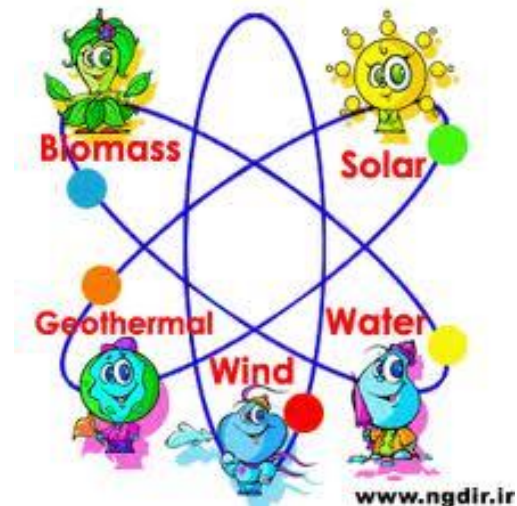


Energy Resources



Energy Sources

- Humans use energy for heating, transportation, cooking, and much more
- We get energy by burning biomass such as wood, burning fossil fuels, breaking atoms apart, or using renewable energy sources such as wind or water.



Fossil Fuels

- a non-renewable fuel (coal, oil, and natural gas) formed in the earth from plant and animal remains
- Non-renewable energy cannot be replaced in a reasonable time-frame for humans.



Advantages of Fossil Fuels

- Easy to transport
- Reliable
- Power plants can be built almost anywhere.
- Contain a lot of energy



Disadvantages of Fossil Fuels

- Create pollution such as carbon dioxide
- Mining causes problems.
- Non-renewable resource.



Coal

- formed when fern-like plants were buried in swampy area.
- After a long-time pressure and heat converted these dead plants into coal.



Mining Coal

- coal is in seams under ground.
- surface mining – the earth above the coal is scraped off (also called strip-mining)
- deep mining – holes are drilled into the ground and coal is pulled through these holes



Oil

- formed from tiny sea animals and plants died and then got compressed on the sea floor.
- Intense heat and pressure turns these animal remains into petroleum or crude oil.
- oil is used to make plastics as well as a fuel



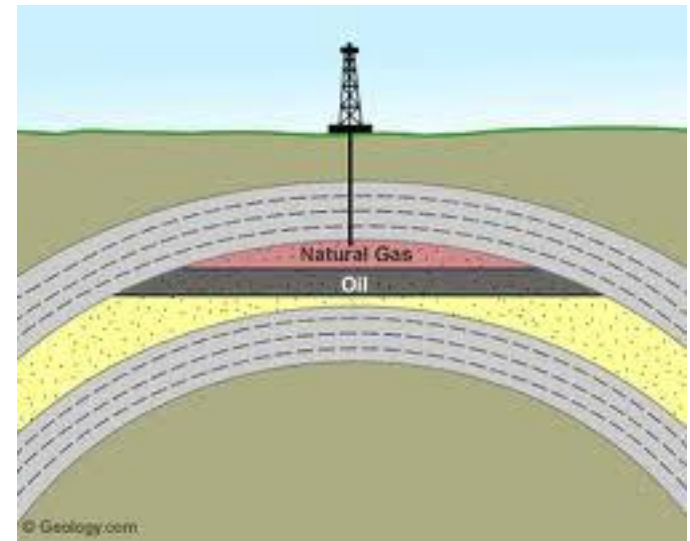
Natural Gas

- Formed the same as oil.
- Often used for heating, cooking, and generating electricity.



Drilling for oil and natural gas

- Once they form oil and natural gas flow upward until they reach impermeable rock. People drill through this rock to find oil and natural gas.
- Natural gas is usually above oil because it is less dense.



Fracking

- the process of drilling and injecting fluid into the ground at a high pressure in order to fracture shale rocks to release natural gas
- there are concerns about the amount of water used and possible contamination of ground water.



Future of Fossil Fuels

- because they are non-renewable, fossil fuels will eventually run out.
- Estimates of reserves:
 - coal: 150-400 years
 - oil: 50 years
 - natural gas: 60-170 years

