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CAREYGLASS SOLAR EXPERIENCE

We have 20 years international experience designing and operating Solar PV systems. CareyGlass Solar is an expert in the Solar electricity business and provides solutions for a variety of needs and applications using Solar PV technology.

The strength of CareyGlass Solar lies in its people & commitment to quality products, services & value for money to the customers. We are the only company in Ireland which offers turnkey services from concept to commissioning, with total capacity for the design, integrate, manufacture, installation and commissioning of Solar Photovoltaic systems.

CAREYGLASS SOLAR PV TRACKING SYSTEM

What if the PV array could sense where the brightest part of the sky is, and move itself atomically to face in that direction throughout the day.

CareyGlass Solar PV tracking systems do just that, and by constantly adapting the angle of the PV modules to face the sunlight, a maximum of electrical energy can be generated. This ensures that your PV array is exploiting every minute of sunshine and making the best use of diffuse light - all year around. This leads to an added solar energy yield of 35 - 45%.



CareyGlass Solar PV Tracking system in Co Tipperary

SPECIALTY PV PANELS

We offer any range of specialty glass to glass PV modules customized to your specific requirements. With the expertise and backing of Carey Glass International, the most experienced and progressive Independent architectural glass company in Europe, CareyGlass Solar can respond to the most complex of challenges.

Useful Design Points

PV glass to glass laminates replaces conventional glazing materials whilst simultaneously harnessing energy from daylight to generate electricity.

PV glass to glass modules are ideal for a variety of applications including; Curtain Walling/facades, Windows, Bris soleil, Roof glazing

The panels will add to the visual appeal of the building. You have total design flexibility as regards size, transparency and colour. Panels can be single glazed or double glazed and can incorporate low emissivity glass to enhance insulation.

Technical Specification

The PV cells themselves are standard. But we can either increase or decrease the space between the cells within the panel, in order to increase or decrease the transparency and output of that panel.

CareyGlass Solar can customise the panels to meet your needs. The sky's the limit really!



Commissioner for Irish Lights Headquarters in Dun Laoighre which uses 32 PV modules & 2 inverters to generate solar electricity



CareyGlass

SOLAR



Photovoltaic

Solar Generated Electricity for your Home & Business

About Photovoltaic Panels

Photovoltaic (PV) is a very exciting and promising solar technology. PV solar panels transform sunlight directly into electricity.

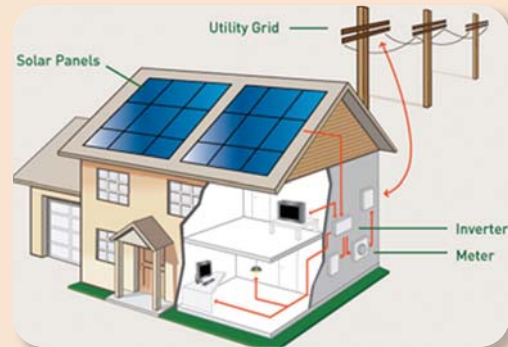
They are part of the family of sustainable energy technologies described as "micro-generation" whereby the electricity is produced on site using a renewable source of energy. If you've ever seen a solar calculator, you've seen PV in action. PV is distinct from other kinds of solar energy in that it harnesses the sun's light rather than its heat. It provides an on-site renewable power generation solution for almost any application.

Benefits of Photovoltaic (PV)

1. Electricity bills reduced
2. Greenhouse gas emissions abated
3. A real 'energy rating' bonus and increased market value for property
4. A true and visible statement of your green credentials
5. PV requires no fuel, produce no emissions and generates no waste
6. Maintenance free
7. Electricity generated by PV displaces fossil fuel use which can be subject to volatile price changes
8. Today, over 60% of the energy used to produce electricity is wasted due to generation and grid transmission losses; this waste is eliminated by using PV to generate electricity on site where it will be used (micro-generation)

