

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 semiconducting 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 the flow of electricity.

How much electricity do Solar PV systems generate?

A suitably orientated, unshaded 1 kWp system can generate approximately 800 kWh (units) of electricity each year.

How much carbon will my panels save?

This varies with the size of system and its performance. Typical estimates range from 0.6 tonnes per year (t/yr) for a 1.5 kWp system, to 1.7 t/yr for a 4 kWp system, to 4.2 t/yr for a 10 kWp system.

How much money can I save and/or make?

For a typical 8 panel installation (2 kWp), in the first year, you will save around £100 on your electricity bill and earn £336 from the FIT. At the end of 25 years your savings could add up to over £12,600.

Where can I put my Solar PV panels?

PV panels (sets of panels together are often called 'arrays') can be mounted in a range of locations but the sloping roof of a building usually provides the best and simplest site. PV panels can, however, also be mounted on flat roofs or on the ground, using ballast or specially designed mounting frames. Most importantly Solar PV panels should be located in a broadly south-facing, 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 a structural survey be undertaken before proceeding with your installation.

Are there any other Solar Discount Schemes in operation?

Yes, the first nearby scheme was set up in spring 2011 by Whittington and Fisherwick Environment Group (WFEG). Their scheme is doing really well and they have shared their experiences and given us advice in setting up this scheme for the Stafford area, for which we are very grateful. If you want to find out about their projects please visit their website at www.wfeg.org.uk

For further information about the Stafford Area Community Solar discount solar energy scheme or other energy-related projects run by Sustainability Matters please visit the Stafford Area Save Your Energy website www.staffordarea.saveyourenergy.org.uk or phone Rob Hine on 01785 603 387.

Disclaimer

Sustainability Matters and Stafford Borough Council or any individual or individuals working to promote this scheme 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 through this project, including any loss or damage suffered as a result of the quality or lack of fitness for purpose of any good supplied or materials installed, or any failure by the supplier to deliver or install the goods or to install them to the purchaser's satisfaction. Sustainability Matters and Stafford Borough Council and members/employees of these organisations 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 Sustainability Matters or Stafford Borough Council.

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 given are based on the Government's official calculation methodology 'Standard Assessment Procedure' or 'SAP'. This takes account of roof orientation, slope and shade but it doesn't take account of latitude - thus Stafford is considered to be on a par with Stirling in sunshine terms, which clearly is not the case, and many systems in the Midlands and South are performing above their SAP based forecasts. However, British weather is full of surprises and estimates should not be considered as a guarantee of performance. Make sure you have checked the credentials of anyone visiting your home and take appropriate security precautions.



Stafford Area Community Solar (SACS) is a solar energy discount scheme run by Sustainability Matters in partnership with MEB Total and supported by Stafford Borough Council.

Stafford Area Community Solar (SACS)

Discount Solar Energy Scheme

Generate your own electricity, receive the feed-in tariff payments and reduce your fossil fuel use and carbon emissions.



Stafford Area Community Solar (SACS) Discount Solar Energy Scheme

You can save money on energy bills, get a guaranteed return on capital and reduce your carbon footprint.

Sustainability Matters, with support from Stafford Borough Council, have arranged a discount solar electricity scheme for households, businesses, community groups and schools in Stafford Borough.

MEB Total Ltd (a local installation company) has agreed to offer solar photovoltaic (PV) systems at a highly advantageous rate.

Feed-in tariffs: money from the sun!

In April 2010 the Government introduced the Feed-in-Tariff (FIT) scheme which pays households and organisations for all the electricity they generate from renewable sources. The top rate until April 2012 is 43.3p per kilowatt hour (KWh) for retrofitted systems of less than 4 kW capacity - guaranteed for 25 years, tax free and inflation linked. This tariff 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 in your building.

IMPORTANT NOTE: The FIT rate will fall from 1 April 2012, probably to 21 p/kWh, but this will not affect people whose systems are already registered under the FIT scheme. Systems installed, commissioned, and accredited with an electricity supplier before 12 December 2011 will be eligible for the existing higher FIT rate over the full 25-year period. Those accredited after this date will get the current rate until 1 April 2012, and the new, lower rate thereafter.

How to take part in the SACS scheme:

This offer is open to residents, businesses, or community organizations of Stafford Borough. You can see a map of the Borough at www.staffordbc.gov.uk/DemServWards

Is my building suitable?

