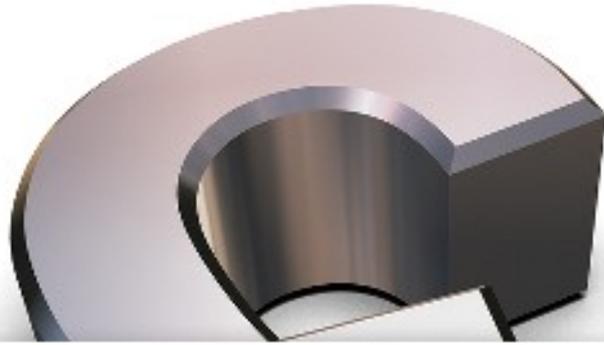


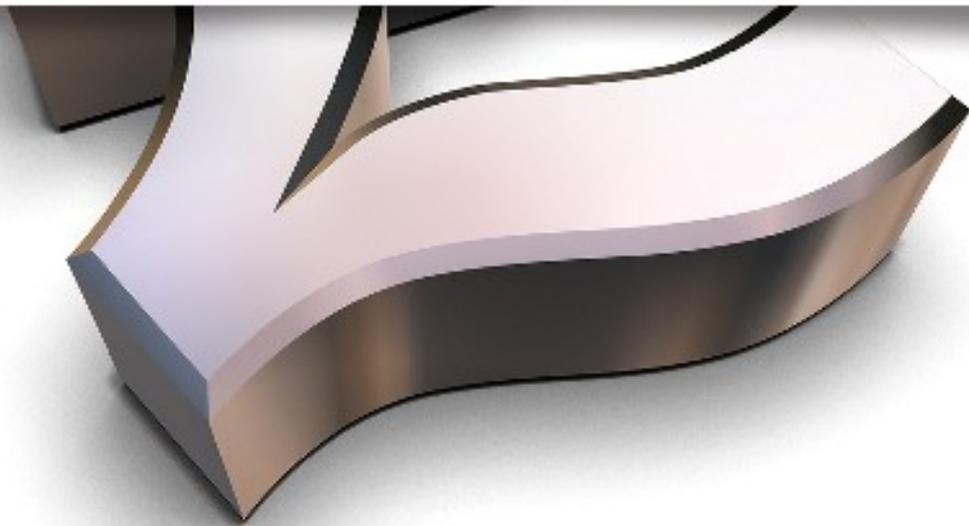
**You can earn
real money from clean and free
Solar PV energy**



**Now YOU CAN AFFORD to do
your bit for the environment.**



**A Comprehensive Guide To The
Financial Benefits To You**



Gain High Returns



**For Generating Your Own
Clean Electricity...**

**Learn how individual
householders are recouping a
long-term 8%+ return on
investment - via a product
whose time has come...**



Renewables:

The New Investment Opportunity

Renewables has been a key term within the energy industry and political circles for some years.

Now it's also the new buzz word in the UK investment and financial sectors, as Government initiatives are heavily compensating householders and businesses with the new Feed in Tariff Scheme (FITS).

So what is all the fuss about? And can individuals really make a secure and serious profit from doing the right thing environmentally?

Well YES!



Encouraging Financial Incentives

Most of us are aware of the need to reduce our carbon footprint, but until recently there hasn't been a decent financial incentive to encourage us.

However all that has changed, - now you can make a healthy and secure index linked income for the next 25 years by producing your own energy, and for domestic producers that income is **taxfree**.

For the purposes of this book we'll focus on Solar PV Power, which is creating the biggest stir at the moment. However, readers should be aware that other forms of renewable energy are also becoming increasingly attractive to the private investor, and may well be worth considering also.

So What Exactly Are Feed in Tariffs?

On April 1st 2010, with cross party support the UK Government introduced the new Feed in Tariff Scheme:

This is an initiative which pays householders and businesses to generate their own energy from renewable sources, such as daylight and wind power.

This generous and much more inclusive incentive replaced any previous grants that may have been available.



Earn 41.3p * For Every kWh Of Solar PV Electricity You Produce...

Index Linked For The Next 25 Years!

