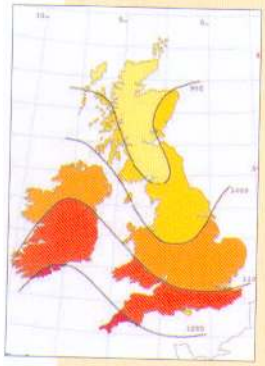
Solar Photovoltaic (PV)

What it is and what it does

Solar PV systems rely on daylight, rather than radiation, to generate electricity by capturing the sun's energy using photovoltaic cells.

When light shines on the cell it creates an electric field - the greater the intensity of the light, the greater the flow of electricity. The angle of the sun, number of sunlight hours, clouds, rain, snow and location all affect the performance of a photovoltaic array. However, Met Office figures show that, on average, the UK experiences 1350 hours of sunlight a year – 1470 hours in the south of the country, 1250 hours in the north - making a PV system a viable proposition.



The Government has introduced a Clean Energy Cash-back Scheme, also known as Feed-in Tariffs, whereby householders and communities who install low carbon electricity technology, such as solar photovoltaic panels, will be paid for the electricity they generate even if they use it themselves. In the case of PV, these rates are index-linked to inflation and guaranteed for 25 years.

Typical financial example

The average installation cost of an 8-panel PV array on a three-bedroom house is £7,800 including VAT (standard rate 5%).

The return generated from the Government Feed-in tariff scheme could be as much as £750 per annum.

A PHOTOVOLTAIC CASE STUDY

Happy to recommend Gregor to anyone!

With a background in electronic manufacturing - and with environmental considerations in mind - Nigel Burtt had been thinking for a while about a solar photovoltaic (PV) system. Following the introduction of the Government Feed-In Tariff scheme, and further detailed research, he set about obtaining a number of quotations from installers and from these we were chosen to carry out the work.

With a south facing aspect, his house built in 2003 is ideally situated for a solar array, however, gables at either side of the roof interfered with the sun's reception to a small degree. To offset the shading effect, Richard Blackmore, our renewable energy specialist, recommended an eight-panel array capable of producing 1.44 kwp (killowatt peak) energy to be positioned between the two gable roofs.

To Mr and Mrs Burtt's delight, installation of the Grant Monocrystalline panels and connection to the existing household electrical system was completed in just one day. Further, they reported that the Gregor engineers were friendly, carrying out their work in a clean and tidy manner.

Commenting, Nigel Burtt acknowledges that a PV installation is a long-term investment and that one needs to want to do it for more than just financial reasons. However, he felt that the uncertainty of future energy prices and the Government's Feed In Tariff initiative, together with the value that has been added to the property, made solar PV a viable consideration.

And, he added, he is happy to recommend Gregor to anyone.

LATE NEWS!

As part of a major refurbishment carried out by South Gloucester Council, we have just completed the installation of 85 Photovoltaic panels on the roof of the Council's Civic Centre in Kingswood. For more information see our website www.gregorheating.co.uk.

New "green" hall for Kingswood Scout Group

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communal rooms; and a Sedbuk A-rated gas boiler to work in conjunction with two solar thermal roof panels to provide hot water and heating to all other areas. Installation was scheduled to fit in with other building trade personnel and volunteers, all working within tight restraints to meet the opening day timetable. In a gesture to help keep costs down, we supplied all the sanitary ware and brassware at a much-subsidised rate.

The new building was officially opened in July 2010 and, today, Beavers, Scouts, Explorer Scouts as well as Cadet and Senior bands are using the hall, their ages ranging from 5 to 25 years.