Solar Cells: Generating Power Out Of Sunlight

Solar cells are devices that have been designed to tap into the solar energy which is abundant on the surface of the earth during daylight. You would have seen small solar cells at work in your calculators, watches and other such devices and could have observed that some of these contraptions seem to be running on these solar cells alone, forever, as though they never need any other source to derive power from, as along as there is sunlight.

The solar cells we see everyday are also called Photovoltaic cells or modules-usually frames with groups of solar cells tightly packed and arranged in a systematic way. Photovoltaic are special materials which have the ability to convert sunlight into electricity. Hitherto used exclusively for space and related applications, it has now been extended to almost everything from water heaters to automobiles.

Photovoltaic cells are constructed using semiconductor material - materials which have the ability to conduct electric current. Silicon is one of most common materials used. When sunlight hits the solar apparatus, the solar cells absorb the heat and the electrons are let free or kicked out from their lodging places within the atomic structure of the semiconductor material. The electrons duly freed, thus begin to flow leading to an electric current. If two metal plates can be attached to the points of flow, electric current could be drawn out.

Earlier solar cells found use only for generating power for satellites out there in the space. Today, they are here in use for even less exotic applications like solar water heaters, cookers, calculators, watches and a few automobiles too. Solar cells could be used to provide electricity for your home or office too. However, while the operating costs of your power expenditures would come down drastically, you need to be aware that the installation and the solar cell set up itself is outrageously expensive. Since you would be using this power primarily to run your major appliances, you might have to find alternatives.

It is a matter of time before the energy from the sun is harnessed into a full-time energy source that could be used to produce electricity. It is already quite popular, but then, there are a few problems associated with this technology. The heat rays from the sun keep fluctuating and it could be snowing or raining sometimes. The warmer areas on earth are fine, but how do we help the colder areas? The lack of uniformity and reliability on the solar heat rays has remained a challenge for harnessing this technology.

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About the Author

Jason Uvios writes about "Solar Cells: Generating Power Out Of Sunlight" to visit:http://www.generators-europe.info, http://www.generator--usa.info and http://www.generators-today.info