



evergreen power limited

2009 - 2010 edition

# Solar Power System

*your valued solar partner*



[www.evergreenpower.com.hk](http://www.evergreenpower.com.hk)

**Evergreen Power Limited (EPL)** is Asia's leading supplier of solar lighting, heating and power system. We specialize in delivering practical solar applications for our customers and partners. Based in Hong Kong, EPL believes solar green energy will become inevitable part of life in the 21st century and beyond. **Our aim is to deliver cost effective solar solution.** During these years, we have acquired strong technical expertise and experience working with agencies and distributors in Asia, Europe and Africa. We believe in long term, mutually beneficial relationships with our customers and create value through collaboration to enhance customer competitiveness. **Quality is what we built in each and every of our products which are backed by our extended warranty.** We have successfully delivered systems for powering computers, mobile phones and lightings to schools and communities in Africa and street illumination in Asia and other remote locations where electricity is not readily available.

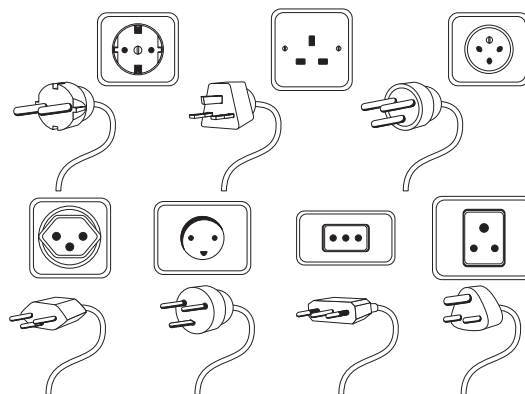
**EPL is your valued partner in solar.**

Solar energy makes it possible for home and business owners to have dependable power from renewable sources. Enhanced technology and mass production has significantly reduced the price of renewable energy systems making them more affordable than before. Our solar systems with battery-based backup power can ensure reliable power and offer significant advantages for supplying electricity to remote facilities or where grid connection is not readily available.

Our system comes **90% factory-assembled and matched.** All you need to do is to connect the simple wiring according to local site condition. **To make it easy for everyday end-user, the Power Box made from industrial-grade steel keeps all components safely secured** with simple user interface for DC/AC loads and power inputs. We can provide different plug configuration.



Customise output socket for US, Europe, Africa and Asia



**Pre-wired**

Every system comes complete with everything you need to start producing power; instantly. All you have to do is determine how much power you need and we will help you pick the appropriate sized system.

**Pre-tested**

These systems were designed for different environments to ensure reliable, trouble-free operation. These systems have been deployed in locations around the world. Each component is factory tested prior to shipping, so you can be assured that when your system arrives, it's ready for work.

**Our solar systems with battery-based backup power can ensure reliable power and offer significant advantages for supplying electricity to remote facilities or where grid connection is not readily available.**

**KEY FEATURES**

1. Not connected to the grid can place them almost anywhere
2. No need for trenches to extend power lines or call the electricity company for a new meter
3. Systems can even be moved with relative ease
4. No more fire risk and pollution from kerosene lamps
5. Uninterrupted power supply
6. No need for cable trenches
7. Simple installation, 90% factory assembled
8. Modular system can be expanded as required
9. 12 months warranty on components and 20 years on modules

All EPL Home Power Systems come complete with Solar Module, Charge Controller, Batteries and DC-AC Inverter.

\*Support frames for ground/ roof mounting and battery racking are available as options.

**Choosing a Solar Home Power System Kit**

To help you select the right system, you can follow the simple steps below. If you have any questions, please do not hesitate to contact your dealer or EPL. We would be more than pleased to help.

**Step 1:**

List down what type of electrical appliances you would like to power with your solar system (e.g. light) in **Column A**. Write down the total number of unit (e.g. 3 lamps) in **Column B**. Write down the rated power of the appliance (e.g. lamp = 11W; radio = 5W) in **Column C**. If you are unsure of the power rating, check your manual or look at our power table.

**Step 2:**

Write down the estimated daily running time of appliance, in this case the lighting (e.g. 3 hrs) in **Column D**. If you are using fridge or freezer, simply write down its daily energy consumption in **Column E**, e.g. 200Wh.

