



ONE PLANETS CONSULTANTS LTD

## SOLAR PHOTOVOLTAIC (PV)

OPC can design and supply complete Solar PV systems from leading manufacturers throughout the world, from small domestic systems to larger ground-mounted solar arrays. Our market-leading range of Solar PV components offer the right solution for every project.



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# SOLAR PHOTOVOLTAIC (PV) SYSTEMS

Solar panel systems, also known as solar photovoltaics (PV), capture the sun's energy using photovoltaic cells. These cells don't need direct sunlight to work – they can still generate some electricity on a cloudy day.

The cells convert the sunlight into electricity, which can be used to run household appliances and lighting.

PV cells are made from layers of semi-conducting material, usually silicon.

When light shines on the cell it creates an electric field across the layers.

The stronger the sunshine, the more electricity is produced. Groups of

cells are formed together to create modules, these modules that can

either be mounted on your roof or on the ground.



The power of a PV Module is measured in kilowatts peak (kWp). That's the rate at which it generates energy at peak performance in full direct sunlight during the summer. PV systems or 'arrays' are made up of modules that fit either 'On-Roof' or 'In-Roof' which is mostly fitted to new build properties, an alternative to modules are solar tiles.

- Cut your electricity bills. Sunlight is free, so once you've paid for the initial installation, your electricity costs will be reduced.
- Get paid for the electricity you generate. The UK government's Feed-in Tariff scheme comprises of the 'Generation Tariff' & 'Export Tariff', the Generation Tariff is paid for the electricity you that your system generates.
- The 'Export Tariff', the electricity provider will pay 50% of your total generation as they assume that is approximately what you will not use and what will be exported back into the grid. This 50% is paid even is you use ALL of the electricity you generate. Battery storage can become a significant benefit because of this assumption.
- Cut your carbon footprint. Solar electricity is green renewable energy and doesn't release any harmful carbon dioxide or other pollutants. A typical 4kW Solar PV system could save nearly two tonnes of carbon per year.

One Planets Consultants have the design and installation expertise for any PV installation, whether it is single or multiple elevations, pitched or flat roof mounted. Small ground mounted systems or large PV farms, OPC can provide the design, supply, installation, commissioning and MCS registration of your Photovoltaic System.

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