

ALTERNATIVE ENERGY

SOLAR ELECTRICALLY DRIVEN WATER HEATING



A novel alternative Energy solution using Solar and electricity to heat water in existing and new electrical hot water systems. The simplicity of this system means that there is little modification required to an existing electrical hot water system, and makes the installation of a new system as simple as it has always been with grid electrical supply.

USEDASUN utilizes photo voltaic solar panels to generate electricity in an innovative way to heat water, while saving you on electrical bills.

The use of a boost converter, means less power lost over long distances whilst allowing an easier transmission of power with the boosted voltage.

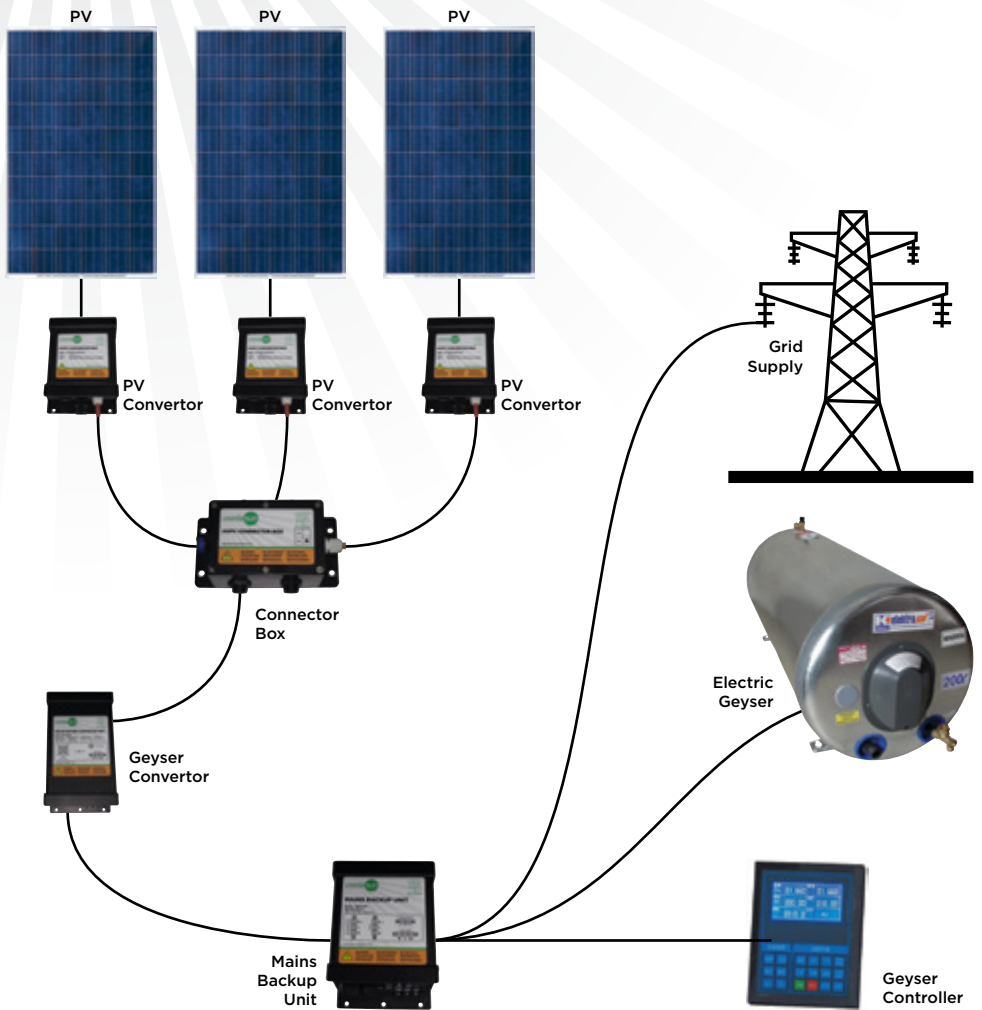
Innovative Maximum Power Point Tracking (MPPT) techniques, increases the energy that is converted into the hot water system.

These innovative ideas allow this system to use solar energy more efficiently, reducing the amount of equipment required.

- No more complicated vacuum tubes on your roof.
- No more recirculating pumps required.
- No more complicated heat pump installations.
- No more extra weight on your roof from all the extra equipment to heat your water.
- No batteries required as it runs directly off the sun.

You can start off small and grow the system by increasing the power delivery by adding more modular plug and play equipment.

In the case that there is insufficient sun to heat the water, the system has an adaptable grid system relay which allows you to switch between the solar power and grid (electrical) power, allowing you to utilize the best of both, giving you the freedom to use which source power to meet your demands.



SYSTEM PARTS



265W Solar Panel

The heart of the system lies in the PV panels. The panels convert the sunlight into electrical energy



HVPV Converter Box

This unit boosts the panel voltage to a high D.C. Voltage



HVPV Connector Box

All the HVPV Converter Boxes are concentrated into one place, making the wiring simpler. One wire from this unit is fed to the Solar Geyser Converter Unit



Solar Geyser Converter

This unit transforms the high voltage DC into a energy usable by the geyser element.



Mains Backup Unit

This unit routes the power to the geyser from the source selected by the user. When there is usable sun, the unit will route the high voltage from the HVPV connector box to the geyser. When the switch is activated, then the geyser is fed from the grid electricity.

Typical Economy Kit for geysers up to 150L

- 2 off 230 to 265W Solar Panel including mounting kit,
- 2 off HVPV Converter - HVPVCB-250W300V,
- 1 off HVPV Connector Box - 3W,
- 1 off Solar Geyser convertor unit - SCGU-500W and if required Mains Relay Bypass unit - MBU-001.
- For additional power add an extra Solar panel and HVPV Converter unit - HVPVCB-250W300V.

Typical Economy Kit for geysers up to 200L

- 4 off 230 to 265W Solar Panel including mounting kit,
- 4 off HVPV Converter - HVPVCB-250W300V,
- 1 off HVPV Connector Box - 5W,
- 1 off Solar Geyser convertor unit - SCGU-1000W and if required Mains Relay Bypass unit - MBU-001.
- For additional power add an extra Solar panel and HVPV Converter unit - HVPVCB-250W300V.

Typical Economy Kit for geysers up to 300L

- 8 off 230 to 265W Solar Panel including mounting kit,
- 8 off HVPV Converter - HVPVCB-250W300V,
- 2 off HVPV Connector Box - 5W,
- 1 off Solar Geyser convertor unit - SCGU-2000W and if required Mains Relay Bypass unit - MBU-001.
- For additional power add an extra Solar panel and HVPV Converter unit - HVPVCB-250W300V.

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