

GREAT OPPORTUNITIES IN SOLAR ENERGY

What we do

Introduction to Solar Energy

Solar is one of the most talkedabout alternative energy sources in the world today. Enough energy comes from the sun in one hour to power the global population for a year. Sunlight is a totally renewable resource, unlike oil, coal and natural gas. We know that our sun is actually a very large and hot star emitting lots of power in its rays. How do we go about harnessing that power effectively, so it can help generate electricity, which is an important part of modern life?



- The light is used in photovoltaic systems to convert light to electricity and this is one of the main areas where our solar industry is concentrating its efforts today.
- The solar industry, like many others, has its own unique vocabulary.
- For example: Photo (light) + voltaic (produces voltage)
 = photovoltaic (PV) system.









poly silicon







Manufacturing



Solar module



How solar modules work

Solar modules consist of layers of materials like a sandwich. A solar cell is made from a thin wafer of silicon, similar to a computer chip, but bigger.

The light carries energy into the cell and the cell and the wires connected to the cell convert the light energy into another kind of energy – electric current. No electricity is stored in the cell.



Technology Transfer

We offer technology transfer of know how for the construction of solar panels. We offer design and training for new companies interested in peruse the solar photovoltaic business around the world.



Turnkey

We offers solutions for every part of a large-scale solar system, from solar inverters to complete packaged solution the large Solar Plant.

Initiation

- Implementation
- Planning & Programming
- Estimating → Request for
- Valuation
- Design

Engineering



Purchasing

- Expediting
- Receiving
- Invoicing
- Reconciliation

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Photovoltaic system

A photovoltaic power station, also known as a solar park, is a large-scale photovoltaic system (PV) designed for the supply of merchant power into the electricity grid.

Residential rooftop

On grid

Off grid

Storage energy

On-grid Ground PV Plant

> Hybrid and storage energy

> > Most Solar parks are ground mounted PV systems, also known as free-field solar power plants.

Commercial rooftop

On grid

off grid

Hybrid and storage

Photovoltaic system

most PV systems are connected to the electrical grid, while stand-alone or offgrid systems only account for a small portion of the market.



Rooftop power system

A small PV system is capable of providing enough AC electricity to power a single home, or even an isolated device in the form of AC or DC electric. In 2013, roof-top systems accounted for 60percent of worldwide installations.





A hybrid system combines PV with other forms of generation, usually a diesel generator. Biogas and wind are also used, and often will incorporate a storage system (battery, fuel cell) or small fossil fueled generator to ensure maximum supply reliability and security. Hybrid systems are most often found on islands.

Hybrid power system

Solar pump

One of the most cost effective solar applications is a solar powered pump, as it is far cheaper to purchase a solar panel than it is to run power lines.







Solar street lights are independent of the utility grid. Hence, the operation costs are minimized. Solar street lights require much less maintenance compared to conventional street lights. Since external wires are eliminated, risk of

Since external wires are eliminated, risk of accidents is minimized.

This is a non polluting source of electricity Separate parts of solar system can be easily carried to the remote areas

Solar street light