



## Innovation under the SUN



### **Mission**

To bring the "SUN" closer to a common man - in terms of Product Application, Quality, Reliability and Affordability.

### **SOLKAR SOLAR INDUSTRY LIMITED**

Was started in the year 1984, by Mr. K.E. Raghunathan, an engineer with specialization in the field of solar energy, as a first generation entrepreneur. The company has its manufacturing facility at Ambattur, Chennai, INDIA. The company is engaged in the manufacturing of both Solar Thermal and Solar PV products. The company has installed nearly 60000 square meters of solar collectors in the field since its inception covering various domestic and industrial applications. Solkar has developed a strong supply chain through their Franchisee/Dealer network and geared up to cater to the need of people for the generations to come, with innovative Solar PV products.

### **HIGHLIGHTS**

- Has been in Solar industry for the last 30 years.
- A Technology based company in Solar Consumer / Roof Top / Off Grid Applications
- More than 2,00,000 satisfied customer base over the last 30 years.
- First company to secure ISI for Solar Water Heating System in 1993 itself.
- Awarded as Best Small Scale Industry by Govt. of India in 1996.
- Poised to enter EPC Sector with MW scale of power generation projects.

An ISO 9001:2000 certified company

**Go SOLAR..... The Solkar Way.....**



## Solar Water Heating System **SUN SHOWER**

The water is heated during the day time and it is stored in the solar tank for a period of 48 hours without any loss of heat. The solar tank is made of stainless steel and the collectors are of aluminium body, toughened glass, copper risers and copper absorber sheet (selectively coated). The total system is installed in the roof top. On one side of the solar tank, cold water is connected and from the other side, piping is done upto the utility points viz., bathroom, kitchen etc., We also provide electrical heater back up to heat the water during rainy season.



### For Domestic use :

The normal application domestic is for bathing and cooking. The increasing price of LPG and Electricity urges all domestic users to go for Solar Water heating system which is going to produce hot water freely from Solar. Our **Sun Shower** system capacity starts from 100 Litres Per Day (LPD) to 200, 300 and 500 LPD. The payback on domestic solar water heaters will be within 3-4 years.



### Models of **SUNSHOWER** for Home use

DETAILS	100 LPD 60°C	200 LPD 60°C	300 LPD 60°C	500 LPD 60°C
Suitable for No of Persons	4 - 6	8 - 10	12 - 14	20 - 25
No of Bathroom	2 BR+1 KT	3 BR+1 KT	4 BR+2 KT	7 BR+3 KT
No of Panels	1	2	3	4
Area required	35 Sq ft.	70 Sq ft.	100 Sq ft.	225 Sq ft.
Electricity saved / month	120 UNITS	240 UNITS	360 UNITS	600 UNITS
<b>GOVT. SUBSIDY AVAILABLE</b>				

### For Institutional / Commercial use:

Solar Water Heating Systems are very commonly used in Educational institutions, Hotels, Hospitals, Industrial Canteens and in Pre heating applications. Solar Water heating system is predominantly installed in this segment as it recovers the cost within 2 years and for next 20-25 years one will be enjoying free hot water through solar. It is possible to design a Solar Water Heating system to provide hot water upto 80° C also. There is no limitation in the capacity of the system.



We manufacture only **FLAT PLATE SOLAR COLLECTOR** systems, as they are the most suited hot water system for Tropical climate like ours as compared to ETC imported systems which are prone for breakages during summer month and requiring frequent maintenance.



## Consumer Products

### SUN GRACE



**Sun Grace** - A unique Dual mode brightness adjustable Solar Lantern with 2 high bright LEDs. In the first press of the switch, the light glows at 1/3 of its brightness to run for 12 hours and the second press at full brightness with more than 200 lumens covering 300 Sq. ft area for 6 hours. Comes with 3W solar module, 6V 4.5Ah battery and 2W LED load with optional electrical charging Adaptor. There are 3 indicators to show the condition of the battery.

