

What are the options?

- a** **3 X 260Wp 60V high voltage panels**
This array will be sufficient to handle a 50lt or 100lt geyser. Depending on the level of hot water usage, there will be energy left over for system expansion at a later stage. In Johannesburg, an average energy delivery of 84kWh/month has been achieved¹.
- b** **4 X 260Wp 60V high voltage panels**
Options here would be to stay with the 100lt geyser ensuring a shorter heating cycle and more energy available for charging batteries. Expected average energy delivery would be in the region of 110kWh/month¹.
- c** **5 X 260Wp 60V high voltage panels**
A 150lt geyser would present no problem for this number of panels and there would be energy left over for other purposes. Actual energy delivery for this type of system is 140kWh¹.
- d** **Can lower voltage panels be used? No problem.**
Panels with a lower voltage rating (usually +/-30V to 40V) can be used after each panel is fitted with a booster unit. Output voltage for each panel is increased to 60V. Minimum array output voltage in a series configuration is 180V.

¹Based on an annual solar irradiance of 1850kWh/m²/annum. For equivalent energy estimates in other regions, visit <https://solargis.com/maps-and-gis-data/download/south-africa>.

USEDASUN is made of excellence

USEDASUN has been conceived, designed, tested and made in South Africa. All aspects of before and after sales services are handled right here in South Africa. Microsolve CC, the manufacturer of USEDASUN, has an enviable history in the design and manufacture of innovative electronic systems in the Southern African markets that stretches back to the seventies. These include educational equipment, electric motor control, protection and data logging and support systems for groundwater installations.

Sales and distribution opportunities

If your company is in the electrical, plumbing or alternative energy markets, we would welcome the opportunity to discuss the setting up of a distribution agreement in your area. We offer full technical and sales training, first line maintenance material and marketing literature.



For further details contact us

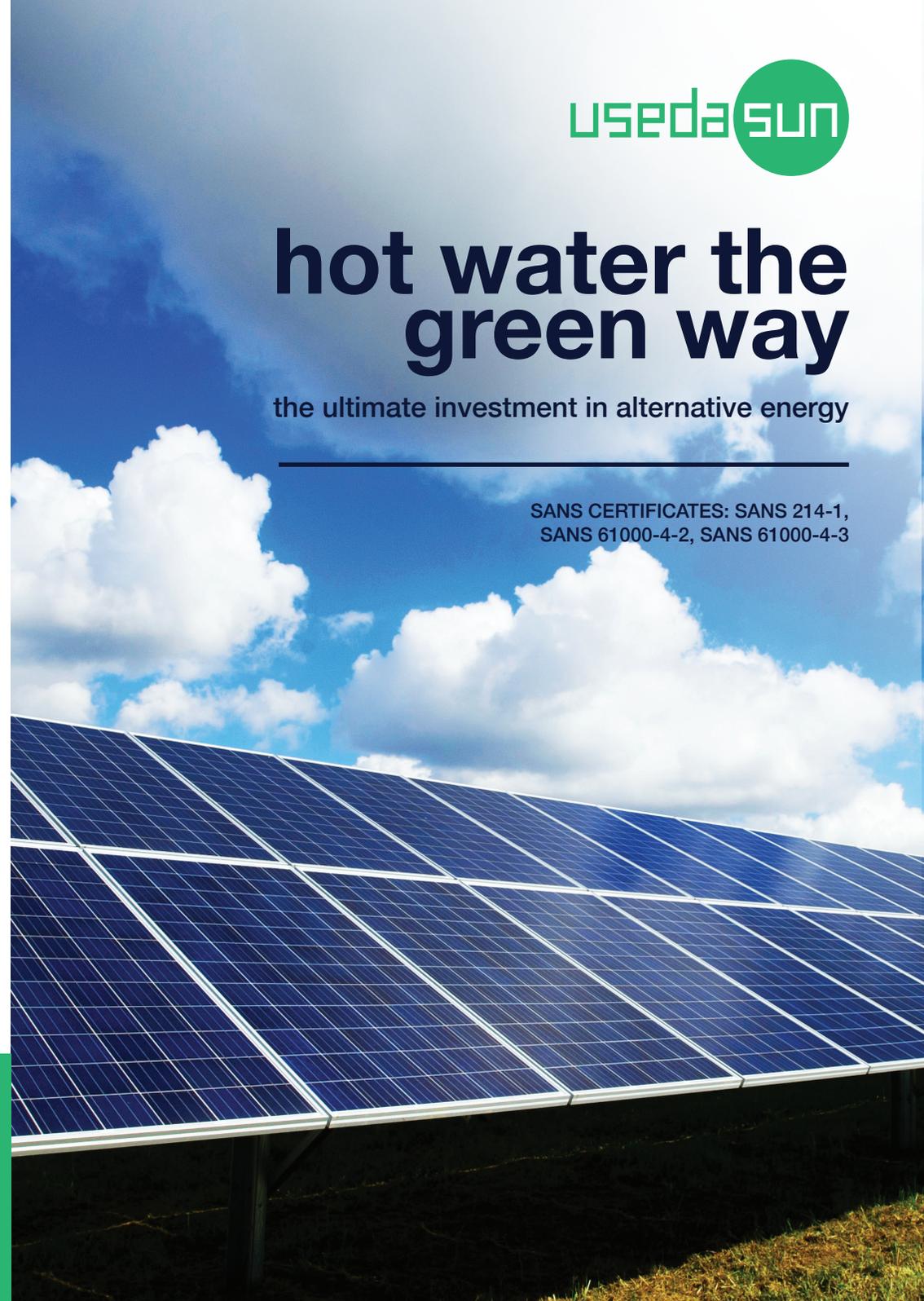
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hot water the green way