The FIT scheme pays householders who are early installers of solar photovoltaic (PV) panels 41.3 pence* for every unit (kWh) of electricity they produce **whether they consume that electricity themselves or not!** *This is known as a 'Generation Tariff'.*

They will also receive an extra 3 pence for every unused unit of electricity they produce that is automatically fed back to the National Grid. *This is known as an 'Export Tariff'.*

- For installations up to 4kW. Solar PV installations of 4kW - 10kW attract a generation tariff of 36.1 pence; 10kW - 100kW a tariff of 31.4 pence; and 100kW - 5MW a tariff of 29.3 pence.



“Feed-in Tariffs provide some of the best secure investment returns available in the market”

Greg Barker, Climate Change Minister



Simple And Straightforward To Manage

There are a few simple rules that you must follow to ensure that you qualify for the FITS payments,

Installations must be carried out by an accredited MCS (Micro-generation Certification Scheme) installer, such as Worcester Renewables

Working with Worcester Renewables, registration on to the scheme is simple and straightforward, what's more, we supply British manufactured high quality panels that are effectively maintenance free and incur little or no on-going costs.

At first glance this all seems too good to be true, especially when you take into account the fact that the tariffs being paid to you are index linked to the Retail Price Index, are tax free and are payable for the next 25 years!

The canny amongst you will spot that this tariff is 3 – 4 times greater than the amount you are currently paying for electricity, ***so how does it all add up?***

We'll get to that in a minute, but first let's take a look at how the numbers can work for you.



Show Me The Money...

The Department of Energy and Climate Change (DECC) have fixed the Feed in Tariff payments to be of most benefit to those who respond promptly, in a bid to encourage an early take up of Solar PV technology.

In a similar way to Germany's highly successful pioneering scheme, people in the UK who that **** install Solar PV systems NOW are being paid much higher Feed in Tariff rates than those who drag their heels, creating an incentive to buy and install renewable energy micro-generators right now. *(Solar PV Micro-generation increased 50 fold over 5 years in Germany).*

UPDATE: In October 2010 the Coalition Government renewed its commitment to FITs. It has however stated that a 'higher than expected' uptake will lead to an early review of the current high rate. **Only those who act now can be sure to receive this payment level for 25 years.**

Early adopters will contribute the most to the government's energy targets *(more of that later...)* and so will receive the biggest pay backs. For example, **the current 41.3p per unit (for up to a 4kWp system) is guaranteed and index linked for 25 years.**

However **this figure will be progressively reduced for people who join the scheme after 1st April 2012.** (Just to clarify, once registered for FITs, your nominated Generation Tariff is secure, it will last for 25 years and be adjusted annually for inflation).

Small wonder that Feed in Tariffs are being viewed by many as the best and most secure return for their investments in today's market!



An Example:

For illustration purposes, let's look at a domestic example where the householder invests £15,000 for all the design, installation and setup costs of a high quality Solar PV System to generate electricity for their four bedroom house.

Let's reasonably assume they can generate 1,800kWh * of solar electricity, 1260 of which they use themselves, and 540 of which goes back to the grid. Over a year they consume a total of 4,000 kWh.

Without Solar Panels	Electricity Cost	4,000kWhx11p/kWh =	-£440.00
With Solar Panels	Electricity Cost	2,740kWhx11p/kWh =	-£301.40
	Generation Tariff	1,800x41.3p/kWh=	+£743.40
	Export Tariff	540x3p/kWh=	+£16.20
		Total	+£474.40
	DIFFERENCE		+£914.40

* Actual amounts vary depending on the quality of the equipment, geographic location and situation.

Given that the income is tax-free, the return on a £15,000 investment is equivalent to 12.2% for a 50% taxpayer and 10.2% for a 40% taxpayer, with the investment recouped in as little as seven years with indexation. As the payments are linked to RPI, this equates to a real return of 17.5% and 15.5% respectively at today's RPI rate of 5.3%.





Financial Highlights...

(We offer this information in good faith, and check our sources constantly).

