

TA7. U10. Energy Sources. Reading 1

Text 1: Understanding Energy Sources

Energy is essential for our daily activities, powering everything from our homes to our devices. There are two primary categories of energy sources:

Renewable Energy Sources: These are naturally replenished and include:

- **Solar Energy:** Harvested from sunlight using solar panels, it provides electricity without harmful emissions.
- **Wind Energy:** Generated by capturing wind power through turbines, it converts wind into electricity.
- **Hydro Energy:** Produced by utilizing the flow of water to generate electricity, often through dams or turbines.
- **Biomass Energy:** Derived from organic materials like wood, crop residues, and animal waste, it can be used for heating and electricity.
- **Geothermal Energy:** Obtained by tapping into the Earth's internal heat, it can be used for heating and electricity generation.

Non-Renewable Energy Sources: These are finite and include:

- **Coal:** A fossil fuel used extensively for electricity and heat, but it contributes to environmental pollution.
- **Oil:** Extracted for gasoline and diesel, powering vehicles and machinery, but its combustion releases greenhouse gases.
- **Natural Gas:** Utilized for heating and cooking, it produces fewer emissions than coal and oil but is still a non-renewable resource.
- **Nuclear Energy:** Generated through nuclear fission, it provides large amounts of electricity but poses challenges in waste disposal and safety.

Each energy source has its advantages and disadvantages. Renewable sources are sustainable and environmentally friendly, while non-renewable sources are more established but have significant environmental and resource limitations.

1. **Which of the following is a renewable energy source?**
 - a) Coal
 - b) Oil
 - c) Solar energy
 - d) Natural gas
2. **What is the primary disadvantage of non-renewable energy sources?**
 - a) They are environmentally friendly
 - b) They are finite and can lead to resource depletion
 - c) They are easy to recycle
 - d) They are inexpensive
3. **Which energy source is harnessed using solar panels?**
 - a) Wind energy
 - b) Solar energy

- c) Geothermal energy
 - d) Biomass energy
4. **What does hydro energy primarily rely on?**
- a) Sunlight
 - b) Wind
 - c) Water flow
 - d) Organic materials
5. **Which of the following is a non-renewable energy source?**
- a) Wind energy
 - b) Geothermal energy
 - c) Solar energy
 - d) Coal
6. **What is biomass energy derived from?**
- a) Water flow
 - b) Wind
 - c) Sunlight
 - d) Organic materials
7. **Which energy source involves harnessing the Earth's internal heat?**
- a) Geothermal energy
 - b) Solar energy
 - c) Wind energy
 - d) Nuclear energy
8. **What is a major environmental concern associated with coal usage?**
- a) Ozone depletion
 - b) Air pollution and greenhouse gas emissions
 - c) Habitat destruction
 - d) Noise pollution
9. **Which energy source is commonly used in nuclear power plants?**
- a) Uranium
 - b) Coal
 - c) Natural gas
 - d) Oil
10. **What is a key advantage of renewable energy sources over non-renewable ones?**
- a) They are more efficient
 - b) They are less expensive
 - c) They are sustainable and cause less environmental harm
 - d) They are easier to store