For maximum electricity generation an ideal location consists of an unobstructed roof that faces roughly south. However, other sites can also be usefully considered. Planning permission is not required for domestic solar panel installations unless the building is located in a Conservation Area or is a Listed Building.

What do I do next?

For further information, or to request a free, no-obligation survey either contact

Rob Hine of Sustainability Matters
EMAIL info@saveyourenergy.org.uk | TEL 01785 603 387 | VISIT www.staffordarea.saveyourenergy.org.uk
or the Solar Team at MEB Total Ltd
TEL 0845 2263 233, quoting the promotional code SACS.

Once your property has been surveyed, MEB Total will send you a bespoke quotation. The quote you receive will be prepared specifically for your house, hence it may vary slightly from the guide prices shown in the table.

If you are happy with the offer, you accept it formally, and you will then be contacted to arrange an installation date. A deposit of 10 - 20% is normally required, with full payment on completion.

Sustainability Matters will charge a small fee to take account of the costs incurred in developing and publicising this initiative and help towards ongoing administration costs. This also contributes towards other sustainable development projects we are running.

Prices and outputs

Some typical discounted prices for the SACS scheme are shown in the table below. These represent an approximate 20% discount on MEB Total's standard prices. Other sized systems, not listed, are available. Prices and other figures in the table may vary depending on individual circumstances. This table has been compiled using the anticipated new lower rates of feed-in tariff that will apply from 1 April 2012 to systems registered after 12 December 2011.

System Information

System size (kilowatts peak, kWp)	1.5	2.5	4	6	8	10
No. of panels (250 W)	6	10	16	24	32	40
Installed cost (inc. 5% VAT)	£4858.00	£6545.00	£9517.00	£13,174	£17,323	£20,972
Referral fee to Sustainability Matters	£150.00	£150.00	£200.00	£230.00	£230.00	£250.00
Overall cost	5008.00	6695.00	9717.00	13,404.00	17,553.00	21,222.00

Projected annual income and savings (assuming 800 kilowatt hours generated for every kWp capacity installed)

kWh per year	1200	2000	3200	4800	6400	8000
Generation tariff (<4 kWp = 21p; 4-10 kWp = 16.6p)	252.00	336.00	672.00	806.40	1075.20	1344.00
Estimated savings on electricity bill (50% @ 13p/kWh)*	80.00	120.00	200.00	300.00	400.00	500.00
Export tariff (deemed 50% of generation @ 3.1p/kWh)	18.60	31.00	49.60	74.40	99.20	124.00
Projected annual revenue	350.60	487.00	921.60	1180.80	1574.40	1968.00
Projected lifetime revenue (over 25 years; not adjusted for inflation or electricity price changes)	8765.00	12,175	23,040	29,520	39,360	49,200
Payback period (years)	14.28	13.74	10.54	11.35	11.15	10.78
Annual return on investment	7%	7.27%	9.48%	8.81%	8.96%	9.27%

*Savings on electricity will vary depending on how much electricity is used in the building during daylight when solar panels are working, and the cost of electricity. Savings are greatest when daytime usage is maximized. Revenues and returns are all estimated at current prices. Payments under the Feed-In Tariff scheme are guaranteed for 25 years, are tax free, and are adjusted annually in line with inflation.

Sustainability Matters... Who are we?

We are a not-for-profit voluntary organisation representing the community of Stafford Borough on sustainability issues. We seek to create a community in Stafford Borough that is environmentally, socially and economically sustainable and is founded on sound ecological principles. As part of this commitment to improving the quality of life for both present and future generations, we are helping to develop practical sustainability measures and initiatives across Stafford Borough. An important focus of our work concerns the use of energy, and with support from Stafford Borough Council we have set up the popular 'Stafford Area Save Your Energy' website www.staffordarea.saveyourenergy.org which contains practical advice on how to become more energy efficient in your home, how to stay warm and how to reduce energy bills. The site also looks at ways of generating your own heat and electricity using renewable energy sources, giving lots of local examples. The 'Stafford Area Community Solar' project is an extension of this work.

MEB Total Ltd

Our installer for this scheme is MEB Total Ltd, chosen after a rigorous selection process. Based in Fenton, Stoke on Trent, MEB Total is a construction company offering mechanical, electrical and building services. It can provide advice and expertise not only on the solar panels themselves, but on any other aspect of the building's structure or electrical systems that may need attention to ensure a safe and reliable installation. For more information visit www.mebtotal.co.uk