Adding Value To Your Asset



Your original investment doesn't disappear; according to The Independent *"Surveys conducted across Europe and America revealed that the addition of Solar PV panels to a house increase its retail value."* Just as a new kitchen or a conservatory add value to your home, so do solar panels with the added benefit that they're an income producing asset. (In addition, some higher quality products can be moved on up to two occasions if you can't bear to leave them behind!).

Looked At Another Way...

You could think of your investment in terms of a small pension. Yet unlike a regular pension your money isn't tied up for years before payments are due, (your tax free income typically starts 3 months after registration) and it doesn't disappear if you die. Plus with indexation linked to the RPI, your income is likely to grow significantly as time goes on.

Ask Rate Of Return, Not Payback Time

Many people naturally want to know how soon they will recover their investment. Whilst that's a good question, (and the answer in terms of cash is usually 7 – 10 years, with another 15 – 18 years of pure profit), it's not actually the best question to ask. You see the money never leaves you, as we highlighted above it simply transfers into asset value on your house. In addition you can expect an excellent annual return on your investment, which will increase as the years go by. Individual cases vary, but you can explore this in depth with an accredited installation company like Worcester Renewables before you buy.



No Tax To Pay

For domestic users who consume the majority of the electricity themselves, the income is tax free

If you're a higher rate tax payer you'll gain even more. Let's assume you were able to receive an annual return of 8% from the Feed in Tariff, it's actually worth 15% to you when compared with any other income you make that commands 40% in tax.

In other words, to receive an actual payment of say £1,000 from any other source, you'd have to earn a gross sum of £1,670.

And that's not taking indexation into account!

Let's Look At Indexation

For reasons we'll expand on below, energy prices are inevitably going to rise considerably over the next decade or so. If you generate a significant amount of your own power you'll protect yourself to a large extent from higher fuel bills. So not only will the amount of money you make from the Feed in Tariff increase over time, so too will the savings you make from not having to purchase so much electricity from the National Grid.

Quality Pays...

Don't be tempted to skimp on quality and buy cheap remember, your 25 year income is dependent upon your PV system lasting for that length of time. There are superior panels on the market that will outperform most others, and not only easily last for over 25 years, but produce much higher yields each year as well. – That's why at Worcester Renewables, we strongly recommend UK manufactured Sharp Solar PV panels – Sharp have been manufacturing panels for more than 51 years so when they guarantee that after 25 years they say that their panels will still be producing at least 80% of their original output – you know that they will.

It's worth noting that in October 2009, the Japanese manufacturer Sharp issued the following Press Release:

“Sharp Develops Solar Cell with World's Highest Conversion Efficiency of 35.8%” The company has over 50 years of experience in Solar Development, and has a manufacturing base in Wrexham in North Wales (SUKM). The UK plant doubled its production capacity from 110MW to 220MW a year in 2007 in response to rapidly increasing demand for solar cells in Europe.

<http://sharp-world.com/corporate/news/091022.html>

This quality of manufacture will undoubtedly enhance your investment potential, and in our opinion it's well worth dealing with an installation company who can provide you with this level of product.



In addition, make your purchase from an established and reputable company who hold their own accreditation and will carry out the installation work themselves.

Give a wide berth to companies who have simply jumped on the FITs bandwagon, and pay third party installers to do the work. If any challenges occur with those sort of installations down the road, who would take responsibility?

Beware the man bringing Free Gifts (Solar Power Fitted for FREE!)..

As you can see from above the financial benefits of installing Solar PV from Worcester Renewables are large.

Well some other people would like to have that return too, and they will make offers like, 'we'll install the system for you for free and you can have all the electricity it produces for FREE as well'.

So what's the catch? Well, it's a big one – first of all your property will have to meet the strictest of criteria so that the installation is the cheapest that they can do, secondly they will want to maximise your roof area and if it doesn't meet their minimum size, they won't do it, thirdly your roof must also face almost due south, and the final sting in the tail - you will never be able to buy it from them, so you are now effectively selling your roof space for 25 years (or ever) and anyone that buys your house later will also have to agree to giving them the income.

So why would they do it? Simple, the Feed in Tariff is probably the best return on investment that they can make for their money – Government backed, index linked, guaranteed for 25 years – ***don't let them steal your investment return or your roof - do it for yourself!***



Time To Fill In A Few Background Details...

