

Feed-in tariffs ('FITs'): how they work



The feed-in tariffs are designed to encourage investment in small-scale renewable energy. This leaflet shows **the kind of calculation** you need to make to see if it's worth it for you.

The example below uses **solar photovoltaics (PV)**, but the principle applies equally to other forms of renewable electricity generation like wind or hydro. 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).

So, let's say a family installs solar PV panels on the roof of the 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 21p per kWh, though the government may decide to reduce this. The owner of the PV panels will receive the generation tariff, 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 is sold to the grid for a fixed rate of 3p per kWh. The export rate is the same for all renewable energy technologies.

Before you go any further ...

1) For you to be eligible for the feed-in tariff, your installers, and the product they fit (e.g. the solar panels, wind turbine etc), must be accredited with the Microgeneration Certification Scheme. Find out more at www.microgenerationcertification.org

2) For solar power, the generation tariff will only be paid at the 21p/kWh rate where the relevant property has an Energy Performance Certificate of band D or above. If not, the rate is just 9p/kWh. This is designed to encourage energy efficiency before energy generation.



Feed-in tariffs are designed to encourage the take-up of small-scale renewable energy systems

Now for the figures ...

Let's assume the solar panels generate **1275kWh** of electricity a year. Our family is getting a generation tariff of 21p for each kWh so they will be paid about **£267** (i.e. 1275×0.21) 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 **£359**, 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 investing in renewable energy is something you wish to explore further, you should seek more information, starting at www.decc.gov.uk/fits.



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

See also our leaflet 'How to get the most out of your solar panels', available at www.cse.org.uk/advice-leaflets

Tips for lower energy bills

Happy paying your electricity and gas supplier more money than you need to? Thought not. Here are 10 ways to cut your bills ...

1) Give your clothes a day in the sun; and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.



2) Keep the oven door shut as much as possible; every time you open it, nearly a quarter of the heat escapes.



3) Catch 'em young. Encourage your children to switch off electric toys and lights that they're not using. They'll soon get the hang of saving energy.

4) Be a friend to your freezer. Defrost it regularly to help it run more efficiently.

5) Buying a new washing machine, TV or dishwasher? Look out for the Energy Saving Trust logo.



6) Don't over-fill the kettle (but do make sure you cover the metal element at the base).



7) Dodge the draught! Fit draught-excluders to your front door, letter box and key hole, and draw your curtains at dusk to keep the heat in.

8) Turn your heating down by 1 degree. You'll hardly notice the change in temperature, but it'll make a big difference to your heating bill.

9) Wait 'til you have a full load before doing a wash. Two half-loads use more energy (and water) than one full load.

10) Sleep tight. Make sure all the lights are turned off when you go to bed. If you want to light a child's room or a landing, use a low-wattage night light.



This leaflet is one of a series that covers a range of energy efficiency and renewable energy topics, produced by the Sustainable Energy Across the Common Space (SEACS) project, for you to view online or download to share in your community.

SEACS brought together three UK and two French local authorities – Devon County Council, Dorset County Council, Wiltshire Council, le Conseil Général des Côtes d'Armor and Lannion-Trégor Agglomération – to tackle the energy challenge that is faced on both sides of the channel.

The aim was to create opportunities for individuals, households, communities, schools and local authority buildings in both UK and France to reduce their energy consumption, implement energy efficiency measures and use clean/renewable energy where possible. The project has raised awareness of climate and energy issues and encouraged long term behavioural change towards energy use. Cooperation was the ethos of the project and participants had the opportunity to exchange and learn from each other.

For further information about SEACS project, to get ideas and view case studies to help you and your community save energy, and to find out which schools and community groups in your area have been involved, visit the SEACS website or the energy pages of your local authority's website.

www.seacs.info

www.wiltshire.gov.uk/sustainability

www.dorsetforyou.com/climatechange

www.devon.gov.uk/energy

This leaflet was first produced by the Centre for Sustainable Energy (CSE) and reprinted in this version on behalf of SEACS.

CSE's Home Energy Team offers free advice on domestic energy use to householders in Bristol and Somerset (including the unitary authorities of North Somerset and Bath & North East Somerset).

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Founded 1979

We are a national charity that helps people change the way they think and act on energy