

THE HEART OF A WATER HEATING SYSTEM



Facts

Water heating is the second largest segment of household energy use, ranging from 15% to 30%. It's the largest source of greenhouse gas emissions (up to 25%) from an average Australian home. When a renewable source is used, the emissions are reduced or eliminated.

Hot water systems are usually either:

Storage-based – water stored in a tank and kept hot, ready at all times. Off-peak systems only heat during off-peak times.

Instantaneous – water is heated only as required and not stored in a tank.

Electric storage

Electric storage systems are used by around **50%** of Australian households. They are the cheapest to buy and install and are generally more expensive to run, unless powered by a solar PV system.

*Source- <https://www.energy.gov.au/households/hot-water-systems>



Options

Solar

Solar hot water systems consist of solar panels or evacuated tubes, and a storage tank unit which is either installed on the roof or at ground level.

In areas with less mid-year sun and long cold nights, solar hot water units may require a booster using gas or electricity.

Purchase and installation of solar hot water systems is **expensive**.

Heat pump

Heat pump water heaters are highly efficient and use 30% of the energy of a conventional electric hot water system.

The compressor can be **noisy**, like that of an air conditioning system.

Heat pumps are **expensive** to purchase and install but are **cheap** to run.

Gas

Gas hot water heaters are usually installed outdoors because of venting requirements. They have medium-to-high purchase, installation and running costs.

Continuous flow is the most common type of gas water heater.

Relies on the supply of piped gas to the home.



Why APEX

APEX (formerly MLT Inverters) has been crafting energy management equipment and solutions in South Africa since 1986. Our engineers have been motivated by the simple understanding that efficiency, reliability and quality of build are the cornerstone of successful products.

The global energy climate is shifting and access to dependable and alternative energy has never been more critical. We believe that products should be created with future sustainability in mind and our promise is to build products that are tougher, last longer and create peace of mind for your energy needs.



APEX SGS

Through decades of experience and an understanding of the complete ecosystem for both commercial and residential, the product team saw a need to facilitate for non-essential, but high energy usage devices in a different way.

By taking this approach it further reduces the energy consumption of users, regions and grids.

The question was then asked:-

How can we do this in a unique, nonintrusive manner?

And the APEX SGS was born.



APEX SGS- Performance

Using conventional AC power only as a fallback, APEX SGS utilizes the Solar PV energy generated to Heat existing Hot water storage tanks without the need for additional cutting, retrofitting or messy installations.

Urban and Off-grid usage.

Set-up and control is then at the owner/operator's fingertips to decide what they would like to prioritize. Onboard LED's allow for a visual indicator for basic status.

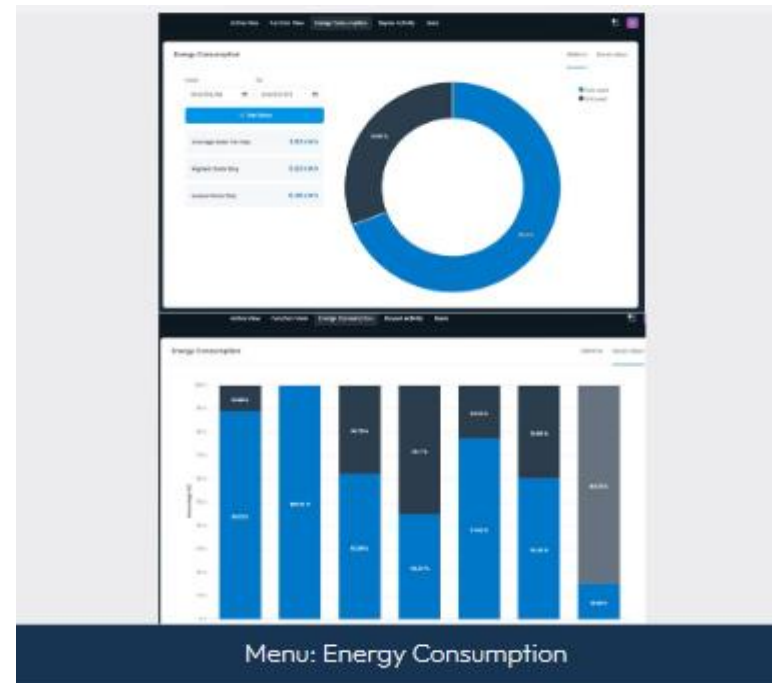
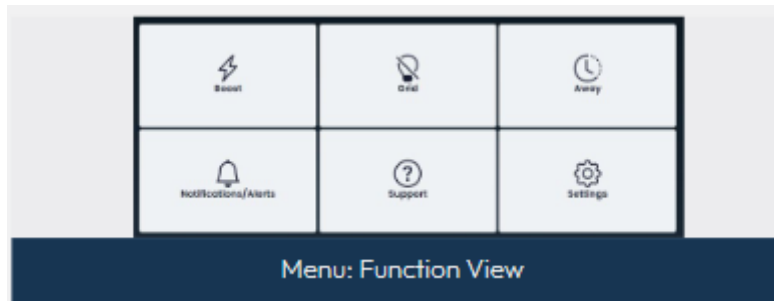
Temp LED	Solar LED	Grid LED	Status LED (2 colour flash)	
Heating	Solar heating	Grid heating	Normal	AP mode
At setpoint	Grid mode	Solar mode	Normal	Wi-Fi connected
Cooling	Solar off	Grid off	Error	AP mode
			Error	Wi-Fi connected

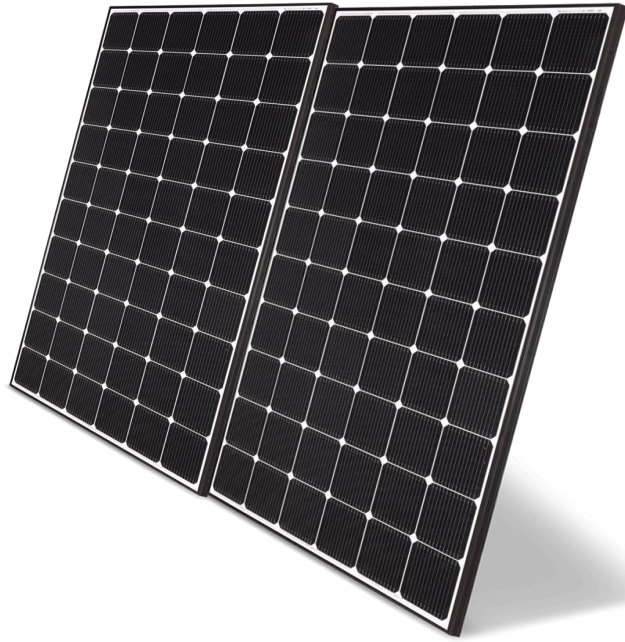
Monitoring

Through online or offline modes, the SGS can be managed, monitored and adjusted according to information and life-style.



<https://Monitor.ApexSolar.Tech>





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= Efficient Water Heating

No Moving parts

|

No Maintenance

|

No Leaking pipes

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