Clearly an initiative of this magnitude hasn't just been dreamt up because the government wants to be chummy with UK voters.

We're facing both an under investment in UK power production and long term global energy challenges which must be met in the short to medium term if we're going to avoid fuel shortages and power cuts in 7 to 10 year's time.

This is not only about the 'climate change' debate, it's about an undeniable shortage of fossil fuels, the global effects of 'dirty' energy supplies and the political and economic realities associated with that.



We're Running Out Of Non-Renewable Resources

On this planet, there is only one real source of energy, and that is the sun, it is from the sun that much of the energy we've been using for the last few hundred years has been preserved over millions of years, laid down as fossil energy, in the form of coal, gas and oil. The Industrial Revolution of the 18th and 19th centuries was fuelled by coal. Then as cars, airplanes and electricity became commonplace in the 20th century, oil and gas took over as the dominant fuels.

Between 1920 and 1973, the use of oil grew as prices fell, but the oil shocks of '73 and '79 saw prices rise from 5 to 45 US dollars a barrel and we saw a shift away from oil for electricity generation. Coal, natural gas and nuclear increasingly supplied electricity, and energy efficiency started to be taken seriously.

Major Global Energy Challenges

Today, in 2011 we face major global energy challenges. Extracting oil is becoming more complex, as all the easy wells have been drilled and greater production risks are threatened.

The fossil fuels that remain in the ground are both dirty and increasingly expensive to extract. Many oil wells and gas reserves are to be found in politically unstable regions of the world, creating further fears about the security of future supplies.

All in all, there's a terrific amount of uncertainty environmentally, politically and economically.

Emerging Economies

On top of that, emerging economies require an ever greater share of the world's dwindling resources. Coal is the most abundant fossil fuel, and China continues to build several coal-fired power plants every month. China already has many of the world's most polluted cities, and its energy demands are still in their infancy.

The Inevitable Rise Of Photovoltaics (aka Solar PV)

Our brief synopsis on the state of global energy (*see also the press extracts at the end of this book*) illustrates why western governments are leading a move away from fossil fuels towards greener forms of energy.

The good news is that renewable energy sources are even larger than the traditional fossil fuels some estimates suggest¹ that we need to capture less than 0.02% of the solar power that falls on the planet's surface to meet all of our current energy needs.

Of course, generating energy from solar power has its limitations. But the demand for solutions to global warming, along with advances in technology and economies of scale, have led photovoltaic's to become the most likely contender to replace fossil fuels and nuclear in the generation of clean electricity.

¹ Wikipedia – World energy resources and consumption





The UK Government Has To Meet EU Targets On Renewable Energy

The UK Government has signed up to some pretty steep EU targets, And has to meet these to comply with EU law. By the year 2020, Britain must produce a minimum of 15% of its total electricity from renewable sources.

And compared to other European countries, we're a long way behind on our commitments to producing power from renewable and to securing independent energy production and fuel sources such as oil and gas.

According to the National Audit Office, the latest available data from 2008 reveals that only 5.5 per cent of UK power was produced by green technology and just 2.3 per cent of all its energy was generated from renewable

Feed in Tariffs to support homeowners to generate their own electricity are a key part of the government's plan to increase this figure to the required percentage over the next 10 years. Decentralising the Renewable Energy Market

The aim is to create a decentralised renewable energy market that will generate 8% of the UK's energy. Consequently, every household that installs Solar PV, becomes a 'Microgenerator' which will help the country to fulfil its obligations.

Feed in Tariffs have been operating successfully in many other countries for several years, with Germany and Spain being good examples. These tariffs have led to a huge increase in Solar PV, (in Germany the market increased 50 fold over 5 years) and have been instrumental in the creation of many new jobs.

Getting Paid to Generate...

It may be appropriate now to explain why the UK Feed in Tariff is payable on the solar electricity we actually use ourselves, as well as that which gets fed back to the National Grid.



This, not surprisingly, is a point of confusion for many people! (Who ever heard of getting paid by a third party for something you produce and then promptly consume yourself...?)

Whilst it's hard at first glance to see how the government benefits, the explanation is quite straightforward.



