



Solar PV Brochure

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Why Choose JSC Installations?

Established in 2003 JSC Installations are registered electrical contractors and fully certified MCS installers (MCS Number: ELC23638) specialising in the supply, design and installation of solar panels, solar energy and photovoltaic (PV) systems.

Our team are fully qualified professionals and have the latest industry knowledge to ensure that every installation meets the needs of the system, government regulations and the requirements of our valued customers.

We design bespoke systems meeting the individual needs of our clients, whether it is a domestic install to reap the benefits of clean energy cashback through feed in tariffs, or off-grid systems bringing power to people in the most unlikely of places, you can rest assured that our system designers will produce the right system for you.

JSC Installations are members of the REAL assurance scheme and as such follow a strict code of conduct ensuring that we engage our business in a fair, honest and professional manner, our customers can rest assured that every effort will be made to ensure that their installation will run as smoothly as possible.

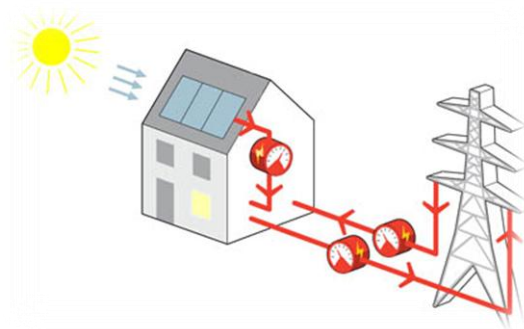
Remember JSC Installations take care of everything from initial survey to commissioning and our prices are 100% inclusive and all quotes are free.

Best wishes

JSC Installations team



How do photovoltaic's work?



Photovoltaic's (PV) is a method of generating electrical power by converting solar radiation into Direct Current (DC) electricity using semiconductors; this is called the photovoltaic effect.

Photovoltaic power generation uses solar panels comprised of a number of cells containing a photovoltaic material.

The electricity generated by a solar pv system is either stored in batteries in the case of off-grid systems, or used within the home and any excess can be exported back to the main electricity networks.

To use the electricity generated in the home a device called an inverter is used, this equipment converts the DC electricity generated from the pv panels to standard 230V AC, and from there can be used or exported to the national grid.

Due to the growing demand for renewable energy sources, the manufacture of solar cells and photovoltaic arrays has advanced considerably in recent years.

As of 2010, solar photovoltaic's generates electricity in more than 100 countries worldwide and, while it contributes a tiny fraction of the 4800 Gigawatt (GW) total global power-generating capacity from all sources, is the fastest growing power-generation technology in the world.

Between 2004 and 2010, grid-connected PV capacity increased at an annual average rate of 60 %, to 21 GW, with Britain being cited as the fastest growing solar economy in Europe, with current estimates reflecting a 1500 % growth since 2009.

Solar PV installations may be free standing, ground-mounted or built into the roof or walls of a building, known as Building Integrated Photovoltaic's or BIPV for short. Off-grid PV systems are not attached to the main electricity network.

Photovoltaic arrays are often associated with buildings: either integrated into them, mounted on them or mounted nearby on the ground.

Arrays are most often retrofitted into existing buildings, usually mounted on top of the existing roof structure or on the existing walls. Alternatively, an array can be located separately from the building but connected by cable to supply power for the building.

Building-integrated photovoltaic's (BIPV) are increasingly incorporated into new domestic and industrial buildings as a principal or ancillary source of electrical power. Typically, an array is incorporated into the roof or walls of a building.

The power output of photovoltaic systems for installation in buildings is usually described in kilowatt-peak units (kWp).

Financial Benefits

The installation of a solar pv system benefits you in not only generating clean renewable energy and helping to reduce your carbon footprint, but it is also a very good financial investment generating a yearly income and adding value to your home.

Once the initial outlay of the system is paid for, your pv system will then begin to payback the cost of install, typically this can take between 8 – 12 years.

You will generate revenue in three main ways:

- For each unit of Electricity generated your energy supplier will pay you even if you use that electricity!
- Your energy supplier will pay you an additional sum for all electricity exported back to the National Grid.
- By generating your own electricity you will import less from the National Grid and therefore reduce your overall energy bills.

