

Feed-in tariffs: how they work

The feed-in tariffs are an incentive offered to people who invest in small-scale renewable energy. This leaflet shows the kind of calculation you need to make to see if it's worth **you** making the investment.

This example uses **solar photovoltaics (PV)**, but the principle applies equally to wind, hydro or other forms of renewable electricity generation. Figures vary according to the type of technology installed, how much electricity it generates and what year you enter the scheme (although once you're in you stay on the same tariff for 20 years, or 25 years for PV).

Let's say a family installs solar PV panels on the roof of their home. They'll be able to benefit from the electricity they produce in three ways:

1) A generation tariff. This is a set rate paid to the household for each unit of electricity that the solar panels generate, measured in kilowatt-hours, or kWh. In the case of solar PV this is 41.3p per kWh. **The household will receive this, whether they use the electricity themselves or not.**

2) Lower electricity bills. Some, but not all, of the household's electricity demand (lighting and appliances) will be met by the solar panels – free electricity! How much they save depends on how much electricity they use during the day when the solar panels are 'active'.

3) An export tariff. Any electricity the household generates but doesn't use (for example when they are out during the day) is sold to the grid for a fixed rate of 3p per kWh. The export rate is the same for all renewable energy technologies.

What the household in this example earns per year...

Generation tariff	£526
Free electricity	£72
Export tariff	£20
Total	£618

Guideline figures only. More details at www.est.org.uk/generate-your-own-energy

"Feed-in tariffs are index-linked and the income from them is tax free."



NB On 31 October 2011 the Government announced a consultation into solar PV Feed in Tariff rates (see www.decc.gov.uk/fits) in which it is proposed that the rate of payment is significantly reduced. If agreed, the generation tariff in the example below would be 21.0p per kWh. The consultation will run until 23 December.



A place in the sun ...

Now for the figures ...

Let's assume the solar panels generate **1275kWh** of electricity a year. Our family is getting a generation tariff of 41.3p for each kWh so they will be paid about **£526** (i.e. 1275×0.413) a year.

Say they use 600kWh of this themselves (just under half). This is free electricity, and will reduce their annual bill by **£72** (assuming they pay 12p per kWh). Of course, if the family used **more** of what they generated – for example by using their washing machine during the day when the solar panels were working – their bill would go down further and they'd save more money.

Under the export tariff, the other 675kWh (the electricity that they don't use) is sold to the grid at 3p per kWh earning a further **£20** (i.e. 675×0.03).

The total benefit to the family in this illustration is therefore **£618**, but of course they have to buy the solar panels first. An array that would generate 1275kWh a year starts at around £7,500.

The figures in this simple illustration should be treated as a guideline only. If you think investing in renewable energy is something you wish to explore further, you should seek more information, starting at

www.est.org.uk/generate-your-own-energy



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