



The 50plus



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Micro power generation

The government is introducing tariffs to make it attractive to generate power on a small scale in our homes. 50plus director Roger Runswick investigates two of the up and coming technologies.

Micro generation, the production of power in our homes, is a technology that is about to come of age. It's actually multiple technologies and the reasons they are going to become important is that they offer the opportunity to produce power equal to several Sizewell B's. And the government intends to make it worth our while to install them.

To quote Friend of the Earth in 2008 "Currently only 2% of UK energy (and under 5% of UK electricity) comes from renewable sources. The Government must deliver a huge increase in UK renewable energy if it is to meet its share of the target of 20% of EU energy to come from renewable sources by 2020 (energy includes electricity, transport fuels and heat). The 15% target which the EU has allocated to the UK would, if adopted, require the UK to generate about 40% of its electricity from renewable sources – an eight fold increase from current levels."

Most of us are familiar with using the sun to heat our water indirectly and such installations are increasingly common. But what is coming is technology that will both provide power to run our homes at least in part AND the opportunity to export what we don't use back to the distribution network for others to use.

The two key technologies are:

- Solar photovoltaics (PV);
- Domestic scale combined heat and power (microCHP).

Solar photovoltaics installations consist primarily of an array of solar panel(s) on the roof. A typical home PV system can produce around 40% of the electricity a household uses in a year (source Energy Saving Trust). And in some installations you can store excess electricity in batteries to use when you need it. The costs for installing a solar electricity system vary a lot - an average system costs between £8,000 and £14,000, depending on its size and type.

MicroCHP electricity generators will be fitted in new style gas heating boilers and produce around 1KW of power. 10% take up of UK homes would negate the need for two power stations. Around 1.5 million boilers are replaced each year in the UK so the opportunity to get the technology out there is available. Anticipated costs are about £650 over and above a 'normal' boiler.

Feed-in tariffs launch in April 2010 and will enable users to be paid in two ways:

- (i) for what they don't use from the grid
- (ii) for what they export back to the grid.

As the feed in tariff web site explains 'the tariffs work by metering the locally generated power used (generation), the power used from the grid (import) and the power exported back to the grid. The electricity company both pays the feed-in tariffs and bills users for the electricity imported in the normal way. Suppliers may choose to 'net these amounts off' and just pay a cheque or submit a bill for the

difference. Meters will be needed to measure each of the three energy flows. You will already have an import meter, and the others may be similar - though the whole country is changing over to Smart Meters in the next few years, and they will be able to cope with all this.'

How much could I save? Dependent on many factors from the type of systems(s) installed to which way your house faces if you go for PV panels. However £200 - £400 a year is feasible and more for larger and multiple installations. This means that for those with available capital it may be a better investment than putting the money in the building society - at least whilst interest rates remain low. But do remember that before installing any home energy generation technologies, it is essential to minimise your energy demand by ensuring your home is fully insulated, and using energy efficient lighting and appliances.

More information?

<http://www.energysavingtrust.org.uk>

<http://www.fitariffs.co.uk>

Contact 50plus on:

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