...Whether We Use the Electricity or not!

As a Micro-generator, you are helping to contribute to the UK renewable energy generation targets. But you are also contributing to the national electricity supply.

With your own Solar PV panels you might reasonably generate anything from say 1,260 kWh to 4,000 kWh a year. That's 1,260 kWh to 4,000 kWh of electricity that the National Grid doesn't have to generate.

Whether you personally use all or none of it is irrelevant you've still bolstered the national supply, and any you do use decreases the amount you need to take from the Grid.

When enough people are micro-generating 'clean' electricity, we can limit the number of power stations required to supply the country, and consequently reduce our dependency on imported fossil fuels and nuclear.

Where Does The Money Come From? - Someone must Pay!

Although Feed in Tariffs have been implemented by the Government and are established in law, the money doesn't come from the Treasury's coffers. Instead, the Electricity Supply companies are obliged to pay out the rewards.

Climate Change Levy

But it's not appropriate to feel sorry for the likes of British Gas, EON and EDF. Whilst they're charged with administering the tariffs, they will simply pass on the extra costs to their traditional customers in the form of a Climate Change Levy.

That's just one of the reasons why it's inevitable that electricity prices will rise. Not only that, but as a double whammy, those who don't opt to install Solar PV and go down the Micro-generation route will be subsidising those who do! And as prices rise over time, so do the Feed in Tariff rewards...

The smaller energy companies can opt out of administering FITs, but to make it fair to them all Ofgem is operating a 'levelisation' process to balance out the costs across all suppliers.

It isn't necessary to change your supplier when you have Solar PV panels installed, as you can apply to receive your Feed in Tariffs from any participating energy company.



The Process Is Very Simple...



As we mentioned earlier, to qualify for the Feed in Tariff, your Solar PV system must be installed by an accredited 'Micro-generation Certification Scheme' company, such as Worcester Renewables.

Once your system is in place, Worcester Renewables will give you an MCS certificate, which you send to your chosen energy supplier.

The supplier then registers you for Feed in Tariffs by adding your name and details to a Central Register that is monitored by Ofgem.

You provide quarterly or half-yearly meter readings to your supplier, and they make quarterly or half-yearly payments into your bank account.

Ofgem spreads the cost across suppliers via levelisation, and monitors supplier compliance.

SUMMING UP - The Time To Act Is NOW!

Act Now Before It's Too Late...

As we mentioned above, quotas need to be met to hit the government's energy targets. Since the launch of FITs in April 2010, the number of householders and businesses installing renewable energy systems has risen exponentially. Word about the financial benefits is spreading fast, and we may reach a full quota target on Feed in Tariffs sooner than was expected.

Stop Wasting Money...

It makes good sense to act now. Feed in Tariffs offer the best guaranteed return on your investment, allowing you to safely put your savings to work, and to protect you from future price escalations.

Improve Your Standing In The Community...

Becoming a micro-generator of clean electricity will allow you to feel good about making a responsible decision both for the UK economy and for the environment.



Do It For Your Children...



By choosing to join the growing team of people who are doing their bit for the future, you'll be leading by example. There are not many things that we as individuals can do today that will really make a difference to the environment our children and our children's children will live in. – This is something that you can do.

Generating your own clean energy is a great example of something that really will leave a positive and lasting legacy.

For personal advice on the best way for you to proceed, call our advice line on **0844-453-5591** or send an email to: info@WorcesterRenewables.co.uk



Your most common questions answered:



Q. What are the key benefits of a PV system?

A. Once installed and commissioned, you own the system, having control of a long term free source of electricity that presently is exempt from VAT and price increases. You are not only saving money and are actively saving the environment we live in, if you qualify for the Government's Feed In Tariff scheme (FITS), you will also GET PAID for every kwh of electricity that you produce, so you benefit 4 ways: 1) You get paid to produce electricity (even if you use it yourself), 2) You save on your current electricity bill by using you own electricity instead of buying it, 3) You get paid for any excess electricity that you produce and 4) You are doing your bit for the environment. As the system has no moving parts they require minimal maintenance, have a long lifespan, generate no emissions and no noise – producing clean energy for eons to come.

