

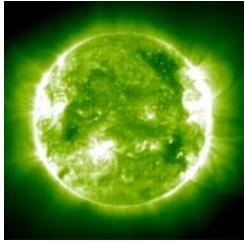
Solar Electric Power

Grid connected systems



February 08

What are Solar Electric systems?



Also known as photo voltaic (PV) systems, which are based on panels made up of semi-conductor cells that convert sunlight into electrical power. The panels produce Direct Current (DC) and in a Grid connected system this power is fed into an inverter which converts the electricity to Alternating Current (AC). The inverter also provides safe disconnection within proscribed times set down in G83 and feeds the power into the National Grid through a watt-hour meter (measuring generated power) via your fuse board.

These systems do not represent stand-by power - please see our Hybrid on-grid - Uninterruptible Power Supplies (UPS) brochure.

- ✚ A one thousand watt peak (1kWp) system will produce approximately 750 thousand watt hours (kWh) every year (kWh/a).
- ✚ The UK electric system produces 0.43kg CO₂ for every kWh, therefore the 1kWp system will save approximately 322.5kg of CO₂.
- ✚ For every 1kWp you will require in excess of 8m² of roof or wall space.

We can provide solar electric systems for domestic, commercial and industrial applications: [on-grid \(grid connected\)](#), [off-grid \(stand-alone\)](#) and [hybrid on-grid](#) systems to maintain power even when the grid goes down.

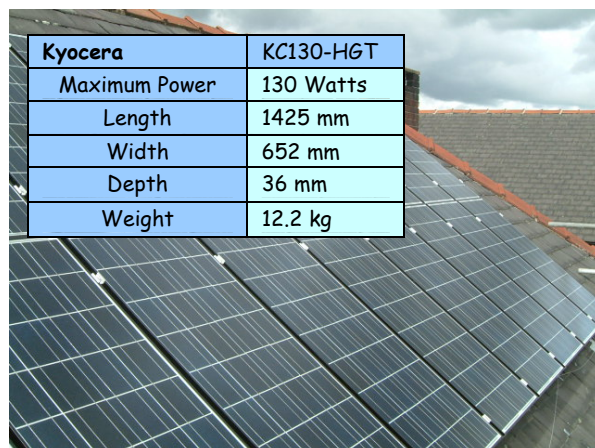
The solar electric panels, which can be retro fitted [on-roof](#) to existing roofs or [in-roof](#) for new roofs, can be mounted [vertical \(facades\)](#) or [horizontal \(flat roofs\)](#). However there can be [reductions in performance](#). The orientation also effects performance, as deviation from due south will see a reduction in performance.

There are also [tiles](#) available to make the roof look by varying degree, depending upon the chosen system, indistinguishable from a conventional tiled roof.

High quality components

- ✚ Kyocera panels
- ✚ Schuco panels
- ✚ Fronius inverters
- ✚ SMA Sunny Boy Inverters
- ✚ Studer Inverter/Chargers
- ✚ Stecca Charge controllers
- ✚ Uni-Rack mounting systems
- ✚ InterSole in-roof system
- ✚ ConSole flat roof units
- ✚ Solion flat roof units
- ✚ Schuco On-roof, In-roof & Façade mounting systems

Kyocera	KC130-HGT
Maximum Power	130 Watts
Length	1425 mm
Width	652 mm
Depth	36 mm
Weight	12.2 kg



All of the above components are approved for the **Low Carbon Building Programme** grant scheme.



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EcoHeat - Kyocera Solar Electric Power Systems						
	Peak Power	KC130 HGT	Panel area	Inverter	Expected power	Expected CO ₂ saving
Eco13	1.3KWp	10 Panels	10m ²	SMA SB1100	975 kWh/a	419 kg/a
Eco15	1.56KWp	12 Panels	12m ²	Fronius IG15	1170 kWh/a	503 kg/a
Eco20	2.08kWp	16 Panels	15m ²	Fronius IG20	1560 kWh/a	671 kg/a
Eco28	2.86kWp	22 Panels	21m ²	Fronius IG30	1950 kWh/a	838 kg/a
Eco34	3.38KWp	26 Panels	25m ²	Fronius IG30	2535 kWh/a	1090 kg/a
Eco68	6.76KWp	52 Panels	50m ²	2 Fronius IG30	4070 kWh/a	2190 kg/a
Eco94	9.36KWp	78 Panels	75m ²	3 Fronius IG30	7020 kWh/a	3270 kg/a

EcoHeat are Fronius Service partners ensuring that we can look after your system during the warrantee period and for the life of the system.

Fronius IG Inverters	IG15	IG20	IG30	IG40	IG60
Input voltage range	150-400 V				
Max input voltage	500 V				
PV system output	1.3-2KWp	1.8-2.7KWp	2.5-3.6KWp	3.5-5.5KWp	4.6-6.7KWp
Max input current	10.8 A	14.3 A	19 A	29.4 A	35.8 A
Nominal output	1300 W	1800 W	2500 W	3500 W	4600 W
Max power output	1500 W	2000 W	2650 W	4100 W	5000 W
Dimensions (l x w x h)	366 x 344 x 220 mm			610 x 344 x 220 mm	
Weight	9 kg			16 kg	



Monitoring		
		
Generation watt-hour meter	Fronius wireless personal display	<u>Large format display</u> 430mm x 166mm

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