

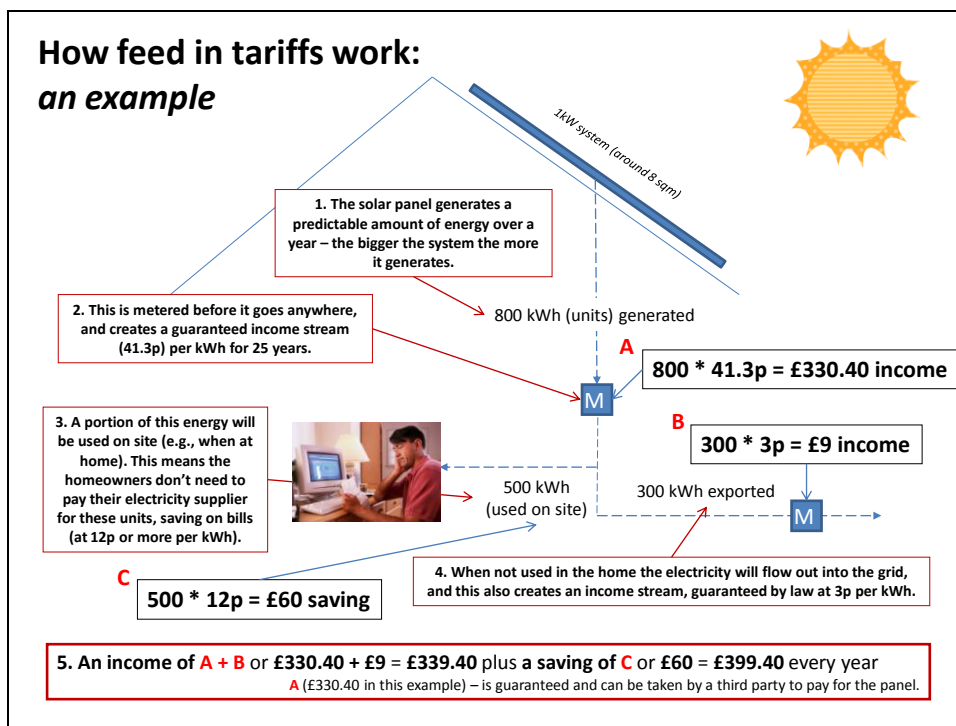
Updated briefing on feed in tariffs

On 1 February 2010 the UK Government published the final levels of feed in tariffs which will apply to all eligible electricity microgeneration schemes commissioned after 16 July 2009.¹

These levels were broadly as predicted, but differ in some details from the position previously set out by the government on July 2009². This short note provides an update and summary of the final scheme for our customers.

What are feed in tariffs?

The diagram below shows how feed in tariffs work, using solar PV as an example.



In essence they provide guaranteed payments for micro-generated electricity, based on the amount produced. System owners can secure further benefits by using some of this power on their own sites, and thus reducing their (or their tenants') electricity bills, or by selling the power to the grid, which will also attract a (small) guaranteed income stream.

Why do they matter?

Unlike grants, feed in tariffs (FITs) do not artificially cap the size of the market in the UK for renewable energy technologies. For the first time we now have an open, competitive

¹ Full details at http://www.decc.gov.uk/en/content/cms/consultations/elec_financial/elec_financial.aspx.

² See Encraft briefing of 28 July 2009: <http://www.encraft.co.uk/ws/P/Aboutus/News.php#28>

market for these systems in the UK, where individual homeowners and small project developers are operating on a “level playing field” in the market with big energy producers.

The key features of the scheme from an economic perspective are:

- Tariff payments are guaranteed for 20 or 25 years by the government. This makes effective financial planning, project and product development possible.³
- These payments will rise with inflation, offering protected financial returns.
- They vary by technology type and size (see table below) but are in general calculated to ensure that people who invest in micro-renewables will secure a 5-8% return on their investment over 20-25 years.
- Government will review the tariff levels every 3 years, and may change future values (i.e., for projects started after each review point).
- FITs replace national grants entirely. The Low Carbon Building Programme scheme ended on 3 February 2010.
- FITs for some technologies, like PV, will be lower for projects commissioned after 2012. This is in anticipation of project costs falling as prices fall.
- The government has modelled the tariffs with a view to incentivising an outcome where around 2% of UK electricity will be supplied from onsite renewables by 2020. If this were all achieved via 1kW solar PV systems, we would need 10 million installations by then. This would be a 200-fold increase in market size. This is why you will see a lot more solar energy companies coming into the market in the next few years.
- Property owners who take a long term financial perspective, for example public bodies and social landlords, should be able to use FITs to secure win/win outcomes for both themselves and their tenants and stakeholders. This is because the returns on well-designed and executed microgeneration projects are now better than the rates at which long-term funding can be secured by some organisations.

