

This Is How Solar Energy Works

Sun is the primary source of energy in our solar system. It provides life to billions of living creatures on planet Earth. It is the source of light and provides life. The bountiful and non-exhaustive resource in the form of solar energy is free, available and omnipotent. Humans have harnessed this resource into a usable energy form and are using it to the benefit of the society. Many claim that this energy is going to replace the other form of polluting energy sources in the near future. The process for this change is an extension of human ingeniousness and a fast change of the technology since the 1970s.

Historically, the sun has been the only source of energy for all living beings on the planet. With the increase in the consumption of energy in the world today and phenomenon like the greenhouse effect becoming a possible threat to the planet's existence, solar energy and other alternative forms of energies are gaining favor. They are relatively cheaper to produce and do not produce harmful emissions like carbon based fuel sources.

So how does solar energy work? The process of converting the rays of the sun into a usable energy form requires conversion, storage and harnessing of the rays in a form which can be used by the energy consuming appliances. The various ways in which this energy is being converted and used depends upon the technology utilized to harness it. For drying out clothes, direct sunlight is enough. For powering satellites, direct sunlight along with a storage mechanism is required. Cars use a combination of hybrid batteries and charge them using sun light.

The primary method of using solar energy is to store them in photovoltaic cells. They were first developed in the 1950s for use on U.S. space satellites program. They are constructed from silicon. When sunlight strikes the solar cell, it makes the electrons to move about. The electrons move toward the treated front surface of the solar panel. This leads to an electron imbalance between the front and the back surface of the panel. On joining the two surfaces, a conductor is formed, just like a wire, and current begins to flow. The individual solar cells are arranged together in a PV module and the modules are grouped together to form an array. This current is used to charge cells and this energy is used to light lamps, tube lights and also to drive cars now. The current can also be used to run appliances.

Another method of using solar energy is to use curved reflectors to direct the solar rays to a convergence point and then make a current flowing system like a photo cell and store energy. Plants like this are operational in the US and in India.

Solar energy is abundantly available in the world and is perhaps the only freely available source of energy, with little or no pollution contribution. Its conversion to usable forms of energy has become possible in recent years and more and more advanced and optimized methods are available to us to harness its full potential.

In the energy crisis ridden world, the SUN might once again come to our rescue.

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About the Author

Isabel Baldry is covering a wide range of interests for various publications. To know more facts about how solar energy works please visit <http://www.acesolarenergy.com/> .