Q. What grants are available?

A. Since April 2010, the Government has operated a scheme whereby **they WILL PAY YOU** for every kWh of electricity that you generate, even if you use it yourself! – this is know as the Feed-In Tariff Scheme, or often called 'FITS', for full details of the scheme: **FITS Explained:** <http://www.worcesterrenewables.co.uk/feed-in-tariff/>

Q. How much electricity do I use?

A. We have a number of systems but an average 3 bedroomed house can typically use between 4000 to 6000 kWh (or units) per year. Which is around 12-17 kWh per day.

Q. What is a Unit or kWh (Kilowatt Hour) of electricity?

A. Units are how you are billed for electricity. These are examples of 1 unit or kWh. A 1 bar electric fire



running for one hour. A 100w light bulb running for 10 hours.

Q. Do I need a south facing roof and how big does it need to be?

A. South, SW or SE facing is fine. In some case we can install on East and West facing roofs, however the efficiency is greatly reduced. Typically a solar PV module is approx. 1m x 1.3 to 1.5m and a typical domestic scale system consists of 8 to 10 modules in either portrait OR landscape format therefore an area of approximately 15m² of clear un-shaded roof is required.

Q. What will it generate?

A. Each house is different depending upon many factors including location, the direction that the roof faces, the slope of the roof, the location and size of trees. We will produce an individual estimate for your house, which will be confirmed by a site survey.

Q. Can I generate cash and electricity back to the grid, so my system is not wasted when the weather is good for generating power?

A. **Yes.** Any electricity that is not consumed through the distribution board will be returned back to the grid through your meter. Most electricity suppliers will guarantee a fixed percentage to the grid, in some circumstance, your electricity supplier may add an Export Meter or Smart Meter to your system to show the number of units that you have cumulatively exported.

Q. What does a typical System cost?

A. It varies, by size and is dependent on our detailed survey.

Q: How will the electricity I generate integrate with my electrical system?

A: Output from the PV Panels, goes through an AC inverter so that it is compatible with your house supply, this is then wired into a spare breaker unit on your distribution board via a generation meter.

Q: Will the system power my house if there is a power cut in my local area?

A: If your system is 'On Grid' and does not contain any back up device it will automatically shut down when AC current from the distribution board is lost. This prevents any danger of electrocution to anyone who may be working on the local electric system or local grid.

Q: Will I have to regularly clean my PV modules?

A: Unless the modules are exposed to a high level of covering, i.e. adjacent to a construction site, the performance of the modules suffers very little degradation and normally efficiency is unlikely to drop more than a couple of per cent.

Q: We don't get many bright sunny days does this matter? – Will



they work if it is a dull day?

A: Your system will work as long as there is sufficient irradiation from the sun to initiate the inversion process. It is a common misconception that solar modules only work in direct sunlight, indeed it is often the case that the highest output is on a bright crisp winters day, as the panels then run cooler and hence more efficiently!

Q. Do I need planning permission for renewable energy technology.

A. Generally speaking, planning is NOT required for 'most' domestic installations however, we advise all of our customers to seek clarification from their local planning department in all cases.

Q. Does the system need any maintenance?

A. A standard PV array has no moving parts and as such doesn't "need" any maintenance however; we do advise that the system is checked electrically and mechanically on an annual basis along with cleaning of the module surfaces as this can reduce the effectiveness of the module generation capacity.

Some Useful Resources



All of these links can be easily found at:

<http://www.WorcesterRenewables.co.uk/UsefulResources>

Energy Saving Trust

<http://www.energysavingtrust.org.uk/Generate-your-own-energy/Getting-planning-permission> or here:

