

What is PV?

Photo = light **Voltaic** = electricity

Photovoltaic (PV) is the term used to describe semi-conducting materials that generate electricity when exposed to daylight.

Solar PV is not reliant on bright sunshine to produce electricity, and works effectively in cloudy UK.

It's an effective technology to reduce carbon emissions and generate clean electricity

How Solar PV works

When sunlight shines on to a solar PV cell, the cell material absorbs some of the light particles (photons). When the photon is absorbed, an electron is freed from the solar material (silicon). The release of electrons creates a flow of electricity between the two layers. Metal contacts in the panel take this electricity away as a direct current (DC).

A silicon photovoltaic cell

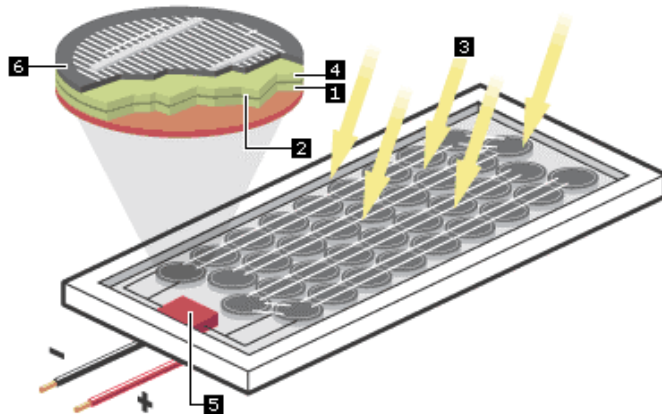


Diagram Credit: BBC

- 1 Some electrons move from one semiconductor layer to another
- 2 This electron migration creates an electrical field at the junction
- 3 Light shines on the whole cell, knocking electrons free
- 4 Electrical field causes free electrons to build up in one layer
- 5 Built-up electrons flow through a circuit to the other layer
- 6 Anti-reflecting coating helps cell absorb maximum sunlight

Imagine... a world where you could harness the power of the sun to meet your energy needs

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