

FAQs - Solar Photovoltaics (solar PVs)

What is solar PV?

Photovoltaic systems, also known as solar PV or solar panels, convert solar radiation into electricity. PV cells consist of one or two layers of a semiconductor material, usually silicon. When the sun's rays hit the cell, an electric field is generated across the layers. PV cells do not necessarily require direct sunlight in order to operate, as they will still work with the diffuse light on a cloudy day. However, the greater the intensity of the sunlight hitting the cells, the greater the flow of electricity.

Where can solar PV be placed?

Solar PV systems can be mounted on buildings, such as a roof top in both a commercial and domestic (home) setting or mounted on structures on the ground. Roof mounted schemes typically range from small domestic systems at 4kW through to 500kW.

Ground mounted schemes typically range from 100kW through to multi-megawatt schemes.

Can I rely on the electricity from solar PV?

Solar PV panels produce electricity during the day only, as they require daylight to generate power. The output is therefore greatly reduced over winter.

So, what are the benefits?

- Solar PV panels are simple to install and maintain.
- The technology continues to become more efficient, and costs of systems are reducing.
- They are space efficient, and ideal for typical domestic roof spaces although orientation may limit their effectiveness.

Can I make money from solar PV?

The Smart Export Guarantee (SEG) is available depending on the size of the installation. The SEG launched on 1 January 2020 and is a government-backed initiative. The SEG requires electricity suppliers (SEG Licensees) to pay small-scale generators (SEG Generators) for surplus low-carbon electricity which they export back to the National Grid, providing certain criteria are met.

Further information can be found here [OFGEM - SEG](#)

Who can install Solar PV?

Information and frequently asked questions about accredited installers of solar panel and other renewable technologies can be found at <https://mcscertified.com/>

Are there any grants for solar PV installation?

There is a current energy grant available for residents to apply for depending on your eligibility. These are outlined below.



The Green Homes Grant Local Authority Delivery Scheme aims to help low-income homes' keep warm by improving the energy efficiency rating and reducing energy bills. The scheme is delivered by our partner, E.ON. You don't need to be an E.ON customer to apply.

So how do I apply?

To find out more, visit E.ON's Green Homes Grant [webpage](#) and apply through their online form or call the Green Homes Grant team at E.ON on 0333 202 4820 (Offices are open Monday to Friday between 9am – 5pm).

How do I know if I'm eligible for this grant?

The Local Authority Delivery Programme is open to homeowners that meet the eligibility criteria. For homeowners, the government will fund up to £10,000 worth of improvements, if someone in the household receives certain benefits, they may be eligible for a 100% of the cost of the improvements up to a maximum of £10,000.

To be eligible for the scheme:

- You need to own and live in your property; and
- Your gross household income must be less than £30,000 year; and
- Your home's energy rating EPC should be D, E, F, or G. If you don't have an EPC then E.ON can arrange this for you.

What energy efficiency measures are available?

If eligible, the scheme allows free energy efficient measures, such as:

- External wall insulation
- Air Source Heat Pumps (low carbon heating)
- Solar Panels
- Smart heating controls
- Cavity insulation
- Loft insulation

What if I live in a rented property?

Tenants who live in social or private rented homes should contact their landlord if they wish to discuss energy efficiency *or* renewable energy technology measures.

General energy information and advice can be found at <https://www.gov.uk/improve-energy-efficiency> and also here: <https://energysavingtrust.org.uk/>

What are the technical aspects of a system?

Most PV systems are grid-connected so that electricity generated can be exported to the distribution network. A typical grid-connected system contains PV panels, inverters (converts DC to AC for export or use), a metering system and connection point to the grid. The PV



system can be connected to the electrical supply system of the building via the standard building wiring and the mains switch distribution board, and to the utility grid via import and export metering.

Larger schemes typically require a grid connection agreement from the distribution network operator (DNO) and connections can be expensive. This is not likely to be the case for domestic scale schemes.

