FAQs

About the Community Solar PV scheme

CREW has teamed up with Social Power Partnerships (SPP), a leading UK renewable energy developer, to offer community solar photovoltaic ("PV") systems at a reduced rate. By pooling together a number of installations in the same area, installed at the same time, it enables CREW to drive down both the equipment and installation costs.

Social Power Partnerships have been involved in providing solar PV systems across the UK for a range of clients including private homeowners, charities and housing associations.

Economic benefits of installing Solar PV

- A forecasted 10.5%-17.5% tax-free return on your investment. Much better than your ISA!
- Insulate yourself against energy bill rises. The government recently reported that energy bills have risen 158% in the last 15 years, and energy companies are planning on raising prices further to pay for national infrastructure upgrades
- Scottish and Southern recently announced that it will increase electricity prices by 14.9%, from May 2017. By installing solar PV, you can reduce your monthly energy bills and protect yourself from future price rises.

What is a Solar PV system?

A solar PV system converts sunlight into electricity you can use in your home. In London you can expect to generate between 800 and 975 hours per kWp of solar PV installed, depending on roof orientation and shading.

Is my property suitable?

There are several factors that need to be considered to understand whether your property is suitable for a PV system:

Roof

Orientation: If you have a roof that faces east, southeast, south, southwest and west, then your roof is facing in the right direction. The performance of your system will be affected by the orientation; systems facing due south will produce more electricity than those orientated towards the east or west.

Shading: Shading needs to be kept to an absolute minimum, so if your roof suffers from shading (e.g. trees or nearby tall buildings) most of the time, then it may not be suitable, even if it is facing due south.

Area: To fit a minimum 6 panelled PV system you need an uninterruptable area approximately 3.6m wide by 4.2m high.

Tiles: To keep costs of the scheme to a minimum, it has been assumed that no roof is tiled with slate, or similar flat tiles. If your roof is, then this will increase the installation time, and the system cost. We can advise on what impact on price this will have.

Flat Roof: If you have a flat roof, you will need to arrange a structural survey before considering Solar PV. SPP can help arrange for a structural engineer to survey your property. This will cost around £200. Framing (used for attaching the panels to the roof) for flat roof systems also costs more, between £100-200 depending on system size.

Internal

Inverter location: An inverter needs to be installed internally, usually in the loft space. This is wall mounted and needs 1m x 1m of space to fit the inverter (50cm x 50cm x 20cm) and space around.

Cable run: We need to connect the inverter to the fuseboard. Wherever possible this cable run will be hidden, but it may require running a cable down a wall and lifting carpets and floorboards. The generation meter will be mounted so that you can easily read the meter for submission to your electricity supplier.

Do Solar PV systems work in the UK and how much will they generate?

The UK receives plenty of the suns radiation to work very effectively. Using the Governments Standard A P ("SAP") measurements it is anticipated that a system installed in your area will produce the following output per year:

Roof orientation	Hours per kWp
East or West	803 kWh
South-east or south-west	931 kWh
South	978 kWh

What sized system should I choose?

There are a number of factors to consider:

- How much roof space do you have available?
- How much do you wish to spend?
- Do you wish to optimise your return on investment or your domestic consumption?

- If you wish to optimise returns and you are a low energy (3000kWh or less) user pick a 1.56kWp- 2.60kWp system. If you are a higher energy user consider either a 2.08kWp- 3.12kWp system.
- Do you want to future proof your system? Battery storage is becoming an ever more viable option. Should you plan to install a battery in the next few years, you may prefer to install a larger system. This will allow you to store more of the electricity you generate and earn income from demand response services to the grid.

How much roof space do I need?

You will need a minimum of 2.6m wide (w) by 4.2m high (h) to fit a 4-panelled PV system.

System size	Roof space required
1.04 kWp system – 4 panels	2.6m (w) x 4.2m (h)
1.56 kWp system – 6 panels	3.6m (w) x 4.2m (h)
2.08kWp system – 8 panels	4.6m (w) x 4.2m (h)
2.6 kWp system – 10 panels	5.6m (w) x 4.2m (h)
3.12kWp system – 12 panels	6.6m (w) x 4.2m (h)

How much will a Solar PV system cost me?