### SUN WONDER

**Sun Wonder** is a portable multipurpose solar lamp specially designed for both indoor and outdoor usage. It has 24 small LEDs to cover an area 150 sq.ft while it is hanged on top roof. And while walking out in the dark it can be used as a Torch light with the hit distance of 20 feet. Comes with 3W solar module, 6V 4.5Ah battery and 24 LEDs load with optional electrical charging Adaptor. There are 3 indicators to show the condition of the battery.



### SUN BREEZE



**Sun Breeze** is a High speed, High breeze, Light weight, Low noise portable solar fan. It is ideal for one person to get comfortable breeze and can be carried in hand anywhere. The product is recommended for 3 to 5 hours use everyday. Ideal for housewives, small babies, children, elderly people and small shop keepers. Comes with 3W solar module, 6V 4.5Ah battery and 6V DC micro motor load with optional electrical charging Adaptor. There are 3 indicators to show the condition of the battery.

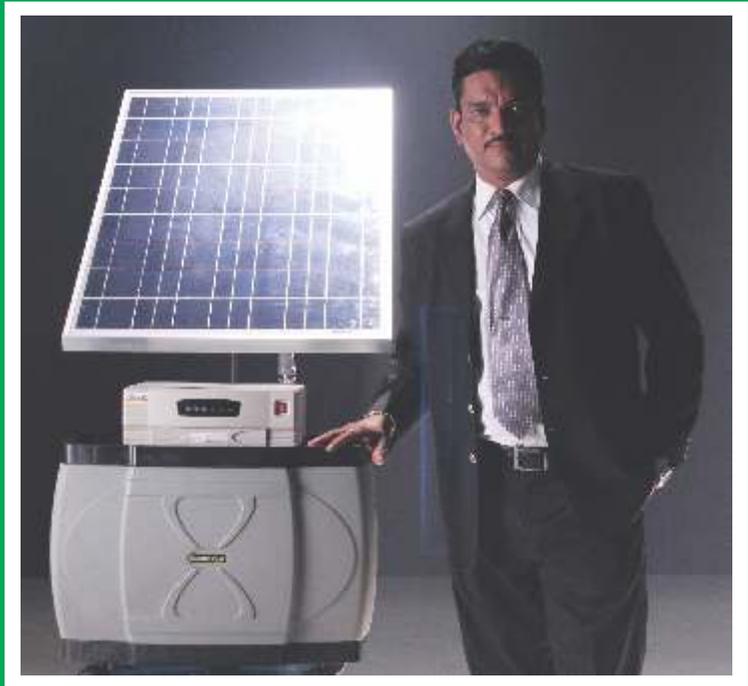
### SUN PACK

Sun Grace and Sun Breeze together is presented economically as **SUN PACK**. Many a time one requires both Light and Fan at the time of power failure, so rather spending on two individual products one can buy this pack. A Sun Pack consists of one Sun Grace + one Sun Breeze + One 3W Solar Module + one Electrical Adaptor





# SOLGEN - Pure Sine wave Solar Inverter



DETAILS	SOLGEN		SOLGEN	
	1000VA	1000VA +	600VA	600VA +
Solar module	100 W 12V 1 No	100 W12V 3 Nos	75 W12V 1 No	75 W12V 3 Nos
Tubular Battery C 10 RATED	12V 150 AH		12V 100 AH	
Inverter / CCU	1000 VA		600 VA	
Ideal load to back up	3 Tube lights 3 Fans 1 Television	- 3 hrs - 3 hrs - 3 hrs	2 Tube lights 2 Fans 1 Television	- 2 hrs - 2 hrs - 2 hrs
<b>GOVT. SUBSIDY AVAILABLE</b>				