**Step 3:**

For each appliance, multiply **Columns B, C and D** for each line and input the result in **Column E** (Daily discharge), e.g. the daily energy consumption for 3 light bulb of 11W each is 3 units x 11W x 3hrs = 66Wh.

**Step 4:**

Finally, add up the results of **Columns E**. The total at the end will be your total energy needs for the appliance selected (e.g. 66Wh + 10Wh + 200Wh + 300Wh = 576Wh).





























You can now choose a suitable system from our Solar Home Power Series by simply choose one where the system power is greater than your daily discharge. In this case, choose EPL-600W which is greater than 576Wh.

Sample calculation to determine the right system:

<b>A</b>	<b>B</b>		<b>C</b>		<b>D</b>		<b>E</b>
<b>Appliances</b>	<b>No. of Unit(s)</b>	<b>x</b>	<b>Power Rating (W)</b>	<b>x</b>	<b>Running Time per day (hr)</b>	<b>=</b>	<b>Daily discharge (Wh)</b>
Light	3	x	11	x	3	=	66
Radio	1	x	5	x	2	=	10
Television	–	x	–	x	–	=	–
Refrigerator	1	x	–	x	24	=	200
Water Pump	1	x	100	x	3	=	300
Fan	–	x	–	x	–	=	–
<b>Total Daily Discharge (Wh)</b>							<b>576</b>

**Systems that meet your needs**

To meet your energy needs, we have provide a wide range of Solar Home Systems from small system for producing enough power to illuminate domestic work after sundown to larger size system for high energy demand.

System	EPL-80W	EPL-150W	EPL-300W	EPL-600W	EPL-900W	EPL-1500W
Panel Configuration	80W x 1	150W x 1	150W x 2	150W x 4	150W x 6	150W x 10
Controller (A)	C12-10A	C12-10A	C45-30A	Stecca 35A	Stecca 35A	Stecca 35A
Inverter	Modified Sine-wave 500W	Modified Sine-wave 750VA	Modified Sine-wave 2000VA	Modified Sine-wave 2000VA	Pure Sine-wave 2400VA	Pure Sine-wave 2400VA
Battery size	12V/100Ah	12V/100Ah	4 units x 12V/150Ah	4 units x 12V/200Ah	8 units x 12V/200Ah	8 units x 12V/200Ah
Total daily energy (l)	252Wh	470Wh	998Wh	2020Wh	3105Wh	5100Wh
Lamp (11W)	 x 4.5hrs	 x 5hrs	 x 5hrs	 x 5hrs	 x 7hrs	 x 8hrs
Radio (5W)	 x 3.5hrs	 x 5hrs	 x 5hrs	 x 5hrs	 x 6hrs	 x 6hrs
Television (40W)	 x 2hrs	 x 4hrs	 x 4hrs	 x 8hrs	 x 10hrs	 x 10hrs
Fridge (200Wh)						
Computer (50W)	 x 2hrs	 x 2hrs	 x 4hrs	 x 7hrs	 x 8hrs	 x 10hrs



Wide range of application from powering a radio-transmission tower in Mozambique to lighting an advertising billboard, powering security camera or charging mobile phones.

EPL 80 W Home Power System installed in Kenya, 2009

### ECON SERIES EPL-80W

The **EPL-80WHS Power System** is an excellent choice for first-time user of solar electricity. This system will provide enough power to operate lighting and small appliances at home or weekend cottage. Very popular in many developing regions where electricity is not available, this low-cost, highly reliable system provides all you need to generate free electricity. The 80W system comes with durable combiner power box with pre-configured AC/DC socket outlets for **easy plug and play**. Very popular in many developing markets for small community.

#### System Components

- TUV Certified 80W Crystalline PV module
- 10A Solar Charge Controller
- 100Ah, 12V Deep Cycle Solar Battery
- 500W Modified Sine Wave Power Inverter
- Industrial-grade Power Box with Sockets

#### Benefits

- Completely off the grid for uninterrupted power supply
- No need for trenches
- Simple Installation - 90% factory assembled
- Modular can be expanded as required
- 12 months warranty on components and 20 years on modules



To make it easy for daily use, we custom designed a combiner box made from 4 to 10mm industrial grade steel with powder-coated protection to house all the electrical components and keep all wirings safely away from unwanted attention. All input and outputs sockets are clearly designed on the control panel of the box for simple plug-and-play operation.

