

Solar

We get most of our energy from the sun. We call it solar energy. It travels from the sun to the Earth in rays. Some are light rays that we can see. Some rays we can't see, like x-rays.

The sun is a star. It is a giant ball of gas. It sends out huge amounts of energy every day. Most of the energy goes off into space. Only a small part reaches the Earth, but this amount is large enough to provide energy for many things!



Solar energy is light energy.

Solar Energy

We use solar energy in many ways. All day, we use sunlight to see what we're doing and where we're going.

Sunlight turns into heat when it hits things. Without the sun, we couldn't live on the Earth—it would be too cold. We use the sun's energy to heat water and dry clothes.

Plants use the light from the sun to grow. Plants take the energy in light and store it in their roots and leaves. That energy feeds every living thing on Earth. We can also burn plants to make heat.



Some people hang clothes outside to dry in the sun.

The Sun's Energy is in Many Things

The energy from the sun makes rain fall and wind blow. We can capture that energy with **dams** and **wind turbines**.

Coal, **oil**, and **natural gas** were made from prehistoric plants and animals. The energy in them came from the sun. We use that energy to cook our food, warm our houses, run our cars, and make electricity.

Solar Energy is Renewable

Solar energy is free and clean. There is enough for everyone, and we will never run out of it. Solar energy is **renewable**. The sun will keep making energy for a very long time.

Why don't we use the sun for all our energy needs? The hard part is capturing the sunlight. It shines all over the Earth and only a little bit reaches any one place. On a cloudy day, most of the light never reaches the ground at all. Because of this, solar energy provides a very small amount of the energy the United States uses each year.

We Use Solar Energy

Lots of people put **solar collectors** on their roofs. Solar collectors capture the sunlight and turn it into heat. People can heat their houses and their water using the sun's energy.

Solar cells can turn solar energy into **electricity**. Some toys and calculators use solar cells instead of batteries. **Solar panels** are made of many solar cells. Some people put solar panels on their homes. These solar panels can make enough electricity for a house.

Today, solar energy provides a little more than 11% of the electricity we use in California, and it is growing all the time. Scientists are looking for new ways to capture and use solar energy.



Solar Panels

Solar panels on a home's roof turn solar energy into electricity.