Solar photovoltaic

How the technology works

Solar photovoltaic (PV) uses energy from the sun to generate electricity, and requires only daylight, not direct sunlight.

The PV system consists of cells of one or two layers made from semi-conducting material. When the light shines on the cell, it creates an electric field across the layers, causing electricity to flow. The greater the intensity of the light, the greater the flow of electricity.

Requirements

Ideally a solar PV system requires a roof or wall that faces within 90˚ south, with no large obstructions, and that is strong enough to take substantial weight.

Planning permission

You need to contact your Local Authority for guidance on planning.

Grant funding

A 50% grant towards the cost of a solar PV system is available through the LCBP Phase 2 to the public sector, including schools, hospitals, housing associations, local authorities and charitable organisations, until the end of June 2009. Other schemes may be available, please contact us to find out more.

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Key benefits

- 50% grants available
- Generates no greenhouse gases once installed
- Could help reduce electricity bills

Contact us

Call **0845 070 2203**†
Email **theenergyefficiencyteam@centrica.co.uk**
Visit **britishgas.co.uk/energyefficiency**

†Phone lines are open 8am to 8pm Monday to Friday and 8am to 1pm on Saturday. Closed on Bank holidays.

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Case study: City Hall

How Solar Technologies helped City Hall

City Hall was designed by leading architects Foster + Partners, whose design brief was to create a new landmark for the capital. It was designed with sustainability in mind and incorporates unique building façade geometry with ecologically sound, passive environmental controls.

The intention was always to fit a solar roof and solar shading to London's Living Room, situated on the top floor of City Hall. With grant funding assistance from the Department of Trade and Industry Major Photovoltaic Demonstration Programme, the solar PV project was completed in 2007.

The PV modules provide solar power for the building by converting light into electricity with no waste or emissions. The technology is safe, proven and does not release any emissions that contribute to climate change.

The total installed electrical capacity is 68.8kWp, with 617 high-efficiency bespoke PV modules in the domed roof, and 46 bespoke integrated glass-glass laminated modules in the 'eyelash' shading.

KEY FACTS	
Type of panels used	Bespoke Glass-tedlar laminate
Annual kWh generated	49,282
Size of kilowatt peak	68.8
Annual CO_2 savings	28,000kg

More success stories

So far we have installed 111 solar PV systems as part of the LCBP Phase 2 programme, including:

- **Cleveland School, Cleveland**
- **East Campus, Welwyn Garden City**
- **Fleming Development, London**
- **Glasgow Sheriff Court, East and West Wing**
- **Hammersmith Town Hall, London**
- **Metropolitan Police Station, London**
- **The City University, London**
- **The University of Central Lancashire Brook Building, Phase 2**
- **Yerbury School, London**

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