### DELUX SERIES EPL-150W

The **EPL-150WHS Power System** is the right choice for larger cottage and serves as a starter system for full-time solar-powered homes. This system includes a high efficiency 150W EPL solar module to provide more power and a solar regulated controller to maximise module output.

The 150WHS system is designed to provide power to run DC appliances such as indoor and outdoor lightings, water pump and telephone. With the inverter included, you can run a microwave oven, vacuum cleaner and a full sized stereo system too.

#### System Components

- TUV Certified 2 x 75 W Crystalline PV module
- 10Amps Solar Charge Controller
- 200Ah, 12V deep-cycle solar battery
- 750VA Inverter

#### Benefits

- Completely off the grid for uninterrupted power supply
- No need for trenches
- Simple Installation, 90% factory assembled
- Modular can be expanded as required
- 12 months warranty on components and 20 years on modules



### DELUX SERIES EPL-300W

**EPL-300WHS** is a very popular solar power system designed to be ideal for larger summer homes and for those seeking to be carbon-free and achieve full-time solar powered homes. The system comes with two high-efficiency solar modules to power both indoor and outdoor lighting and a water pump. With the factory-matched inverter included in the system, you can run a microwave oven, vacuum cleaner and a full-sized stereo all at the same time.

#### System Components

- TUV Certified 2 x 150W Crystalline PV module
- 20Amps Solar Charge Controller
- 2 x 200Ah, 12V Deep Cycle Solar Battery
- 1250VA Modified Sine Inverter

#### Benefits

- Completely off the grid for uninterrupted power supply
- No need for trenches
- Simple Installation, 90% factory assembled
- Modular can be expanded as required
- 12 months warranty on components and 20 years on module



### POWER SERIES EPL-600W

**EPL-600WHS** is designed specifically for large summer house or for year round residence. The system is powered by four high efficiency 150W solar modules delivering up to 600W of energy. The modules are factory matched with high powered 35A Stecca regulator which is approved by World Bank for re-building projects in Nepal.

#### System Components

- TUV Certified 4 x 150W Crystalline PV module
- Stecca 35A Solar Charge Controller
- 4 x 200Ah, 12V Deep Cycle Solar Battery
- 2500VA Pure-sine Inverter

#### Benefits

- Integrated LCD display showing state of charge
- Completely off the grid for uninterrupted power supply
- No need for trenches
- Simple Installation, 90% factory assembled
- Modular can be expanded as required
- 12 months warranty on components and 20 years on modules



### POWER SERIES EPL-900W

**EPL-900WHS** is higher-end model designed specifically for large summer house or for year round residence. The system is powered by six high efficiency 150W solar modules delivering up to 900W of energy. The modules are factory matched with the same high powered Stecca 35A regulator which is approved by World Bank for re-building projects in Nepal.

#### System Components

- TUV Certified 6 x 150W Crystalline PV module
- Stecca 35A Solar Charge Controller
- 6 x 200Ah, 12V Deep Cycle Solar Battery
- 2500VA Pure-sine Inverter

#### Benefits

- Integrated LCD display showing state of charge
- Completely off the grid for uninterrupted power supply
- No need for trenches



### PREMIER SERIES EPL-1500W

**EPL-1500WHS** is designed as a full-time residential off-grid power system to represent the state-of-the-art in photovoltaic energy. The system comes with an inverter and two factory matched solar charge controllers to deliver clean reliable power all day.

#### System Components

- UV Certified 8 x 150W Crystalline PV module
- Stecca 45A Solar Charge Controller
- 8 x 200Ah, 12V Deep Cycle Solar Battery
- 2500VA Pure-sine Inverter

#### Benefits

- Completely off the grid for uninterrupted power supply
- No need for trenches
- Simple Installation, 90% factory assembled
- Modular can be expanded as required
- 12 months warranty on components and 20 years on modules
- Approved for World Bank funded project in Nepal





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