OUR "SOLAR" BUS

The Signs for Life mobile classroom bus is the first of its kind in the Nation that will teach school-aged children about safety. It has 8 solar panels that produce 1920 watts of power, connected to 12 batteries and an inverter. Pretty fun stuff.

A solar Powered vehicle

The Future of Solar

The future of solar power includes lower costs, more reliability, and less need for fossil fuel-based electricity. As technology advances, we'll see more applications of sun powered products. Can YOU think of a way to use the sun???

Go Solar and Smile!

There are many ways to support solar power. Need new batteries? Buy rechargables with a solar charger. Need landscape lights? Purchase solar powered ones. Want to invest in a community solar garden? Check with your local utility provider.

Helpful Links:

www.findsolar.com
To find a local solar contractor

www.kids.esdb.bg/solar
Energy info for kids

www.nrel.gov/solar
National Renewable Energy Lab.

Coming Soon...

Visit local solar installations and talk directly with owners at the **2012 Pikes Peak Tour of Sustainable Buildings** on October 27. Visit www.ases.org for more information.

This brochure was created by the Colorado Springs Office of Innovation and Sustainability
Check us out at:
www.facebook.com/CS.OIS

SUN-sational Solar Power

The sun is a great source of energy and can be used to heat, cool, and light our homes and businesses.

When you step outside on a hot and sunny day, you can feel the sun's heat and light.

By using this renewable energy source, we can conserve our earth's limited resources while reducing pollution from burning fossil fuels.

Learn more about solar energy!

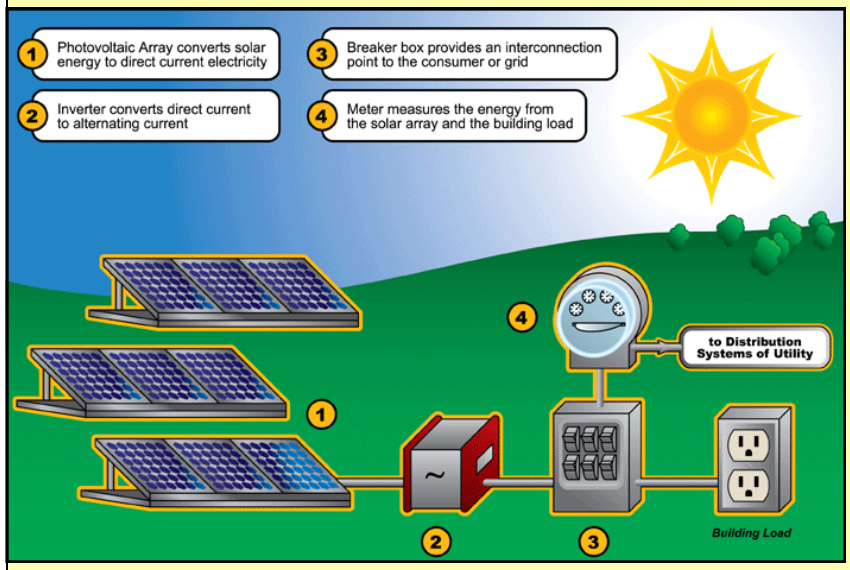
Solar calculator

Solar airplane

Air Force Academy solar array

How Solar Power Works

Calculators, emergency road sighs, airplanes, cars, and homes: they are all harnessing the sun's power and converting it into energy. But how?

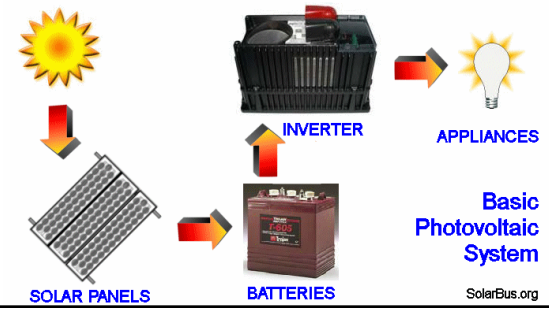


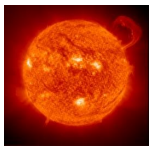
Example of a solar grid system

Solar energy is converted to electricity via photo-voltaic (PV) cells. A module is a group of PV cells, also known as a solar panel. Many panels make up a solar array. When light strikes a cell, a portion of it is absorbed, the electrons are freed and flow as a current. The current plus the cell's voltage determines how much power the solar cell can produce.

Batteries, Baby!

Batteries can be used to store energy created by solar panels, so power can be used when then sun is not shining. A charge controller prevents overcharging the batteries once they are full.





DID YOU KNOW...

- Solar energy is the most abundant energy resource on the earth... 173,000 terawatts of energy strike the earth continuously
- The first solar cell was built in 1954
- As early as the 1960's the first satellite powered by solar cells was created. It is still in orbit today, logging more than 6 billion miles!

Passive and Active Solar Energy

A building can be built to allow as much sunlight as possible to enter, reducing the amount of electricity needed for light and heat. This is called ***passive solar.*** A greenhouse is an example of a passive solar building.

Capturing the energy of the sun and converting it to electrical or mechanical energy through cells is called ***active solar.*** A water heater for washing, showering, and other home uses can utilize active solar instead of using electric, gas, or oil. Panels can be placed on a rooftop or on the ground in a solar garden.