Where does all the power go?

Current UK power production releases around 0.6Kg CO2 into the atmosphere for every KWH of electricity delivered to your home. So if your electricity bill is £30 a month (£360 a year), you are using 3200 KWH a year and responsible for the release of 1.92 metric tons of CO2.

Even if you buy only green electricity, wasting it still adds to CO2 release because the more of your green power you use, the more fossil fuel power someone else uses. So it is still important to minimise your electricity consumption.

Lighting

Low energy bulbs should be used everywhere except in two specific situations.

1. Don't use them where they are only turned on for a few minutes – like a toilet or store cupboard. A fluorescent bulb uses a big surge of power getting started and will wear out quickly in such situations.
2. Traditional tungsten bulbs are also best for 'high stress' places like ovens and here their energy is not wasted, contributing to heating the oven.

Where a really bright light is needed, halogen spots are a reasonable halfway house. A 20 watt bulb gives the equivalent of a 40watt standard bulb. But they are only really good for task lighting.

Avoid ceiling downlighters. Lighting the whole room in this way is very wasteful. In addition, because halogens get so hot they are a fire risk set into your ceiling. If you must use them, protect them with proper fireproof guards.

LED bulbs are just beginning to become bright and cheap enough to be practical and are probably the future as they use far less power for the same light than even fluorescent low energy bulbs. Up until now they are only really effective as spotlights but they are developing very fast.

Where else does the power go?

A case study by Richard Jannaway

Even with mostly low-energy light bulbs, our electricity bill is about £30 a month. So where was it all going? I bought a plug-in gadget which accurately measures electricity used by individual appliances.

Some results were not surprising, the freezer used 3 units (KWH) over 24 hours, and even more when it was freezing down fresh items.

More surprising was the power used by appliances on ***standby***. A count up of appliances with small transformers which are usually left on, came to a shocking total of sixteen.

As well as the obvious ones, such as computers, printers and TV boxes, there were three low voltage lamps, a bedside radio, and a mobile phone charger which a visitor left behind switched on.

The annual usage for these gadgets came to an amazing 350 KWH or 210kg of CO2 released just for standby.

The only 'standbys' we now keep on, are the modem/set- top box and DVD recorder. Neither work properly if powered down for any length of time.

Other energy saving measures

- Washing laundry at 30° could save a further 60kg,
- Your kettle is a big energy-guzzler. So if you only boil the water you need, you could save another 60kg a year. You also get your cup of tea quicker!
- Lowering the thermostat on your central heating boiler by a couple of degrees during the winter can save you 420kg a year.
- Keep your freezer full and ensure the door shuts properly, the seals work and the fridge light goes out.
- Consider whether you REALLY need a tumble dryer. Even the best use an awful lot of power.

  The most efficient are condensing machines with a built-in heat pump and use half the power of a standard vented type. They are expensive though, £500 rather than £200.

  A compromise might be to use a cheaper condensing dryer. At least then the heat used stays in the house rather than warming up the outside air so you are only totally wasting energy in the summer.
- If you need to replace any white goods, such as fridges, freezers, washing machines, choose an ‘A’ rated appliance.

Green Electricity Suppliers

Not all ‘Green Suppliers’ are the same. Most of the major energy companies now have a ‘green tariff’ where you pay a bit extra to be supplied with power generated from renewable sources.

In most cases this is a CON. Certainly they generate as much or more of their power from renewable sources as they sell on their green tariff.

But they are required by government to do this anyway, regardless of who they sell it to. So by paying the green tariff, the only thing you are helping is their profit margin.

There are, however, three smaller suppliers who are genuinely green:

Ecotricity make the genuine claim that, “For every pound our customers spend with us on their electricity, we spend another pound building new sources of green electricity. We like to think of it as ‘turning electricity bills into windmills'. And the more customers we have the more we can build - it’s that simple.”

Ecotricity are supported by such groups as the Soil Association and Oxfam.

Green Energy make a big thing about supporting small scale producers, buying power from domestic and small scale wind turbines, photovoltaic and hydro installations.

They also support more ‘exotic’ producers such as organic waste gasification, energy crops, pig waste.

They do not, however, invest heavily in generation themselves. They also have support from an impressive range of green organisations.

Good Energy is similarly committed to only buying renewable electricity and to supporting small-scale producers. However, like Green Energy they are not themselves investing heavily in renewables.

Good Energy is supported by a wide range of green organisations, including Friends of the Earth.

All three are keen to buy electricity from small producers and pay them 9p a unit for the power they generate.

Look at their sites and make your choice. They all have advantages and it is difficult to choose between them.

Don’t be taken in by the green claims of the major suppliers.