

Greening Training



Non Renewable Energy:

An energy resource that is not replaced or is replaced only very slowly by natural processes.

Fossil Fuels:

- Coal, natural gas and oil are fossil fuels that are non renewable energy resources.
- Fossil fuels may seem very different but were created in the same natural way.
- They are called fossil fuels because they were formed some 300 millions years ago by the action of heat from the Earth's core and pressure from rock and soil on the remains (or "fossils") of dead plants and animals.

Coal:

- Coal is mined underground or at Earth's crust.
- It is the most abundant fossil fuel on Earth.
- When coal is burned as fuel, it gives off carbon dioxide, the main greenhouse gas that is linked to global warming.
- Burning coal also produces emissions, such as sulphur, nitrogen oxide, and mercury that can pollute the air and water.
- Coal is not renewable.

Oil:

- Oil is pumped from deep underground.
- It is process first before it can be used so that unwanted chemicals can be taken out.
- The oil can then be used to make products like gasoline, heating oil and diesel fuel.
- A disadvantage of using oil is the potential for an oil spill which could cause damage to very large quantities of land or water.
- It is non renewable.

Natural Gas:

- Natural gas is pumped out of deep wells.
- It is an odorless gas that is used mainly for heating.
- It does not pollute the environment the way oil or coal does when it is burned.
- However, it does still produce emissions such as nitrogen oxide, carbon monoxide and carbon dioxide.
- It is non renewable.

Uranium:

- **Uranium is not a fossil fuel but a metal which is also non renewable.**
- **No emissions are produced when used but spent fuel rods become radioactive.**
- **The issue becomes where these spent rods can be stored until they are no longer radioactive.**

Renewable Energy:

These are sources of energy that renew quickly and are not depleted from the environment.

Types of Renewable Energy:

- **Renewable energy sources include water, wind and solar energy.**
- **Geothermal and biomass energy are all forms of renewable energy resources.**
- **Unfortunately, most of our current produced energy does not come from renewable sources.**

Hydroelectricity and Wind Power:

- Hydroelectricity is produced when moving water turns blades on a turbine which spins an electrical generator.
- Some hydroelectric plants are artificially produced and some use the flow of a river or waves in the ocean.
- Like water, wind turns a turbine that spins an electrical generator that produces electricity.
- Both are clean methods of creating electricity.

Solar Power:

- Heat from the sun can be used to heat water or air using dark colored surfaces.
- The sun's energy can also be harnessed using photovoltaic cells that produce electricity directly.
- Finally, concentrated sunlight using mirrors, can focus light to warm water to create steam. The steam works like wind or water to turn blades on a turbine to create electricity.

Geothermal:

- **Geothermal energy is produced deep within the Earth's core.**
- **Temperatures in the upper 10 feet of the Earth's surface hold a relatively constant temperature.**
- **Heat pumps use the Earth's constant temperatures to heat and cool buildings.**
- **Heat is transferred from the ground (or water) into buildings in winter and reverse the process in the summer.**

Biomass:

- Biomass refers to plant matter such as wood or corn.
- It also includes waste such as garbage and animal matter such as fats and oils.
- Biomass energy is harnessed much the same way coal or oil is, by burning it.
- Using biomass as energy prevents it from becoming waste.

In the end..

- It seems that all sources of energy have advantages and disadvantages.
- Which source produces the least amount of negative consequences on us as people and on the earth?
- What is the mentality of the people making decisions about how we use our resources?
- Let's talk about.