

ENERGY RESOURCES

A **resource** is a supply of something that will meet someone's need. When we talk about energy resources, we are discussing those materials and events that can produce energy and thus become a resource to humans.

Two kinds of energy resources: renewable and nonrenewable.

A **renewable resource** is a resource that can be naturally restored or at least replenished as it is needed. So a renewable resource must be produced in a relatively short time, such as solar energy, which can become available as a resource whenever the sunlight shines on the earth.

A nonrenewable resource is a resource that cannot be replaced or replenished in a short period of time. It takes a long time to produce and is limited in quantity.

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Fossil Fuels

Fossil fuels are energy sources that are made from plants and animals that died a LONG time ago and were buried under layers of the earth. The heat and pressure caused from being buried under layers and layers of earth changed the dead material into oil, natural gas, and coal.

Crude Oil

Type of resource:

nonrenewable resource

Where it is found:

beneath the Earth's surface and below the ocean floor

What it is used for:

gasoline, diesel fuel, and other fuels

What it is used to make:

plastic, asphalt, grease, wax

Natural Gas

Type of resource: nonrenewable resource
Where it is found: in the ground
What it is used for: cooking, for heat, and in power plants to make electricity
Interesting fact: Natural gas is flammable, but has no odor, so it's mixed with a chemical that makes it smell like rotten eggs so people can tell if there's a natural gas leak!

Coal

Type of resource: nonrenewable resource
Where it is found: beneath the surface of the earth, at different depths
What it is used for: Power plants burn the coal to create electricity

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Now for the disadvantages...

- Two words: AIR POLLUTION, caused when we burn these fuels. This is the biggest disadvantage of fossil fuels.
- Another crucial disadvantage is the fact that they are **not renewable!**

So with these disadvantages in mind, we need to find alternative choices!



The power of the EARTH

Geothermal energy is heat from the earth.

(geo = earth and thermal = heat)

A geothermal type heating system has pipes buried beneath the ground and uses the earth's heat to buildings.



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where volcanoes and earthquakes occur.

The Energy of TRASH?

Biomass includes material or materials from organisms that was once alive – plants and trees, animal waste, and food waste. Garbage is burned to create electricity.

Advantages: helps eliminates garbage (less in landfills) and it's renewable

Disadvantage: causes air pollution when burned

Lesson Checkpoint: What is one energy resource that does NOT create pollution?