the ultimate investment in alternative energy

SANS CERTIFICATES: SANS 214-1,
SANS 61000-4-2, SANS 61000-4-3



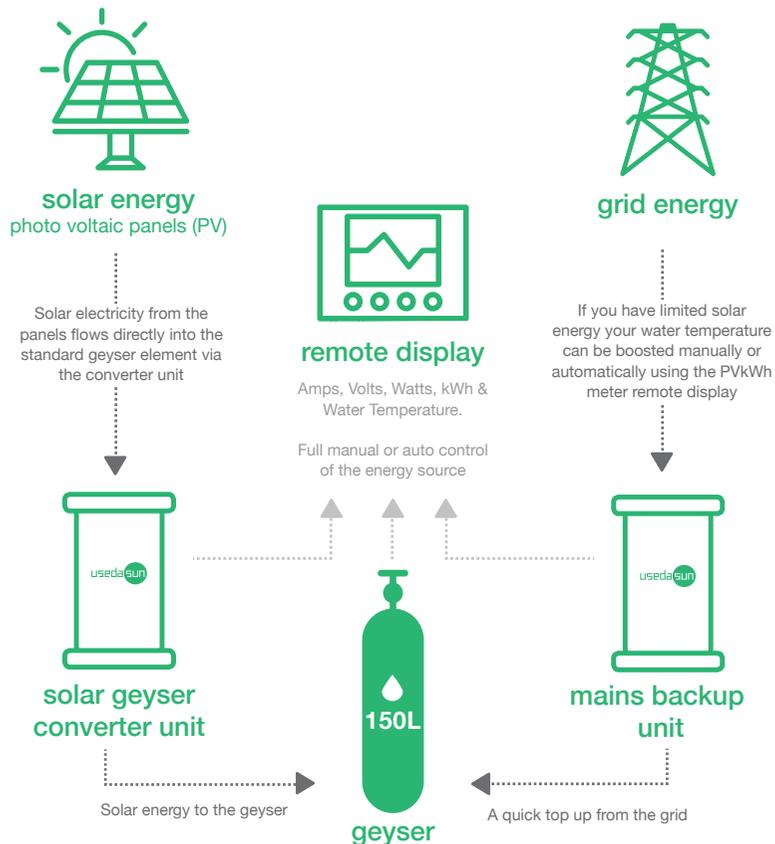
A solution that involves no plumbing & minimal electrical connections

Hot water using the sun's limitless energy just got a whole lot easier and far more cost-effective. USEDASUN, is a product that uses solar electric energy (photo voltaic panels or PV for short) to power the geyser with the existing standard element. Imagine no plumbing, minimal electrical connections all the while attacking the biggest source of energy costs in any household, B&B or hotel.

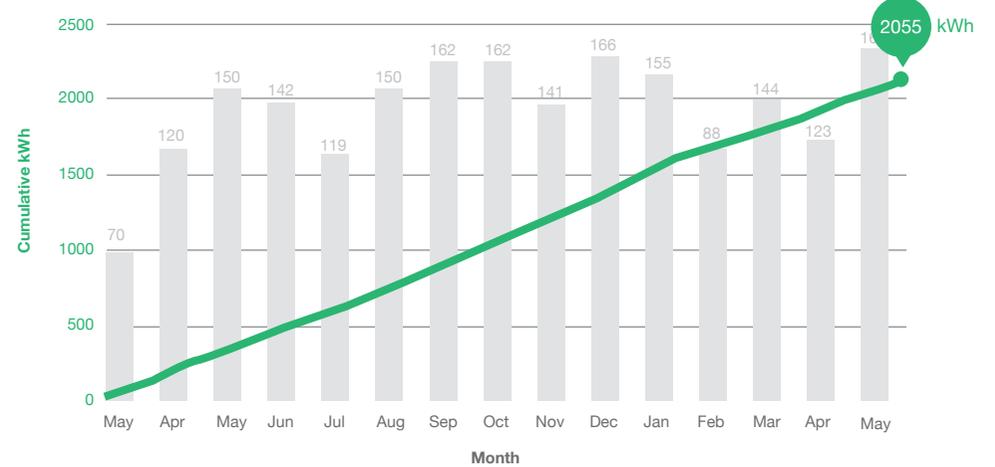
How it works

Introducing the USEDASUN Solar Geyser Converter Unit SGCU. Conceived, designed, tested, manufactured and supported in South Africa.

Solar or Grid Energy



This graph shows the total energy saved over 1 year in the Johannesburg area using the revolutionary PV water heating system



Despite times of overcast and low levels of sunshine, this 150-litre geyser was only switched to mains 6 times over 15 Months.

Using data from ESKOM's 2018 Integrated Report, the 2055kWh of energy delivered by this South African designed PV water heating system has saved:

Emission	kgs/kWh	USEDASUN savings
Ash	0,1426	293,1kgs
CO ₂	0,9259	1903,1kgs
SO ₂	0,0081	16,7kgs
N ₂ O	0,0012	2,4kgs
Electricity	2055	R 3904.50

Calculations based on R1.90/kWh

So why PV?

Besides the ease of installation, PV is controllable. Once the water has reached the desired temperature, the sun's energy can be used for other (energy) requirements. Adding a direct circuit from the GCU to any resistive load such as underfloor heating, kettles, under-counter mini geysers or adding an optional inverter opens up some very real possibilities for maximising the energy your panels produce from the sun.

No more wasted energy and water with thermal systems that require dumping hot water and using fresh cold water to control the water temperature.