energy suppliers offer these monitors to their customers on certain tariffs, however there are also some retailers who sell a wide range of monitors.

Some trials have shown that monitoring energy usage has helped to reduce electricity bills. However, there is a danger that if a concerned householder sees a high consumption level, they will turn off appliances/heating. This may lead to householders not heating their homes sufficiently, putting their health at risk. Effective education about controlling energy consumption is necessary to the effectiveness of home energy monitors.

These are only three examples – they come in all shapes, sizes and brands.



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Smart Meters

Smart meters are a new kind of electricity meter which the Government has decided must be installed in every home in the UK by 2020.

Smart meters will replace existing electricity meters and differ in one significant way. Smart meters will be able to send constant updates of the electricity usage to the energy supplier. How and when they do this may depend to a large extent on the supplier, but householders will no longer have to take readings themselves or wait at home for the meter reader.

Some suppliers may take a reading once a month to ensure an accurate bill, while others may constantly monitor the usage of their customers to see patterns and maintain effective supply. Some suppliers are looking at retrieving this information using SIM technology like in mobile phones; others are exploring the use of long-range radio signals.

A smart meter is most likely to come with an in-home display; much like the home energy monitors it will give real-time information on electricity consumption. There is a lot of talk in the industry of using this technology to provide customers with greater control, including the ability to programme appliances to be automatically switched on at off-peak cheap energy times and provide customers with variable tariffs according to electricity demand. Smart meters may also take the consumption reading to a new level by providing information on consumption divided up by appliance – so a householder can see at a given time exactly which of their appliances is using how much electricity, and how much it is costing.

Some suppliers have already started rolling out smart meters however the industry and Government are still trying to work out technology compatibility between suppliers to ensure smooth processes as customers continue to switch in the future.

Examples of smart meters and in-home displays:



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