

FREQUENTLY ASKED QUESTIONS



How do Solar PV Cells work?

Photovoltaic (PV) cells convert radiation from the sun into electricity. A typical PV cell consists of a wafer of semi-conducting material, usually silicon, manufactured with two electrically different layers. When sunlight hits the cell it excites the electrons within the silicon, creating an electric field across the layers and causing a flow of electricity.

How much electricity do solar PV systems generate?

An optimally orientated, unshaded 1kWp array will, each year, generate approx 850kWh (units) of electricity.

Who are New World Solar?

New World Solar is a locally-based installer of renewable energy systems established in 2006. They completed their 1000th installation in November 2010. Among their clients are Family Housing Association and Birmingham City Council. They are committed to high ethical standards and support for local communities.

Disclaimer

Please note that WFEG, LoCaL or any individual or individuals working to promote the Solar 500 Project cannot accept any liability whatsoever in respect of any loss or damage suffered by a purchaser or any other person in respect of any goods supplied or installed under this Project, including any loss or damage suffered as a result of the quality or lack of fitness for purpose of any goods supplied or installed, or any failure by the supplier to deliver or install the goods or to install them to the purchaser's satisfaction. WFEG, LoCaL and members of these groups have provided all information in good faith and you are solely responsible for your own project, any survey or preparatory works and no reliance can be placed on this document, or any other communication from WFEG or LoCaL.

The performance of Solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. Estimates are based upon the Government's standard assessment procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be considered as a guarantee of performance.

Please make sure you have checked the credentials of anyone visiting your home and take appropriate security precautions.

Your contract will be with New World Solar:

Units 1-3,
Waterloo Industrial Estate,
Burhill Way,
Chelmsley Wood,
Birmingham B37 6RF

Where can I place my Solar PV Panels?

PV arrays can be mounted in a range of locations but the roof of a building usually provides the best and simplest site. Flat roofs are not ideal as it is hard to make them water tight once the bolts to secure the panels are drilled in. However, ground solutions are available if your roof is unsuitable using ballasts or specially designed mounting frames. Most importantly, Solar PV panels should be located in a broadly south-facing, largely unshaded location.

My roof is old and in fairly poor condition – can I still install a Solar PV system on it?

Although Solar PV systems are not normally heavy enough to cause structural problems, if your roof is in poor condition we would recommend that you undertake a structural survey before proceeding with your installation.

For further information about WFEG including membership please visit www.wfeg.org.uk and for LoCaL <http://lowcarbonlichfield.wordpress.com>

Solar 500

Group Discount Solar Energy Scheme



Whittington & Fisherwick Environment Group

Telephone: 0121 779 4876
Email: information@newworldsolar.co.uk
Company Registered Number: 05665710

Whittington and Fisherwick Environment Group (WFEG) and Low Carbon Lichfield (LoCaL) want to help households in Lichfield, Tamworth and neighbouring areas to reduce their carbon footprint and save money on their energy bills. So we have arranged a group discount solar electricity scheme for households and community organisations in the area. After a careful investigation we have identified a local installation company - New World Solar (based in Chelmsley Wood) - which has agreed to offer Solar PV systems at a highly advantageous group rate.

If you are interested in generating your own energy, taking advantage of generous feed-in tariff payments and saving carbon then read on...



FEED-IN TARIFF (FiT)

In April 2010 the Government introduced the Feed-in Tariff (FiT) which pays households and organisations a generous rate for all the power that they generate. From April 1st 2011 the rate will be 43.3p per kilowatt hour for systems of less than 4 kW - guaranteed for 25 years, tax-free and inflation-linked. This is in addition to the savings that will be made on electricity bills from the free power produced when electricity generated by the system is used. The FiT rate will drop from 1st April 2012

This offer is open to residents of Lichfield and Tamworth Districts and neighbouring areas. It may also be available further afield at slightly increased rates reflecting travel costs. Preferably you should have an unobstructed roof that is roughly between south-west and south-east facing. Planning permission is not required for domestic installations unless you are in a conservation area or the building is listed.

Even at these prices solar PV will be beyond many people's budgets so we have also identified a Birmingham-based company which will lease the roofs of suitable properties for 25 years. Under this arrangement the company would receive the feed-in tariff and the homeowner would benefit from free electricity supplied by the panels (generally estimated to be around 30-40% of annual bills). For more information on this please contact Mike Kinghan (details on the next page).

We do ask for a small donation to take account of the costs we have incurred in developing and publicising this initiative - this also contributes towards other projects we are promoting such as energy efficiency and renewables.



HOW TO TAKE PART

For further information or to request a free, no-obligation survey contact either Mike Kinghan of WFEG via mike@wfeg.org.uk or on 01543 432238 or Colin Strong of New World Solar on 07831 533024.

Once the site has been surveyed, New World Solar will send you a quote. The quote you receive will be prepared specifically for your house, hence it may vary slightly from the guideline pricing. If you'd like to arrange a survey straight away, please contact us.

If you are satisfied with the offer, you accept it formally, and you will then be contacted to arrange an installation date. Full payment is due on commissioning - a deposit is not required.

PRICES & OUTPUTS

The discounted costs for the group scheme are shown in the table below. These are a 20% discount on New World Solar's standard prices, which are themselves some of the lowest in the market. Other sizes are also available. Please note that prices and other figures in the table below may vary depending on individual circumstances.

Systems based on multiples of 230 watt Winaico panels. Includes scaffolding costs on a standard house with easy roof access. Annual generation is based on estimated figures of 850kWh generated per kWp installed - for a south-facing roof. Energy saved is based on using half of the energy generated, and exporting the rest (and includes a 3p per kWh export payment). Payback time is based on price including VAT and donation.

System size - peak	No of panels	Cost inc VAT at 5%	Donation to WFEG/LoCaL (suggested)	Anticipated annual generation	Est. benefit from FIT & energy-saving	Approx. payback time
1.38 kW	6	£4,711	£120	1150 kWh	£498 + £92	8.19 yrs
1.84 kW	8	£5,524	£140	1534 kWh	£664 + £123	7.20 yrs
2.30 kW	10	£6,599	£160	1917 kWh	£830 + £153	6.88 yrs
2.76 kW	12	£7,691	£180	2300 kWh	£996 + £184	6.52 yrs
3.22 kW	14	£8,581	£200	2684 kWh	£1162 + £214	6.24 yrs
3.94 kW	17	£10,201	£220	3259 kWh	£1411 + £260	6.10 yrs