Carbon Footprint Calculator

<http://actonco2.direct.gov.uk/index.html>

FITS

For more information on FITS qualification and application

<http://www.worcesterrenewables.co.uk/feed-in-tariff/fits-how-to/>

For further information on the Feed In Tariff

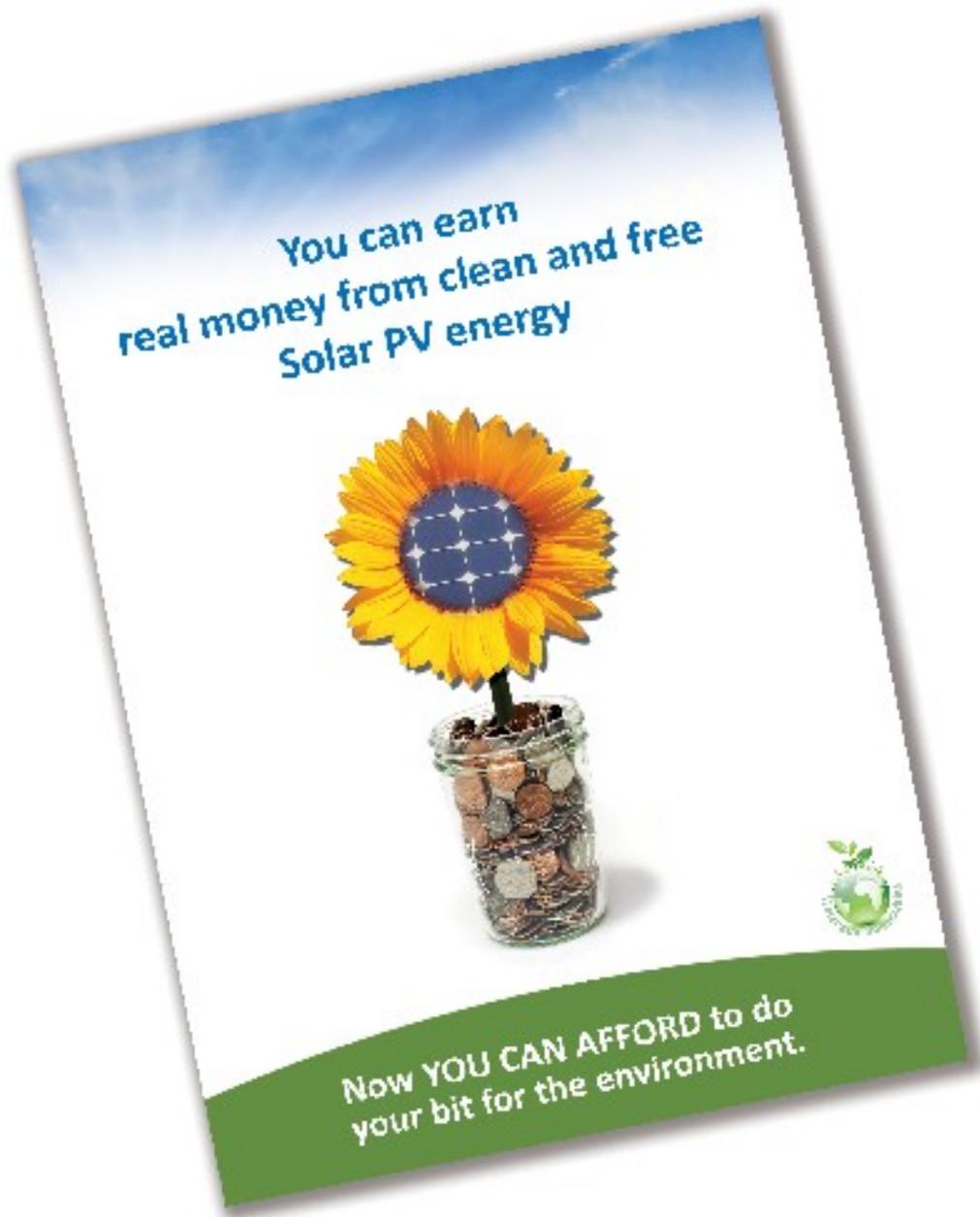
<http://www.fitariffs.co.uk/>

Feel free to read the Ofgem FITS Factsheet

http://www.worcesterrenewables.co.uk/wp-content/uploads/2010/11/Ofgem-FIT_Factsheet_April_10.pdf



**This Free Guide to Investing in Solar PV has been brought to you
courtesy of Worcester Renewables**



If you would like to receive free personal advice as to how you can benefit from Solar PV and other renewable technologies, please call our advice line on **0844-453-5591** or send an email to:

info@WorcesterRenewables.co.uk

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