**PV REQUIRES NO FUEL,
PRODUCE NO EMISSIONS
AND GENERATES NO WASTE**

Grid Connected Photovoltaic Systems



1. The Solar Photovoltaic (PV) Panels transform sunlight directly into electricity. They should be located on a south-facing roof surface, with an inclination (tilt) between 30° to 60° from horizontal.
2. The inverter converts the electricity produced (direct current) by the solar panels into the type of electricity supplied by the grid (alternative current) and used by most domestic appliances. It also ensures that your system operates safely and provides useful data like power produced, etc.
3. Your solar PV system is supplying electricity to your home through the existing circuit board where it is connected with its own fuse.
4. With the incorporation of a smart meter, you can optimise the use of electricity generated by the PV array, any excess energy produced will be exported to the grid, to be off-set by energy imported from the grid during hours of reduced sunlight'

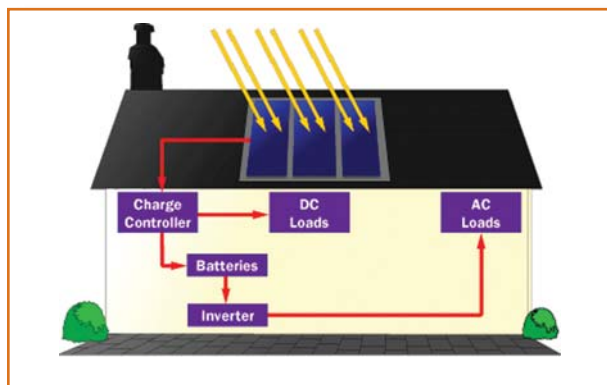
MICRO-GENERATION EXPORT TARIFF

The Commission for Energy Regulation (CER), Ireland has recently published a decision paper regarding a proposal from ESB Customer Supply, for the introduction of a domestic Micro-generator Export Tariff. The offer is currently limited to domestic customers only. The value of the export payment offered to domestic customers is €0.09/kWh. Now you can sell your excess PV electricity to ESB.



A CareyGlass Solar 1.65kWp grid connected Photovoltaic (PV) system in Co Kildare

Off-Grid PV Systems



Although they are most common in remote locations without utility grid service, off-grid solar PV systems can work anywhere. Electricity generated by the panels is stored in a bank of rechargeable batteries as DC, but in order to power household appliances an inverter will be required to convert the stored DC to AC.

These systems operate independently from the grid to provide all of a household's electricity. That means no electric bills and no blackouts—at least none caused by grid failures. Those who choose to live off-grid often need to make adjustments to when and how they use electricity, so they can live within the limitations of the system's design. This doesn't necessarily imply doing without, but rather a shift to a more conscientious use of electricity.

These systems are particularly suitable in remote locations especially those where the property is more than one-quarter mile from the nearest power lines. Often the installation of an off grid PV system proves more cost-effective than extending the power lines.



1.98kWp CareyGlass Solar grid connected system on a passive house in Newbridge



1.98kWp grid connected PV system in Mount Merion, Dublin'

CAREYGLASS SOLAR PV MODULE

The CareyGlass Solar high efficiency 185 Wp module is made of mono-crystalline solar cells of 125 x 125mm embedded between tempered glass cover (3.2mm-AGF) and an encapsulant (EVA). These modules are having highest power output per m² area, thanks to most efficient mono-crystalline solar cells with latest technology.

The module is enclosed in an aluminium frame which gives it excellent structural strength and resistance to corrosion.

They are manufactured under the quality certified ISO 9001:2000, and undergo strict inspections.

Installation Methods

Installation of PV panels is extremely flexible and very fast. We offer a number of different installation options including on-roof, in-roof, flat-roof installation, ground mounted, bris soleil and facade. The use of aluminium and stainless steel means that all components are especially durable and corrosion-resistant.

Technical Specification

Standard PV Module	
Model No.	CGS 185M-24
Power (Pmax)	185Wp
Output tolerance	+/- 3%
Voltage (VMPP)	36.2 V
Current (IMPP)	5.12 A
Open-circuit voltage (Voc)	45.2 V
Short-circuit current (Isc)	5.46 A
Max. system voltage (Usys, SKL II)	1000 VDC
Module efficiency (%)	14.5%
Power per m ² (W)	144.531 W
Dimensions LxHxW (mm)	1580 x 808 x 42
Module area (m ²)	1.28 m ²