## Features

- ◆ DSP Microcontroller based design
- ◆ Multi Stage Battery Charger
- ◆ AC charging on non-solar hours
- ◆ Automatic changeover on Power failure and resumption
- ◆ Over voltage / overload / short circuit protected
- ◆ Battery reverse polarity protection
- ◆ Low Voltage charging from 120V AC Input
- ◆ Advanced battery management
- ◆ Rugged design and engineering for continuous use
- ◆ Negligible battery-water loss
- ◆ Low battery maintenance
- ◆ Battery Deep Discharge Protection with Reset Option
- ◆ Smart Overload Sense with Auto Reset
- ◆ Ultra-Fast Short Circuit Protection
- ◆ Multifunctional LED indicator and sound alarm
- ◆ Intelligent thermal management
- ◆ Extended power backup time
- ◆ Easy maintenance
- ◆ Generator compatible
- ◆ Pure sine wave output
- ◆ Easily Serviceable
- ◆ Various Capacities to suit individual's requirements

**Upgradeable, Portable and  
Easy Installation**

**FIRST TIME IN INDIA**



# Outdoor Lighting Solutions

## Stand Alone System

The stand alone system would have a Solar Panel and a Battery installed within the pole and thus do not require separate wiring. This can be installed in any place where it requires illumination. This can also be with 2 Wing Lights / 4 Wing Lights which are ideal for Parking areas. The lights can also be installed in terrace to illuminate the open roof area which has various utilities during the night hours. In some places where there are tree shadows or places not suitable to erect poles, the Solar lights can be wall mounted. In such cases Solar Panels and Batteries will be kept in the roof and the light alone will be wall mounted. This is purely a DC driven system and runs only with the Solar energy charged in the battery.

**Application :** For remote areas, open ground, big resorts, gardens, parks, parking area etc.,

## Street Light



## Parking Light

Parking Light



Wall mount



Terrace light mount



## Centralized System

This works as a conventional Street Lights but the energy is from the Centralized Solar Power Plant. The arrays of Solar Panels, Batteries and Inverter are placed in one particular location, from there the cable will be drawn to connect the street lights. This can be customized very easily to suit any requirement viz., for first 4 hours all the lights can work then only alternative lights can work in order to conserve the energy. This is a AC driven system and provides back up from the battery which is charged from Solar Energy and when the battery is dry it gives back up directly from the Grid. The poles can be designed with customization and it comes with a provision of Signage boards where the advertisement banners can be fixed.

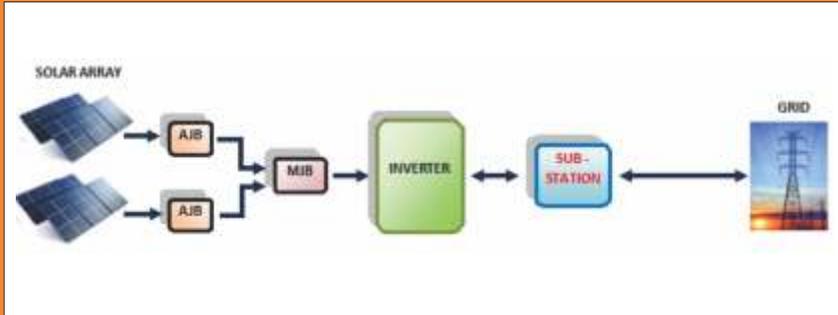
**Application :** For Institutions, Hospitals, Industries, IT parks , Land Developers etc.,



- We can design customized requirements of all the above outdoor lighting solutions
- Life of the System : Solar Module : 25 Yrs / Battery: 3-5 Yrs / LED : 50,000 Hrs