By pooling together installations within the local area, and ordering the equipment, as well as installing, at the same time we can drive down the cost of both the equipment and the installation. Based on a desktop assessment it is anticipated that the following system costs will be available:

Sytem Size	10+ systems	20+ systems	50+ systems
1.04 kWp system	£1,740	£1,720	£1,700
1.56 kWp system	£2,050	£2,015	£1,980
2.08kWp system	£2,385	£2,240	£2,195
2.60kWp system	£2,700	£2,650	£2,600
3.12 kWp system	£3,170	£3.115	£3,060

These prices are subject to site survey and are based on there being no need for third party roof access (scaffolding), pan-tiled roof, and a accessible route from the PV modules to your fuseboard. These quotes are for pitched roof systems only and include VAT.

If scaffold is required prices could increase by a further £400. Slate roofs will cost £100-£200 more than a standard tile. If you have a flat roof you can expect to pay an extra £150-£300 for the framing kits.

Check for your self how these prices compare with the market:
http://www.theecoexperts.co.uk/how-much-do-solar-panels-cost-uk

What can I expect to earn from my Solar PV system?

You can view your returns as coming from three sources:

- A subsidy called the Feed in Tariff (FiT) from the government, currently 4.04p for every kWh your system generates
- Deemed export. For simplicity the Government assumes that you will export 50% of the energy you generate and pays for that deemed export. The current deemed export price is 4.91p per kWh.
- The savings you make from consuming the energy you generated from solar PV on your roof.

The tables below will illustrate potential returns you can get depending on system size and roof orientation.

1.04kWp system

Orientation of roof	Hours of Sunshine	Years to payback	Return on Investment	CO2 Saved over 25 years (t)
East or West	803	10	10.01%	10.64
South West or South East	931	9	11.36%	12.35
South	978	9	11.80%	12.97

1.56kWp system

Orientation of roof	Hours of Sunshine	Years to payback	Return on Investment	CO2 Saved over 25 years (t)
East or West	803	9	11.34%	15.86
South West or South East	931	8	12.58%	18.53
South	978	8	12.99%	19.45

2.08kWp System

Orientation of roof	Hours of Sunshine	Years to payback	Return on Investment	CO2 Saved over 25 years (t)
East or West	803	9	11.57%	21.28
South West or South East	931	8	12.72%	24.70
South	978	8	13.18%	25.93

2.60kWp System

Orientation of roof	Hours of Sunshine	Years to payback	Return on Investment	CO2 Saved over 25 years (t)
East or West	803	9	11.61%	26.60
South West or South East	931	8	12.83%	30.88
South	978	8	13.26%	32.42

3.12kWp System

Orientation of roof	Hours of Sunshine	Years to payback	Return on Investment	CO2 Saved over 25 years (t)
East or West	803	9	10.87%	31.93
South West or South East	931	9	12.08%	37.06
South	978	8	12.49%	38.90

The model assumes the following in preparation of the above: 10+ systems ordered and installed together, annual average consumption of 3500 kWh, and you pay 15p per kWh for your electricity.

Do I Need Planning Permission?

Planning permission is not generally needed to install a solar PV system. However, if you live in a conservation area or your property is listed, then planning permission may need to be obtained. SPP can advise on each case and offer support in tendering a planning request.

I've heard I need an EPC, what is this?

An Energy Performance Certificate ("EPC") provides an energy rating for a home and is similar in format to that of your domestic appliances – 'A' rating being the most efficient, down to 'G' rating, being the least. In order to receive the highest

FiT rate for your PV system your property needs to have an EPC rating of 'D' or above before your PV system is installed.

EPCs were introduced in 2007, so if you've bought your property since 2007 then you should have an EPC. If you don't have an EPC, then we can arrange for one to be undertaken on your behalf for £50.00. You can check if you have an EPC here: https://epc.opendatacommunities.org/domestic/search

What does a technical survey involve?

A survey is needed to ensure that your property is suitable and a PV system can be installed efficiently. We will be checking the orientation and pitch of your roof, shade factors, roof strength, where to fit the inverter and the cable run to your fuseboard.

The whole survey process should take less than 45 minutes and the surveyor will need access to your property. This survey will cost £30. This sum will be subtracted from the cost of your system should you proceed.

What is the process and is there much paperwork involved?

