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**Friends of  
the Earth**

# How the feed-in tariff will work

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- a unique network of campaigning local groups, working in more than 230 communities throughout England, Wales and Northern Ireland
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### **1. How the feed-in tariff will work**

The scheme covers renewable electricity installations up to 5MW in size (equivalent to two large-sized wind turbines). The technologies covered are solar PV, wind turbines, hydro turbines, anaerobic digestion plants, and micro combined heat and power units.

Households, businesses, local authorities, communities and others participating in the scheme will receive regular tariff payments from energy suppliers, fixed for 20 (25 years for PV). The tariff payment will differ for each technology (solar, wind etc) and for different scales of installation; payments set out in the Government's draft proposals vary from 4.5p/kWh for the largest wind generation installation covered by the scheme to 41.3p/kWh for the smallest scale solar PV panels. The payment will be the same regardless of who owns the installation.

An additional payment will be made for any green electricity exported to the grid (i.e. it is not used onsite). This is proposed to be fixed at 3p/kWh for all technologies of all scales for the duration of the tariff (20 or 25 years), although small-scale green electricity generators can also try and negotiate their own contract with the energy supplier.

The tariff levels paid to new installations entering the scheme will be reviewed in 2013 – once an installation enters the scheme it gets the same tariff level for the duration of the contract, although a scheme starting after the review year may get a different tariff which will then also be fixed for the contract length.

Generators will also get the benefit of using their own electricity onsite first, which means they may import less electricity from the grid, thereby reducing their electricity bills. Participants of the scheme will benefit from a combination of the two tariffs, plus any reduced energy imports. Electricity and cost savings may vary enormously between different technologies and different types of generator (for example a stand-alone community-owned wind turbine which exports everything it generates or a business with a solar roof which uses most of its generation onsite).

Tariffs will be paid by electricity suppliers who will then equalise the cost of the scheme among themselves (so no supplier is disadvantaged against another) and recover this cost by placing an increment on the electricity bill of every consumer (business or household). The cost of the scheme to households is predicted to add an average of £6.50 to electricity bills in 2015 (or 54p per month).

**2. Micro wind turbines and solar panels - the most attractive green electricity schemes for householders.**

*WIND TURBINES*

**Renewable UK says...**

**1.5-KILOWATT WIND TURBINE** The 'micro' turbines that can be mounted on a roof. At a site with a moderate wind speed, with 50 per cent of the electricity used in the home and 50 per cent sold to the grid. Care needs to be taken that micro-turbines are installed in suitable locations - which are rarely urban.

Cost £2,000

Annual earnings (taking into account reduced energy bills) £450

Payback 4.5 years

**SIX-KILOWATT WIND TURBINE** Could be installed outside a home in a garden or field. At a site with a moderate wind speed, with 50 per cent of the electricity used in the home and 50 per cent sold to the grid

Cost £22,000

Annual earnings (including maintenance costs and reduced energy bills) £3,420

Payback 6.5 years

**11-KILOWATT WIND TURBINE** Could be installed by large rural home or farm. At a site with a moderate wind speed, with 50 per cent of the electricity used in the business and 50 per cent sold to the grid

Cost £44,000

Annual earnings (including maintenance costs and reduced energy bills) £10,026

Payback 4.5 years

*SOLAR PV*

The Government says that a typical 2.5kW well sited solar pv installation could offer a homeowner a reward of up to £900 and save them £140 a year on their electricity bill.

**The Energy Savings Trust says...**

Cost, savings and maintenance

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.

In general:

- the more electricity the system can generate, the more it costs but the more it could save
- solar tiles cost more than conventional panels
- panels built into a roof are more expensive than those that sit on top but,
- if you need major roof repairs, PV tiles can offset the cost of roof tiles

Savings can be considerable - almost 1 tonne of CO<sub>2</sub> a year, and around £200 off your electricity bill. A 2 kWp system could provide around 40 per cent of a household's yearly electricity needs.

### **Solarcentury says:**

Here's an example for what it means for you, based on a typical size of domestic solar system (12 panels) on a south-facing roof in the UK:

For a 12 panel system, fully installed, typical cost is £12,500 today

- You'll be paid 41.3p for every unit that system generates, worth £878
- Some of the electricity from the system will be used by your home instead of grid electricity, and the rest exported to the grid - If this is split 50:50, you'll then get £138 of electricity savings and £32 of export income as well the £878: a total of £1,048 of income and savings
- These values are inflation-linked, so what you get will go up each year. The system pays back in 10 years  
This is equivalent to a profit of £25,000 over the 25 years of the scheme, or a return of nine per cent.