

APPROVED INSTALLER



# TREADLIGHTER

## The Case for Commercial Solar PV



This document summarises the long-term benefits that accrue to commercial building owners for investing in the installation of a Solar Photovoltaic (Solar PV) system.

As a Renewable Energy source, Solar Photovoltaic (Solar PV) systems generate electricity from daylight (Solar Irradiation). As there are no moving parts in a Solar PV system they require minimal maintenance and are covered by a warranty and guarantee that can be extended for a term of up to 20 years.

In the vast majority of cases, solar energy system installations on commercial buildings do not require planning consent. Where required, eg buildings with listed status, we can assist with the preparation and submission of all required documentation.

Once a system has been installed, the building becomes a micro-generator and an application to join the UK Government's 'Feed-in-Tariff' (FIT) scheme can be made. It is a straightforward process and the benefits that accrue to the owner of the system for the micro-generation of electricity are as follows:

### FIT - Generation & Export payments - Guaranteed for 20 yrs

The amount of electricity (kWh) produced by the Solar PV system is measured via a meter we install (Total Generation Meter) and under The Energy Act 2008, through your electricity provider you are paid for every kWh the system produces. It does not matter who uses the electricity, the fact that you generate it qualifies you to receive the FIT payments, which are usually received quarterly.

|  |                   |
|--|-------------------|
| The amount you are paid for each kWh of electricity varies according to the kWp size of the system and current rates are as follows: | <= 10 kW - 3.93p  |
|  | <= 50 kW - 4.15p  |
|  | <= 250 kW - 1.89p |
|  | Export kW - 5.03p |

Any electricity generated that is not used in the building automatically flows back to the grid and will be used by someone else. With the exception of large systems ie >30kW the amount exported is not measured. Instead it is 'deemed' and everyone is assessed as having exported 50% of what has been generated. Irrespective of the system size, you will receive a smaller payment of 5.03p for each kWh of electricity deemed to have been exported. It is the total of these two payments that represent the Annual Income Generated for the system owner under the FIT Scheme.



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To ensure that your building will qualify to receive the full tariff payment per kWh generated you will have to show that your building achieves an EPC (Energy Performance Certificate) rating of D or better before the PV system is installed. If you do not have an EPC for your building we can provide this for you the cost for which will depend on the size and complexity of the building.

## Annual Electricity Saving & CO2 Reduction

With a Solar PV system there is a third way in which an annual benefit accrues to the building / owner and due to the fact that commercial buildings have higher continuous base loads and are occupied mainly during daylight hours, the ROI possible is generally greater than that for Domestic properties.

The more of the electricity generated by the Solar PV system that is used in the building the less electricity will have to be imported from the grid to meet demand. As such, a saving will be made off the annual cost of grid electricity and therefore CO2 emissions for the building will be reduced.

Electricity produced by the Solar PV system will always be used first with additional power required to meet the buildings demand supplemented by the grid.

The following is an illustrative example:

### A 15kWp Solar PV System facing due south on an unshaded roof

|  |                               |
|--|-------------------------------|
| Forecast Generation pa -                   | 13,440 kWh                    |
| Fully Installed System cost (ex vat) -     | £17,200                       |
| Electricity Generated & used on premises - | 75%                           |
| Grid kWh cost -                            | 11.0p                         |
| A FIT Generation                           | 13,440 x 4.15p = £558         |
| B FIT Deemed Export @50%                   | 6,720 x 5.03p = £358          |
| C Forecast Saving pa                       | 13,440 x 75% x 11.0p = £1,109 |
| Total Annual Benefit A+B+C                 | £2,025                        |
| ROI  | 13.4%                         |
| Payback period                             | 7.7 yrs                       |
| Total Benefit 20yrs                        | £55,394*                      |
| CO2 saved pa                               | 6.0t                          |

\* Using an RPI figure of 3.25% and annual fuel inflation of 3.6%



Solar PV allows otherwise redundant roof tops to generate a revenue stream guaranteed for 20 years, create annual savings on electricity costs and reduce the buildings annual CO2 emissions.

## The Benefits of Commercial Solar PV

- Reclaimed vat reduces Installation Cost & improves ROI
- Daytime occupancy & larger continuous base loads maximise grid saving
- Larger roofs = Larger systems = Greater economies of scale
- High levels of ROI possible
- Guaranteed 20 yr income stream for system owner
- Reducing CO2 emissions = positive PR message (CSR)
- Reduced electricity cost for Tenants increases desirability
- May add value to the building - FIT stays with it
- Minimal maintenance
- Long guarantees & warranties = peace of mind



For Free Advice, System Designs, Surveys & No Obligation Quotations, Please get in touch

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