

OKLAHOMA

ROCKS!
EnergyOTHER RENEWABLE
SOURCES

The use of renewable energy is not new. Wood once provided almost 90 percent of the country's energy and solar energy technology was recognized in 1921 when Albert Einstein was awarded a Nobel Prize for his work with early solar panels. The challenge today is to develop ways to both utilize energy from renewable sources and deliver that energy to consumers in environmentally friendly and economic ways.

BIOMASS ENERGY comes from living or recently living organisms such as crops, wood, manure and landfill gasses and can be burned to create energy for electricity or converted into fuels like biodiesel and ethanol.

COMMERCIAL GEOTHERMAL ENERGY comes from natural heat generated deep in the Earth. Geothermal power plants work by using steam or hot water from wells drilled one to two miles deep which then drives generator turbines. Most geothermal resources are along major tectonic plate boundaries, especially the "Ring of Fire" that outlines the Pacific Ocean. In the U.S., most geothermal reservoirs are found in western states.



SOLAR ENERGY comes from the energy of the sun. It can be channeled through solar cells, which use semiconductors to convert sunlight directly into electricity.

HYDROGEN ENERGY comes from hydrogen atoms separated from other compounds. Hydrogen fuel cells can convert this energy into electricity and have been used to fuel space shuttles and buses and a small number of cars.

**ACTIVITIES:**

1. What renewable energy resources are available in your town? Do you think it is feasible for them to be converted to energy for consumers? Why or why not?
2. Use the map at www.altfuelprices.com to find the nearest alternative fuel station to you. How far is it? What is the source of the fuel? How much does it cost per gallon? Choose a town at least 100 miles away that you have visited or would like to visit. How many alternative fueling stations would you come close to driving from where you live to your destination?



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