The Feed-in Tariff (FIT)

The Feed-in Tariff (FIT) is a government incentive which pays people to generate their own "Green" electricity; the scheme was developed to enable the Government to achieve its obligations under EU laws to generate 15% of the Electricity consumed from renewable technologies by 2020.

The FIT scheme makes it more financially viable for householders and businesses to buy and install a renewable energy generator, such as solar photovoltaic (PV) panels or a wind turbine. Qualifying generators will be eligible to receive a set payment rate for every unit (kWh) of electricity produced, even if this electricity is used on site. Additional export payments may also apply.

Generation and Export Tariffs:

Payment rates for both generated and exported electricity are fixed, and for solar PV, generation rates apply for up to 25 years. This gives anyone registered in the scheme the security of a long-term market for the electricity they produce.

The current generation tariffs are reflected in the following table:

System Size	Generation Tariff Levels £/kWh	Export Tariff £/kWh	Tariff Lifetime (Years)
≤ 4Kw (New build)	£0.361	£0.03	25
≤ 4Kw (Retrofit)	£0.413	£0.03	25
>4kW - 10kW	£0.361	£0.03	25
>10kW - 100kW	£0.314	£0.03	25
>100kW - 5MW	£0.293	£0.03	25
Standalone system	£0.293	£0.03	25

What Can I expect to earn?

There are many factors that can affect how much energy you generate the main one being the capacity of the installed system. An average UK household could expect to see earnings and returns similar to the table below:



System Size: 2.30 kWp	
Output (kWh) per annum:	1,940
Anticipated annual revenue:	£1,072.82
Anticipated income over 25 years:	£26,820.50
Anticipated profit after 25 years:	£17,056.50
Return on investment (ROI):	10.99%
Payback (years)	9.10

The Design and Installation Process

From initial contact to the commissioning and handover of your system, we like to have our customers as involved as they want, we're as happy explaining the install process as we are getting on with the job.

Our trained team will conduct a site survey to ascertain the suitability of your property or site for Solar PV; we will then make any recommendations that need to be addressed for any installation to proceed.

Our team will then propose a range of systems which meet your requirements, site and budget. Through a close working relationship we will work in partnership with you to tailor the correct system, taking into consideration your needs, planning requirements and what is structurally viable.

Once your optimum system is chosen, we will provide you with information on the system and its estimated output and a schedule of how the installation will proceed.

Then it's over to us, we will fully project manage the install process, working with any other contractors that may be on site.

Once installed we will fully test and commission the system, and provide you with all the relevant documentation and MCS certificate so that you may claim the feed-in tariff from your energy supplier.

We will guide you through the whole process of liaising with your energy supplier and in some cases may be able to do this for you, making the whole process as painless as possible.

Certification and Regulations

JSC Installations is fully compliant with all building control and electrical regulations, and as a Part P Elecsa registered company we ensure that any additions or adjustments to your current A/C electrical system will be fully compliant with current legislation, and where applicable certificates will be issued and the appropriate authority notified of such works. For more information on Elecsa please visit: <http://www.elecsa.co.uk>

JSC Installations is accredited under the Microgeneration certification scheme (MCS) to install and commission solar PV systems, and as such all installed systems qualify for government feed-in tariffs. All equipment and practices comply with UK and European Union directives in accordance with the MCS scheme, for more information please visit: www.microgenerationcertification.org



As members of the REAL Assurance Scheme, we agree to abide by the REAL Assurance Scheme Consumer Code. It covers all the factors that contribute to a high standard of consumer service, before, during and after a contract is agreed.

These include:

- clear information on the systems planned and their performance
- acceptable sales and marketing techniques
- arrangements for installing and connecting the system
- the selection and quality of goods supplied
- details of the conditions of business that apply
- the standard of any installation and other on-site work
- guarantees, and any maintenance and after-sales services needed
- what action will be taken to deal with any problems
- arrangements for monitoring and continuously improving the Code.

You can view the REAL code by visiting the following website: <http://www.realassurance.org.uk/real-assurance-consumer-code>

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JSC Installations is the trading name of JRC Services UK Limited, Company No. 06999080, Vat No. 983 2291 01

