Enhance your Ideas regarding Solar Panel

**Solar Panels**

A solar panel is a collection of solar cells. Solar energy begins with the sun. Solar panels are used to convert light from the sun, which is composed of particles of energy called [photons](http://chemwiki.ucdavis.edu/Physical_Chemistry/Quantum_Mechanics/02._Fundamental_Concepts_of_Quantum_Mechanics/Photons) into electricity that can be used to power electrical loads.

**How does solar panel work?**

The earth intercepts a lark of solar power 173k w terabytes that is 10k times more power than planets population uses.

So is it possible that one day the world could be completely reliant on solar power energy!

To instigate that question we first need to examine how solar panel converts solar energy into electrical energy?

Solar panels are made up of small units called solar cells. The most common solar cells are made up from silicon as semi-conductor that is the second most abundant element on earth.

In a solar cell crystalline silicon is sandwiched between conductive layers. Each silicon Adams is connected to its neighbours by force strong puns which kick the electrons in place so no current can flow.

Here’s the key a silicon solar cells uses two different layers of silicon an N type of silicon has extra electron and P type silicon has extra spaces for electron called holes where the two types of silicon meet electron can wonder across the P and N junction leaving a positive charge on one side and creating a negative charge on the other.

You can think of light as the flow of tiny particles called photons shooting out from the sun. When one of these photons strikes the silicon cell with enough energy it cannot electron of its part leaving a hole. The negatively charged electron in location of the positively charged hole are now free to move around but because of the electric field at the P and N junction they only go one way . The electron is drawn to the inside while the hole is drawn to the P side. The mobile electrons are collected by thin needle finger at the top of the cell from there they flow through an external circuit doing electrical work like powering light bulb before returning to the conducted aluminium sheet on the back.

Each silicon cell only puts out half a volt but you can strengthen them together in merges to get more power. Twelve photovoltaic cells are enough to charge a cell phone while it takes many mergers to power any entire halves.

Electrons are the only moving parts in the solar cell and they all go back where they came from. There is nothing to get worn out or used up so solar cells can last for decades.

**So what is stopping us from being completely reliant on solar power?**

There are political factors at play not to mention the businesses lobby to maintain the state square are but for now let us focus on physical and majestical challenges.

In the most obvious of those is that

* Solar energy is unevenly distributed across the planet
* Some areas are sunnier than other. It’s also inconsistent less solar energy is available on cloudy days or at night
* So a total reliance would require efficient ways to get electricity from sunnier parts to cloudy parts and effective storage of energy. The efficiency of the cell itself is a challenge too.
* If the sunray is reflected instead of absorbed or if dislodged electrons fall back into a hole before going through the circuit that photons energy is lost. The most efficient solar cell yet still only converts 46% of the available sunlight to electricity and most commercial systems are currently 15-20% efficient.

In spite of these limitations it actually would be possible to power the entire world with today’s solar technology. We need the funding to build the infrastructure in a good deal space.

Meanwhile solar cells are getting cheaper better and are competing with electricity from the grade.

And innovations like floating solar farms may change the landscape entirely.

Thought Experiments aside there is the fact that over a billion people don’t have access to reliable electric grid especially in developing countries. Many of which are sunny. So in places like that solar energy is already much cheaper and safer and available alternatives like kerosene.

**Effective solar may still build the little way off!!!**