Who pays?

FITs are funded through everyone’s energy bill, so they are also an incentive for energy efficiency³.

What will happen next?

We are likely to see many more companies coming into the UK market, particularly offering solar PV, which is the easiest micro-renewable to fit (if not always the cheapest!). We will

³ The justification for the tariff rates is that green electricity provides a benefit to society in terms of reduced carbon emissions. This has a value, as demonstrated by the Stern Review. FITs are paid for through the regulated energy system (not through taxes) by sharing payments across everyone’s energy bills. In other countries, some of whom have had FITs for over 30 years, the net effect of this has been an increase in fuel bills of less than 2%, during a period where fuel bills have often risen by more than 30% a year for wider economic and political reasons (i.e., the economic impact is essentially negligible).

also see lots of innovative financial services offered around the technologies, as banks realise that they can lend money against relatively secure income streams. (Before feed in tariffs, it was much more risky to invest in a domestic micro-generator than a nuclear power station: now the risks are similar. This is much fairer and more likely to lead to a genuine low carbon economy, because microgeneration engages far more people actively in reducing carbon emissions than centralised electricity generation.)

This should be good for the UK economy, because small scale technologies are accessible to many small businesses (e.g., construction contractors) and thus create significant employment and wealth creation opportunities. In Germany, market-driven deployment of small scale renewables driven by feed-in tariffs is credited with creating over 120000 jobs and around £5 billion of annual economic activity in less than a decade. We may be able to achieve something similar here, although we are starting late.

What about non-electrical technologies, like solar thermal or wood-fuelled heating?

Currently FITs only apply to electricity generation, but the government is proposing a similar scheme for renewable heating technologies from April 2011⁴.

What is the tax position?

FITs are exempt from income tax. Again, this supports a level playing field between individual micro-generators and corporate energy generators as companies do not pay income tax either.

What are the rates for Feed in Tariffs?

The table below shows the rates published by the UK Government on 1 February 2010.

Encraft

6 February 2010.

⁴ <http://www.decc.gov.uk/en/content/cms/consultations/rhi/rhi.aspx>

Table of generation tariffs to 2020

Technology	Scale	Tariff level for new installations in period (p/kWh) [NB tariffs will be inflated annually]											Tariff lifetime (years)
		Scheme Year	1 1/4/10 – 31/3/11	2 to 31/3/12	3 to 31/3/13	4 to 31/3/14	5 to 31/3/15	6 to 31/3/16	7 to 31/3/17	8 to 31/3/18	9 to 31/3/19	10 to 31/3/20	
Anaerobic digestion	≤500kW	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	20
Anaerobic digestion	>500kW	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	20
Hydro	≤15 kW	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	20
Hydro	>15-100 kW	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	20
Hydro	>100 kW-2 MW	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	20
Hydro	>2 MW – 5 MW	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	20
MicroCHP pilot*	≤2 kW*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10*	10
PV	≤4 kW (new build**)	36.1	36.1	33.0	30.2	27.6	25.1	22.9	20.8	19.0	17.2	15.7	25
PV	≤4 kW (retrofit**)	41.3	41.3	37.8	34.6	31.6	28.8	26.2	23.8	21.7	19.7	18.0	25
PV	>4-10 kW	36.1	36.1	33.0	30.2	27.6	25.1	22.9	20.8	19.0	17.2	15.7	25
PV	>10-100 kW	31.4	31.4	28.7	26.3	24.0	21.9	19.9	18.1	16.5	15.0	13.6	25
PV	>100kW-5MW	29.3	29.3	26.8	24.5	22.4	20.4	18.6	16.9	15.4	14.0	12.7	25
PV	Stand alone system**	29.3	29.3	26.8	24.5	22.4	20.4	18.6	16.9	15.4	14.0	12.7	25
Wind	≤1.5kW	34.5	34.5	32.6	30.8	29.1	27.5	26.0	24.6	23.2	21.9	20.7	20
Wind	>1.5-15kW	26.7	26.7	25.5	24.3	23.2	22.2	21.2	20.2	19.3	18.4	17.6	20
Wind	>15-100kW	24.1	24.1	23.0	21.9	20.9	20.0	19.1	18.2	17.4	16.6	15.9	20
Wind	>100-500kW	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	20
Wind	>500kW-1.5MW	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	20
Wind	>1.5MW-5MW	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	20
Existing microgenerators transferred from the RO		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	to 2027

* Note the microCHP pilot will support up to 30,000 installations with a review to start when the 12,000th installation has occurred

** "Retrofit" means installed on a building which is already occupied ; "New Build" means where installed on a new building before first occupation ; "Stand-alone" means not attached to a building and not wired to provide electricity to an occupied building