

FACTS ABOUT SOLAR ENERGY

REAL FACTS ABOUT SOLAR ENERGY

Its unlimited - energy received by earth through the sun exceeds all energy consumption on the Planet!

Clean and renewable - at least for a few million years to come.

Roughly on a monthly basis home solar systems theoretically prevents 80kg of fossil fuels to be burnt, saves 400 liters of water - and prevents more than a hundred kilograms of carbon dioxide to enter the earths atmosphere.

Not equally distributed on earth - it varies because of latitude - the equator receives more energy than the earths poles.

Solar panels can save you money in the longer term and you will contribute to a greener planet - Good Stuff!

Solar Power is converted Solar Energy for human use.

It makes only 1% of global energy usage, but that is set to change quite fast in the next five years.

It is relatively expensive to install.

It could take up to 5 years to break even.

Normally it requires backup power - "the sun does not always shine".

Photovoltaic systems are not completely maintenance free as claimed by some installers.

You must have a good idea of what your house holds energy consumption is in order to choose the correct sized system, see Technical Facts below.

TECHNICAL FACTS ABOUT SOLAR ENERGY

We can theoretically light up 6 100W lights if we capture all the radiation from a square meter on a normal sunny day.facts about solar energy

There are two ways of converting the energy:

Using the suns rays directly to heat water e.g. some swimming pool water heaters or hot water geysers.

Using the suns rays to generate electricity using photovoltaic cells - PV SOLAR PANELS.

A pv solar power system is made up from 4 major components:

1. Solar pv panels

Used to convert the sunshine to volts and current.

Specified in Watts, Voltage and Current it delivers

e.g. 100 Watt solar panel, (24V), 6.9 Amps.

140 Watt solar panel (12V) 7.7 Amps.

2. Charge controller or regulator

Used to regulate the electricity between the solar panel and the battery bank to prevent overcharging. Solar panels usually deliver higher volts than specified! A typical 12V panel will deliver 17 volts Specified in Amps (current) and voltage it regulates

e.g. 10 Amps, 12V Charge Controller.

3. Power inverter

Solar panels deliver direct current (DC). You will need to convert DC to AC for most home appliances Specified in Watts

e.g. 3kW power inverter.

4. Batteries

Used to store the electric power collected from the solar panel

Specified in AmpHours and Volts

e.g. 12V 100 AmpHours.

An average household winter electricity usage is about 3500 kWh(kilowatt hour) per month or roughly 120 kWh per day

Source : <http://www.hicow.com/SOLAR-ENERGY/kwh/SOLAR-PANELS-1.html>