Renewable energy sources

Renewable energy sources are sources of power that quickly replenish themselves and can be used again and again. For this reason they are sometimes called **infinite energy resources.**

Solar: Energy from sunlight is captured in solar panels and converted into electricity. Advantages: Potentially infinite energy supply. Disadvantages: Manufacture and implementation of solar panels can be costly.

Wind: Wind turbines (modern windmills) turn wind energy into electricity. Advantages: Potentially infinite energy supply. Disadvantages: Manufacture and implementation of wind farms can be costly.

Tidal: The movement of sea water in and out drives turbines. Advantages: to generate a lot of energy this way. Disadvantages: Construction can be costly. May be opposed by local or environmental groups

Geothermal: It is possible to use the heat of under the earth in volcanic regions. Steam can be used for heating or to power turbines creating electricity. Advantages: Potentially infinite energy supply. It is used successfully in some countries, such as New Zealand. Disadvantages: Can be expensive to set up. Only works in areas of volcanic activity.

Hydrological or Hydroelectric Power (HEP): Energy harnessed from the movement of water through rivers, lakes and dams. Advantages**:** Creates water reserves as well as energy supplies. Disadvantages: Costly to build. They can cause the flooding of surrounding communities and landscapes. Dams have major ecological impacts.

Biomasa: An organic material which can be burnt to provide energy (heat or electricity). Advantages**:** It is a cheap source of energy. Disadvantages: When burnt, it gives off atmospheric pollutants, including greenhouse gases.

Exercises

1. Where does the main source of energy for earth come from?

a) ☐ Plants (producers)
b) ☐ The Sun
c) ☐ Animals (consumers)
d) ☐ Fossil fuels
e) ☐ Power stations

2. Which of the following is a type of renewable energy:

a) ☐ Geothermal energy

b) ☐ Nuclear energy
c) ☐ Solar energy
d) ☐ Wind power
e) ☐ Hydro-electric power (HEP)

3. Energy resources that, once used, can replenish themselves and can be used again and again are called:

a) ☐ Non-renewable
b) ☐ Renewable
c) ☐ Finite
d) ☐ Potential
e) ☐ Infinite

4. Which of the energy sources listed is not a renewable source of energy?

a) ☐ Oil
b) ☐ Solar
c) ☐ Wind
d) ☐ Coal
e) ☐ Geothermal

5. What is the name given to the source of energy created with the burning plant or animal waste?

6. Which energy source is derived from the movement of sea water in and out of turbines to generate electricity?

7. What is the name of the renewable energy supply generated by capturing sunlight in panels that convert the sunlight into electricity?

8. What is the name of the renewable energy source generated from using volcanic heat found under the earth's surface?

9. What natural resource is harnessed to generate hydro-electric power (HEP)?

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