If you wish to register your interest in this scheme you will need to complete the Customer Registration form. Once enough people have registered their interest we will be in contact to arrange a site survey to ensure that your property is

suitable and provide an accurate cost - the surveyor will need access to your property to undertake this survey.

Once enough people have confirmed their interest, following receipt of the quotation, we will arrange an installation date with you. We will also invoice you for 70% of the installation cost at this point

We will need access to your property and your attendance to sign-off the installation. Once the system is installed we will guide you through the controls of the system and ask you to sign-off delivery. We will then invoice you for the final 30% of the installation cost. Once this is received we will issue you with a system pack that has all of the information about the system and all of the details needed to register your system with your electricity provider.

You will need to contact your electricity provider and request details on how to register your system for the "Feed-in Tariff" – we will provide you with the information you need, and the supporting documentation. If you would prefer us to handle this, we will manage the process for a fee of £50.

Once the system is registered you will need to submit the generation meter reading on a quarterly basis to receive the benefits.

What maintenance of the system is required?

There is little maintenance required although we do suggest that you periodically inspect the inverter to ensure that the system is functioning. There is little to go wrong with the PV modules, and they are generally "self-cleaning". It is anticipated that the PV panels will last 30years + and are warranted for 25 years.

The inverter will need replacing, generally around every 12-15 years, depending on the performance of your system. When calculating the potential revenues of your system, we have assumed that the inverter will be replaced in year 15 at a similar cost to today's prices.

Can I monitor my system?

If you wish to monitor your system from an app on your phone, tablet or computer we can supply you with a dongle that attaches to the inverter – this will then allow

you to monitor the performance of your system via your home's W-Fi network. The supply of a dongle will be £50 and is simply attached to the inverter.

What impact will fitting have in my home and will I need to be present?

The vast majority of the work is done outside of the house, and the internal components and wiring take up very little space. A typical installation can be completed within half a day. You will need to be present while we install the system, as there will be internal works. A wire will need to run from the inverter to you fuse board. We would also like to show you the system after it is installed and guide you through how it works.

How long will it take from placing my order to get the system installed?

This depends on how long it takes for other people in your area to commit along with yourself. By pooling together a number of systems and ordering / installing them in one go, we are able to reduce the overall costs. Without this pooling, we are unable to offer the price quoted. You can help us sign up more people by speaking to neighbour, friends and colleagues about the system.

Through registering your interest we will keep you updated on our progress.

I read something about tax increases on Solar PV systems, does that affect me?

You may have read that the Government is increasing business rates on solar PV, but that does not affect domestic systems. You will continue to benefit from a tax-free income that rises in line with inflation.

Next Steps

1) Contact our partner Social Power to arrange a site survey at info@social-power.co.uk. Please include a contact number and how you heard about the campaign (this will allow to attribute the community fund accordingly). You are requested to pay a £30 deposit at this stage to cover the cost of the site survey.

2) Fill out the order form and fix a date for the install.

3) Pay a deposit of 70% two weeks prior to the install date.

4) Installation, connection, demonstration and sign off.

5) Pay the remaining 30% in 7 days of installation

6) Social Power will provide you with a system pack including warranties, instructions and how to apply for the Feed in Tariff.

Technical Components of a Solar PV System

PV modules: These are panels that are nominally 1.7m high by 1m wide and are fitted to your roof, orientated between East and West. These panels convert sunlight in to DC power. The PV modules are attached to a specifically design mounting system that is attached to your roof.

Inverter The inverter converts the DC power produced by the PV panels into AC power to be used within your house. It is a small wall mounted unit that is normally located in the loft space, although it can also be installed in a utility room or garage. You will need 1m x 1m wall space for the inverter to be mounted on, allowing space around the inverter for airflow.

Gen. Meter A generation meter is installed between the inverter and your fuseboard. This measures the AC power that has been produced by the PV system. You will then provide the figure recorded on a quarterly basis to get paid by your electricity company.

Cables The PV modules are connected to the inverter using DC cables.
The inverter is connected to your fuseboard using AC cables

Isolators There are 2 types of isolators installed within your PV system to enable you to shut down for safe maintenance. A DC isolator, to switch off the PV modules to the inverter and 2 AC isolators to shut down the system providing electricity into your house.

All components used within your system are designed in accordance with UK regulations for PV installations.