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NORTH & WESTERN LANCASHIRE
CHAMBER OF COMMERCE



Fact Sheet: Solar Panels

1. What are solar panels?

There are two types of solar panels: -

A. Photovoltaic panels (PV) – which change energy from the sun into electricity. When light hits the silicon in the panel, it is converted into electricity. This electricity flows through a cable and is collected at a central point. The electricity is then converted for Direct Current (DC) into Alternating Current (AC). Electricity can either be used onsite, or it can be sold on to an electricity supplier. Photovoltaic panels are usually rectangular and are around 1 metre long;

B. Thermal solar panels – which use energy from the sun to heat water for central heating or hot water.

2. How much energy do solar panels generate and how much do they cost?

An area of 8m² in the UK will generate at least 750 Kwh per annum. An area of 8m² will cost around £7,000.

3. What grants are available?

The Photovoltaic Demonstration Programme, funded by the DTI, issue grants of 40-50 per cent for the purchase and installation of Photovoltaic panels. The grants are divided into two streams: -

Stream 1: Small-scale applications (0.5kWp - 5kWp)

- Owners of domestic dwellings;
- SMEs (Small/Medium Enterprises), i.e. organisations with less than 250 employees and less than £32 million annual turnover;
- Public bodies for use on public buildings (e.g. schools, health centres, etc);
- Voluntary / charitable organisations / community groups.

Stream 2: Large and Medium-scale applications (5kWp - 100kWp)

- Any organisation seeking support for installations from 5kWp to 100kWp, for example:
 - Housing developers;
 - Housing associations;
 - Businesses

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- Public bodies for use on public buildings (e.g. schools, health centres, etc;)
 - Energy service companies;
 - Voluntary / charitable organisations / community groups.

The Iotech Group would be eligible for a Stream 1 grant. An application form can be downloaded by clicking on the following link <http://www.est.org.uk/solar/how/applicationforms.cfm>

4. Is planning permission required before installing solar panels?

Planning permission is rarely required, unless the panels project significantly beyond the slope of the roof. Most Councils encourage the use of solar panels as part of their Local Agenda 21 objectives.

5. Which buildings are suitable and how are the systems fitted?

Solar panels are suitable for almost any building. Systems can either be: -

- bolt-on - which are literally bolted on to the existing building;
- integrated - an integrated system replaces the existing roofing system e.g. by replacing slate roof tiles with photovoltaic roof tiles.

6. What maintenance do they require?

Little maintenance is required by solar panels. They typically have a life span of 25-30 years.

7. What are their environmental benefits?

The energy produced by solar panels produces no emissions. It can be used as an alternative to electricity from an energy supplier. An area of 8m² will prevent the release of 8 tonnes of CO₂ over its 25-30 year lifespan.

Further Information on solar panels can be found from

www.est.co.uk/solar (Grants)

www.pv-uk.org.uk/ (The British Photovoltaic Association)