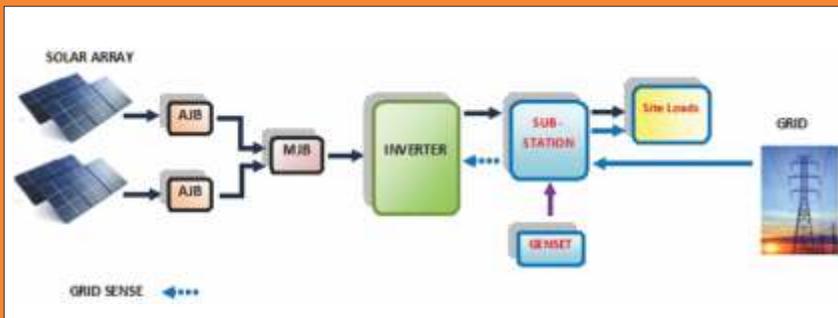
# Different Types of Solar Power Plant

## 1) GRID TIE SYSTEM

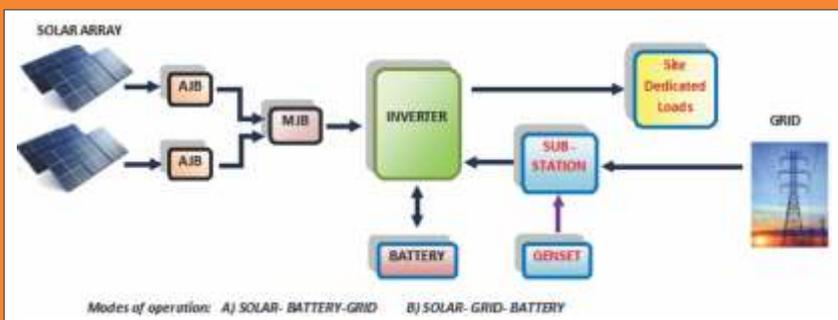


The Solar Module generates electricity when the sun shine falls on it and through a Charge Controller, it is charged into the Battery and later using an Inverter it is connected to the load. It can also directly feed the load without Battery using the Inverter. Primarily there are 5 types of systems available in the market.

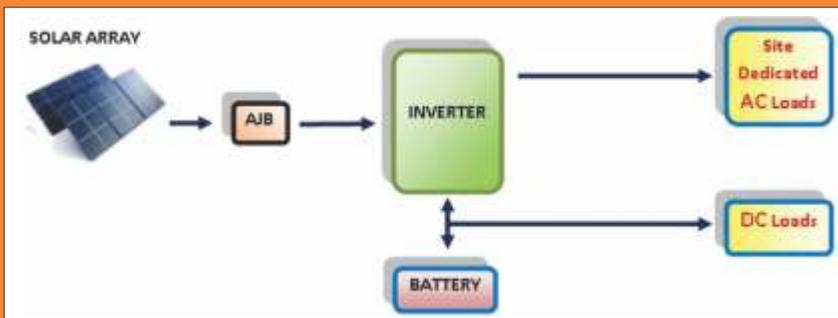
## 2) ROOF TOP SYSTEM



## 3) OFF GRID SYSTEM

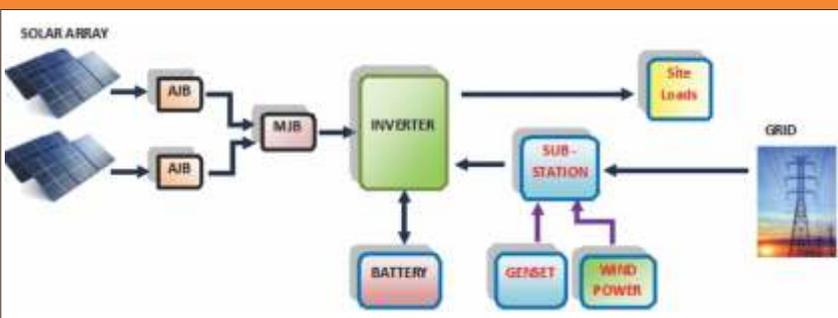


## 4) STAND ALONE SYSTEM



## 5) HYBRID SYSTEM

This type of system is common when several sources of energy are generated such as Solar, Wind, Bio-mass, normal EB, diesel genset, etc.





# Solar Off-Grid Power Plant 1 KW / 5 KW / 10 KW

The Off Grid solar systems are more commonly seen at locations where there is no grid supply available. However due to severe power cut situations, many households, offices, industries have started installing Off Grid power solutions which have battery back ups to provide power even when there is no grid availability.



