Concentrating Solar Power

Have you ever wondered if what you know about Solar Power is accurate? Consider the following paragraphs and compare what you know to the latest info on Solar Power.

Solar power is described as the conversion of sunlight into electricity. Sunlight could be changed straight into electricity with the use of PV or photovoltaics. It can also be indirectly converted using CSPs. There are now several devices and structures created which focus and concentrate solar power in various ways depending on the needed use. There are several now several uses of solar power because of the rise of these devices.

On Concentration

Solar power is concentrated in various ways. Solar troughs are the most common and visible. CSPs or concentrating solar power systems make use of mirrors, lenses and track systems to focus on a wide area of sunlight into a small beam. The concentrated heat is used as a source of heat for a conventional power plant. The wide range of concentrating technologies is now available. The parabolic trough is the most developed. Other structures made include the Stirling dish, the linear Fresnel reflector and the solar power tower. Several techniques are used to locate the sun and concentrate light. Working fluid is also heated in all the systems using concentrated sunlight, which is then applied for storing or generating power and energy.

The Parabolic Trough

A parabolic trough is created from of linear reflector that concentrates light right onto a receiver, placed along the focal line of the reflector. The receiver is described as a tube positioned right over the middle of the parabolic mirror and filled with a working fluid. The reflector is created to follow the sun during the daylight hours by tracking right along a lone axis. Parabolic trough systems give the best land-use factor among all solar technologies.

It seems like new information is discovered about something every day. And the topic of Solar Power is no exception. Keep reading to get more fresh news about Solar Power.

CSP plants use several thin strips of mirror instead of the usual parabolic mirrors to focus sunlight onto a couple of tubes using working fluid. This application provides the advantage that flat mirrors can be used. Flat mirrors are great because these are cheaper and can contain more reflectors within the same amount of space. More available sunlight can then be used. Focusing linear Fresnel reflectors can be used well in compact or large plants.

The Stirling Solar Dish

The Stirling solar dish is also called a dish engine system, which is made of an independent parabolic reflector that tends to concentrate light right onto a receiver placed at the focal point of the reflector. The reflector will track the sun along an axis or two. Parabolic dish systems provide the best efficiency over other technologies. The 50kW Big Dish in Canberra, Australia is a great example. The Stirling solar dish mixes a parabolic focusing dish that includes a Stirling heat engine that regularly drives an electric generator. The benefits of Stirling solar over PV cells are the higher conversion efficiency from sunlight into electricity, plus a longer lifetime.

Power Tower

A solar power tower includes a wide array of heliostats or tracking reflectors that focus light on a central receiver over a tower. Power towers are considered to be the most cost effective and provide better energy storage and higher efficiency compared to other CSP technologies. The solar bowl is described as a dish mirror that is affixed to a certain spot or structure. The receiver will follow the line focus made by the dish.

Now might be a good time to write down the main points covered above. The act of putting it down on paper will help you remember what's important about Solar Power.

About the Author
By Anders Eriksson, feel free to visit his top ranked GVO affiliate site: **GVO**

You can also find this article published on Concentrating Solar Power