



## Specialist Glass Systems

# Solar PV Solutions

## Solutions

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The Government has committed the UK to reduce carbon emissions by 20% by the year 2020; almost half of these emissions are generated by our buildings, so by investing in this technology now we are not only 'doing our bit' to help, we are taking advantage of the generous feed in tariffs which started in April 2010 and are fixed at current levels for 25 years for installations prior to April 2012, see [www.energysavingtrust.org.uk/Generate-your-own-energy/Sell-your-own-energy/Feed-in-Tariff-Clean-Energy-Cashback-scheme](http://www.energysavingtrust.org.uk/Generate-your-own-energy/Sell-your-own-energy/Feed-in-Tariff-Clean-Energy-Cashback-scheme).

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Specialist Glass Systems has the expertise, in conjunction with our systems provider, to assist architects, contractors and developers design buildings which can be 'zero carbon', by the use of building integrated photovoltaics (BIPV). PV cells can be incorporated into vertical cladding, curtain wall systems, brise soleil shading systems, external balustrading and balconies, as well as roof glazing. By skillfully combining different glass products with PV cells, solar energy can be harnessed to heat the building, generate green electricity and an income from the feed in tariffs, whilst being reflected away when appropriate by solar control products, to reduce the air conditioning load.

Whatever your requirements and budget, Specialist Glass Systems can tailor a solution to suit you.

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From the smallest possible installation of 3 panels (0.5kWp), to large commercial applications using solar PV incorporated into the overall energy strategy for your building, we have the expertise complemented by our partnership with Schueco, to develop an appropriate solution.

To achieve optimum performance, solar photovoltaic arrays should

be south facing, pitched at approximately 30 degrees. They can be 'on roof' (fixed over the existing roof structure, ideal for retrofit

applications) or 'in roof' systems (integrated into the roof tiling to form a part of the watertight membrane, usually used in new build or re-roof applications, saving on roof tile costs).

For flat roofs or where an array of solar PV panels is required on the ground (farmers fields can be ideal), they are mounted onto prefabricated aluminium frames in order to achieve the 30 degree pitch.

If your roof is not south facing, don't worry that solar PV power may not be for you; successful performance can be achieved anywhere from East to West facing. Specialist Glass Systems have computer software, which can demonstrate the potential effectiveness of the photovoltaic array for your individual application. Contact us on 01296 668148 or by email at [sales@specialist-glass.com](mailto:sales@specialist-glass.com).

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Whether you are considering electricity generation from solar PV power for your home, factory, office, school or anything else, everybody can benefit from the recently introduced feed in tariffs which guarantee you a minimum income for 25 years. In most cases the initial investment (which can be financed by outright purchase, increase of mortgage or a loan) will be paid back in approximately 10 years. Should inflation increase (the feed in tariffs are linked to the Retail Price Index) and/or electricity prices continue to rise, the income and benefits you receive from the scheme will increase comparably.

Solar PV cells can also be incorporated into other areas of the external building fabric, for example:-

- Photovoltaic cladding - used in curtain wall systems and other non-vision areas
- Photovoltaic brise soleil – double the benefit of the solar shading provided by conventional brise soleil by incorporating solar PV cells and generating some green electricity
- Solar PV in canopies – don't think about a canopy being just protection from inclement weather; by using photovoltaic panels instead of normal glass you can achieve microgeneration of electricity by connecting the array, through inverters in the building, to your power supply.

- Roof lights and atrium roofs can also include solar PV panels; make use of a glass unit which can be designed to offer solar shading, reduce heat loss from the building, and also generate free electricity through the feed in tariffs.
- Glazed balconies and balustrading can contain solar PV cells to generate some green electricity and provide more privacy than standard clear glass.