



## Get the most from your solar PV system

### The New Apollo GEM

Produces free hot water & Powers any appliance from your Solar PV System.

If you own a solar PV system it is probable that 50% or more of the electricity generated will be exported, that is given away, to the electricity grid.

The Apollo GEM is an innovative solar energy management product that will use all the surplus power generated by your PV system to produce hot water. Every unit of power used to heat the hot water in this way reduces imported energy by the same amount resulting in a significant saving in imported energy costs.

GEM will work with any solar PV system and uses a standard immersion heater to produce free hot water. The advanced GEM controller ensures maximum usage of PV power that would have been exported. Alternatively, or in addition to, GEM can power any other household appliance from surplus PV power using the GEM export threshold control mode.

The system is simple to install and will not affect your feed-in tariff payments. GEM works with wind generation systems too with wind generation systems too!

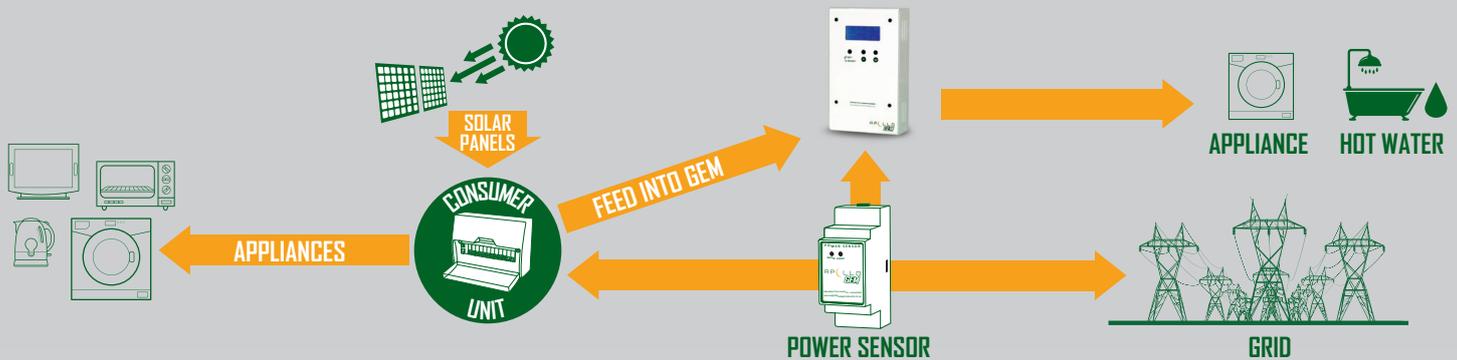
### Benefits include:

-  Power saving starts from 70 Watts
-  Accurate power measurement and heater control
-  Fast response time for accurate control under changing generation and load conditions
-  2 Outputs Available
-  Boost & Timer Functions
-  Use for water heating or to power other household appliances.
-  Wireless sensor option for easy installation
-  High reliability due to solid state, dual redundant design
-  5 Year Warranty



# How does GEM work?

The GEM system works by accurately monitoring the power being imported or exported and always diverts sufficient power into the hot water system in order to keep the exported power to as near zero as possible whilst at the same time ensuring that no additional power is ever imported to supply the hot water store. Alternatively GEM can use surplus PV power to power other household appliances using the GEM threshold output mode. Priority is always given to the energy demands of the household appliances and only surplus energy that would have otherwise been exported is stored in the hot water system.



## Your questions answered...

### ■ Is GEM easy to install?

Yes! GEM can be installed by PV installers, electricians or a competent DIYer. GEM does not need to be installed by an MCS certified installer and will not affect the MCS certification of your micro-generation system. Only one clip-on type import/export sensor is used.

### ■ What energy savings can I expect?

This will depend on the size of your PV system and the amount of hot water you use. For a 4 person family with a 4KW PV system you can expect savings of up to £250 per year.

### ■ Will I still get my export tariff payments?

Yes. Currently FITs export payments are paid for 50% of all units generated regardless of how many units are actually exported. This means you can use all your generated energy and still receive all the export payments!

### ■ Can GEM only be used to heat water?

No, uniquely GEM can work in two different modes. Variable output mode is used to heat water or run other heating appliances, while threshold mode can be used to power other appliances which need full mains power to operate.

### ■ Do I need a dedicated immersion circuit?

No, with the GEM Wireless option, the system can be installed next to the hot water cylinder and will work even if there is no dedicated immersion circuit.

### ■ If no energy is generated do I still get hot water?

Yes, GEM works in conjunction with your normal hot water system whether gas, oil, electric or heat pump. On days when excess power is not available from the PV system your water is heated in the normal way.

### ■ What display does the GEM have?

GEM has an informative 4 line LCD display which can show import/export power, water temperature, diverted power and energy diverted.

### ■ What is the GEM warranty?

All GEM systems are supplied with a 5 year RTB warranty.

<b>Maximum Load</b>	3500W
<b>Input Voltage</b>	215V-255VAC
<b>Variable Power Outputs</b>	Two Fully variable power outputs from 50W-3500W
<b>Threshold Control Outputs</b>	Both Outputs can operate in variable or threshold output modes
<b>Power Adjustment Period</b>	Every 2 Seconds
<b>Boost Function</b>	1 to 4 Hours
<b>Display</b>	4 Line backlit LCD – Displays Import/ Export Power, Output Power, Temperature
<b>Power Consumption</b>	1W
<b>Dimensions</b>	198mm H x 132mm W x 68mm D

<b>OPTIONAL TRANSMITTER</b>	
<b>Power</b>	215-255VAC
<b>Range</b>	30-40M Indoor Range, Wireless extender available for increased range
<b>Power Sample Rate</b>	Once Per Second
<b>Current Sensor</b>	Non-invasive clip-on, 16mm max cable diameter (35mm <sup>2</sup> CSA)
<b>Current Rating</b>	100A