



Solar Electricity - photovoltaics

How does it work?

Photovoltaic (PV) cells made from semiconductor material convert energy from the sun into electricity which can either link to the national grid or direct to individual properties. The brighter the sunlight, the more power is produced.

What are the benefits?

- Source of energy is free and clean
- Can be integrated into the fabric of the building, eg roof-mounted – no land take-up
- Well established and proven technology
- Low maintenance with a long lifespan
- Significant potential
- Silent operation
- Can help contribute to reducing Carbon Dioxide (CO₂) emissions from properties
- Can be used at various scales from domestic stand-alone schemes to larger projects serving schools and business parks
- Often no need for a planning application for most microgeneration installations at a domestic-level¹ - please contact the Council's Development Control Section for further details (e-mail: planning.applications@tmbc.gov.uk Tel: 01732 876230)
- Government grants available

When and where is it suitable?

To optimise performance, PV installations need to be mounted on a south facing roof/wall inclined at an angle of 20-40 degrees. A PV system will operate well on a surface that faces within 90 degrees of south. Ideally the cells need to receive unobstructed sunlight – little sun exposure means low power output - so avoid locations where there are obstacles between the sun and solar roof, eg trees and other buildings. Please consult the Council's Landscape Officer before considering the lopping of any landscape features (Tel: 01732 876168).

Where a planning application is necessary, you need to take into account other considerations including your property (Listed and/or in a Conservation Area) and your neighbours. Please contact the Council's Development Control Section (e-mail: planning.applications@tmbc.gov.uk Tel: 01732 876230) for further advice. You will also need to consult the Council's Building Control Section (e-mail: building.control@tmbc.gov.uk, Tel: 01732 876305).

Further detailed technical advice, including information on typical costs:

- **Centre for Alternative Technology**
http://www.cat.org.uk/information/info_content.tmp?sku=info_is_renewables/
Tel: 01654 705950
- An Eco-Centre providing practical advice and free information on photovoltaics
- **Energy Saving Trust (EST)**
www.energysavingtrust.org.uk
Tel: 0800 512012
- a non-profit organisation providing general advice on photovoltaics (click on 'Generate your own energy' tab on their home page) and technical advice for the development industry professionals (type 'Planners Pack' in the search box)
- **Low Carbon Buildings Programme**
<http://www.lowcarbonbuildings.org.uk/home/>
Tel: 0800 9150990
- find out about available grants
- **London Renewables Toolkit**
www.london.gov.uk
Tel: 0207 9834000
The Greater London Authority has produced a useful toolkit for planners, developers and consultants (type 'London Renewables' in the search box)
- **Creative Environmental Networks (CEN)**
www.cen.org.uk
Tel: 0208 6836694
- not for profit organisation providing technical advice on photovoltaics (click on 'Developer Support' and select 'Renewable Energy')
- **Kent Energy Centre**
www.kentenergycentre.org.uk
Tel: 0800 3586669
- not for profit organisation offering free and impartial advice on photovoltaics (click on 'renewable energy solutions')

If you have difficulty reading this leaflet and would like the information in another format, please call 01732 876266 or email ldf@tmbc.gov.uk.

¹Exceptions apply for Listed Buildings, and buildings in Conservation Areas
Image courtesy of Energy Saving Trust