Other Solar Power Uses

There are several other uses for the sun's energy in modern life. The light that comes from the sun is called solar energy. Have you ever jumped into a pool on a sunny day? The water is warm because the solar energy from the sun has converged and when this solar energy hits the water it is converted to heat, increasing the temperature of the pool. This process is optimized by a technology called solar heating, or alternatively, solar water heating.

To extend the concept of solar heating and compare it to nuclear power is extremely simple because both processes are almost exactly the same. If a solar water heater was substituted in a nuclear power plant for the nuclear reactor the system would run fine without any modifications because water would be heated just as it was through the nuclear reaction. For more information about nuclear power see the physics and chemistry pages. Also see the heat and power page as well as the combustion comparison page.

Solar water heating is not the only method used to retrieve the energy from the sun and convert it to heat. In some homes, a wall made of bricks is made directly below and across from a skylight so that the light rays hitting the brick wall are absorbed. The brick wall acts like a battery and stores the light rays. Try walking on the road without shoes, and it becomes obvious that the bricks and tar keep the light energy inside of it. The energy that is stored in this medium (either a brick or some tar in this case) comes out as the amount of light flowing into it decreases. A home that has a brick wall will be heated at night by the energy that flows out of the brick wall.

One thing that concentrates the power of the sun is called a fresnel lense. This lense takes the power of the sun spread out over a great area and places all of that solar radiation on one small spot. A common example of a similar effect of concentraing the power of the sun witha lense is using a pair of glasses or a magnifying glass to start a fire. Concentrating the power of the sun has some advantages and some disadvantages. A greater amount of sunlight in one area means that more of it can be converted to electricity or utilized to heat water or heat a house. When solar power is concentrated it can cause great heat. Excess heat can cause problems because the heat may burn the solar cell or other important components used in the alternative energy system.

Solar power has also been used to cook food. The way a solar cooker works is essentially just a concentration of the sun's heat or solar radiation (that creates heat) on one particular spot where food is located. A funny saying is that "It was so hot you could fry eggs on it!" With the power of the sun this is entirely possible if you try solar cooking when the sun is high in the sky and gives the most direct sunlight. Without direct sunlight the food will not heat, or may not heat enough.

To visually understand the method of solar heating by a medium such as bricks, look at the partially finished VRML Solar Brick House. If you do not have a VRML 2.0 compatible browser or plugin, please follow the link to the page on where you can get this software.