A Solar Off Grid system consists of 4 major components:

1. Solar panels
2. Panel mounting structure and suitable wiring
3. Inverter/Charge controller
4. Batteries

## TECHNICAL SPECIFICATIONS

Particulars	1.0 KW	1.2 KW	2 KW	3 KW	5 KW	10 KW
Solar Module	4 Nos of 250 W modules	12 Nos of 100W modules	20 Nos of 100W Modules	12 Nos of 250W modules	20 Nos of 250W modules	40 Nos of 250W modules
Battery	12 V x 100 AH x 4 Nos	12 v x 150 AH x 4 Nos	12 v x 150 AH x 4 Nos	12 V x 150AH x 8 Nos	12 Vx150AH x 8 Nos	12 Vx150AHx10 Nos
Inverter	1 KVA	2 KVA	3 KVA	5 KVA	7.5 KVA	12 KVA
System Volt	48 V	48 V	48 V	96 V	96/120 V	120 V
Power generated every day	5 Units	6 Units	10 Units	15 Units	20 Units	50 Units



## THE SUGGESTED LOAD DETAILS FOR THE 1 KW SOLAR POWER PLANT

Appliance	Load	Nos	Hours	Total Power ( W hrs)
Light LED	3 W	15	6	270 W hrs
Fan	60 W	3	6	1080 W hrs
TV	120 W	1	6	720 W hrs
Computer	120 W	1	6	720 W hrs
Refrigerator	120 W	1	6	720 W hrs
Plug points	100 W	1	6	600 W hrs
Additional points	100 W	1	6	600 W hrs

**Total power generated**

**4710 W hrs**

**GOVT. SUBSIDY AVAILABLE**



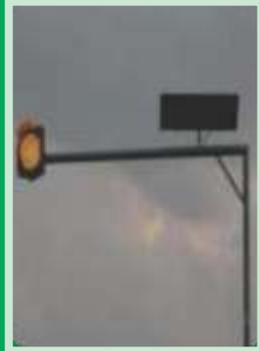
## Other Solar based Applications

Solkar can also provide any kind of Solar based applications depending upon your needs...

Traffic Signal



Blinker



Telecom Tower



Sun Blast



### OUR CSR ACTIVITIES

SOLKAR has initiated an NGO "MOVEMENT FOR GREEN REVOLUTION" [www.mgrindia.org](http://www.mgrindia.org) which has embarked on a cause to lite up 1 Million children and educate 10000 young engineers as a part of our commitment to the society.



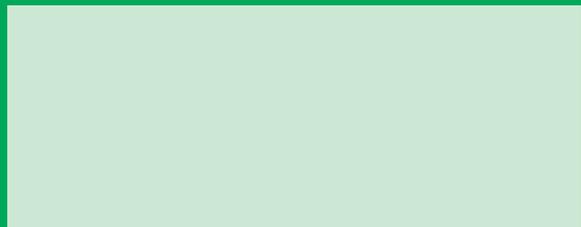
### Way Forward

- ❖ Kindly send us your enquiry to [sales@solkar.in](mailto:sales@solkar.in) with Product model and Quantity required
- ❖ Dealership enquiries are solicited Throughout India. Those Interested please mail to [dealer@solkar.in](mailto:dealer@solkar.in)
- ❖ Those interested to join our "Movement For Green Revolution " please mail to [krj@mgrindia.org](mailto:krj@mgrindia.org)

#### Manufactured by

SOLKAR SOLAR INDUSTRY LIMITED  
 # 13/2 , Jayalakshmpuram I st Street,  
 Nungambakkam, Chennai-600 034. INDIA  
 Tel: + 91 44 2827 4142, 2827 1819.  
 Fax : + 91 44 2827 3435.  
 Email : [sales@solkar.in](mailto:sales@solkar.in) Webmail: [www.solkar.in](http://www.solkar.in)

#### Authorized Dealer



# Go SOLAR..... The Solkar Way.....