

What is alternative energy? And why do we need them and [when did alternative energy first appear in our history](#)? We have a vague idea that these types of enhanced natural resources can save our planet, but we also have heard that [alternative energy may have some disadvantages](#) that may not be as talked about as they should be. The fact is [alternative energy](#) encompasses a myriad of sub-topics that include [wind](#), [water](#), [geothermal](#), [nuclear](#), and more.

Why do we need energy?

Many things around us require energy in order to function. TV set and stereo, microwave oven and electric kettle, computer and refrigerator – all of them need energy to work. Besides, energy is also necessary to make a car run, to keep the house warm or to heat water for showers.

Most of energy, used nowadays, is called electric energy. It is supplied to our houses constantly through wires; but in order to have energy it should first be produced.

How is energy produced?

Energy is produced or generated from natural resources, which are usually called energy sources. The examples of energy sources are gas, oil, water, sun and wind. However, not all energy sources are created equal. Some of them can be dangerous for the environment we live in.

For example, when oil or gas is burnt in order to produce energy or to heat the houses, a lot of harmful things are released into the air, making it bad for breathing. Besides, we have already used so much oil and gas, which was stored on our planet that only a small amount of those resources remained at our disposal.

That is why people decided to find other sources of energy, which would not harm the air and the amount of which would never end. Such types of energy sources are called alternative. Examples of alternative energy sources are solar energy, wind energy, geothermal energy and biofuel energy. All of these sources give us “clean” energy, because it is safe for people and for the environment we live in.

Solar Energy

[Solar Energy](#) comes from the sun. When the sun shines, it can warm water, heat the house, and it can even produce electricity to run different electric house appliances. In order to use the energy of sun, people put special solar panels on top of their houses' roofs.



Those [solar panels](#) can produce electricity or heat water. The amazing thing about solar energy is that it is free of charge, and it is renewable (this word means

that energy from the sun never ends). People use solar energy in those places, where there is a lot of sunshine all year round. In such sunny places as California people even built large power plants, which gather sunlight and transform it into electricity for people.

Wind Energy

People have used the power of wind for thousands of years. Nowadays [wind energy is used to produce electricity](#). Special wind machines are built in the areas, where strong wind blows (usually it is at the coastline).

When many wind machines are built near one another, it is called wind farm. A wind machine consists of a tower with the blades and a generator on top of it. When the wind blows, it rotates the blades. When blades spin around, electricity is produced in the device, called generator.

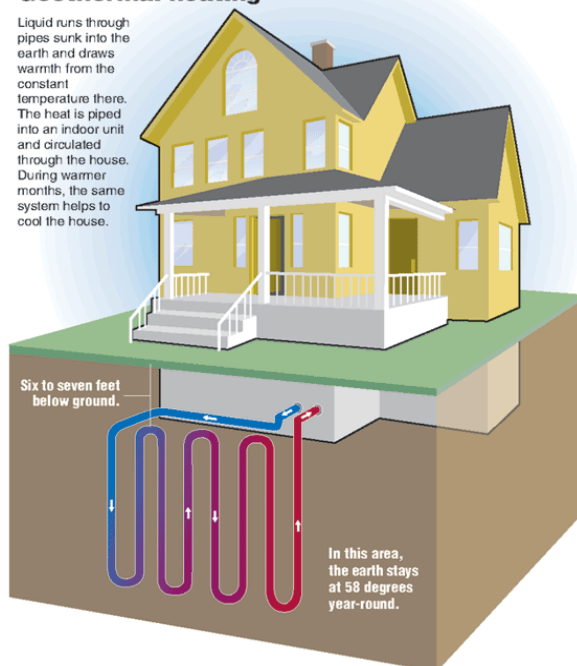
In order to catch a lot of wind, the towers are built very high. As with solar energy, wind energy is renewable, because wind will always blow on the Earth.



Geothermal Energy

Geothermal heating

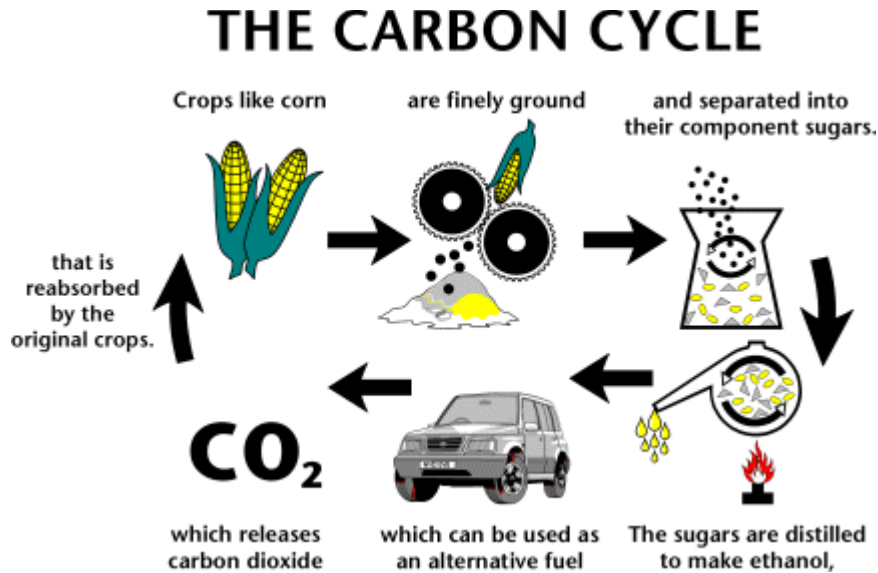
Liquid runs through pipes sunk into the earth and draws warmth from the constant temperature there. The heat is piped into an indoor unit and circulated through the house. During warmer months, the same system helps to cool the house.



Our planet Earth is very hot and contains a lot of hot water and steam deep down beneath its surface. Volcanoes are best examples of how hot our planet is in its center. People have already learned how to use geothermal energy (“geo” means Earth and “thermal” mean high temperature).

In places, where hot water is close to the Earth surface, people drill special wells and use that hot water for warming their houses. After that water is sent back into the Earth, so that no water is wasted in vain. [Geothermal energy](#) is also a free and renewable source of energy.

Biofuel is the modern alternative source of energy, which was invented to substitute gasoline, used in all the cars, trucks, and motorcycles around the globe. Gasoline is bad for the air because when it is burned in the car engine, a lot of harmful substances are released into the air.



Biofuel energy is not that harmful and can be produced from certain plants, grown specifically for that purpose. The fuel, which is produced from plants, is called ethanol and it is suitable for most of the vehicles on the roads.

Some biofuel can even be produced from vegetable oil, after it has been used in the kitchen for preparing meals, like potato chips. Such fuel is called biodiesel.