

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.



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

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."



3 St Peter's Court
Bedminster Parade
Bristol BS3 4AQ
0117 934 1400
www.cse.org.uk

CSE is a national charity that shares our knowledge and experience to help people change the way they think and act on energy

Tips for lower energy bills

Happy paying your gas and electricity supplier more money than you need to?

Thought not. Here are 15 ways to cut your bills ...

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



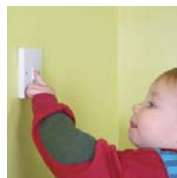
2) **Give your clothes a day in the sun;** and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.

3) **Food in the oven cooks faster when the air inside flows freely,** so avoid putting foil on the racks.

4) **Don't leave your phone on charge all night.** It only needs a couple of hours – and don't leave the TV and other kit on stand-by.

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

6) **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.



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) **When boiling water, only fill the kettle with as much as you'll actually use** (but make sure you cover the metal element at the base).

9) **Buying a new TV, washing machine or dishwasher?** Look out for the Energy Saving Trust 'recommended' logo, and remember: the bigger the TV, the more energy it'll use.



10) **Dimmer is smarter.** Use your dimmer switches to reduce the amount of energy used to light your room.

11) **Wait until you have a full load before putting on a wash.** Two half-loads use more energy (and water) than one full load.



12) **Sleep tight.** Make sure all the lights are turned off when you go to bed, or use a low-wattage night light if you do need to leave one on.

13) **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.

14) **Put your fridge in a good spot.** Somewhere the air can circulate behind it, but not next to a cooker or radiator.

15) **New computer?** Remember a laptop typically uses around 85% less energy than a new desktop PC.

For free domestic energy advice, call **0800 512 012**
or go to **www.cse.org.uk/advice**



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Bedminster Parade
Bristol
BS3 4AQ

0117 934 1400
info@cse.org.uk
reg charity 298740

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More energy advice at
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