C2. Pros & Cons of Non-Renewable Energy

Pros & Cons of Non-Renewable Energy

Energy is what powers our homes, cars, and gadgets. There are different types of energy sources, and one category is called non-renewable energy. Let's learn about the pros and cons of using non-renewable energy.

What is Non-Renewable Energy?
Non-renewable energy comes from sources that cannot be replenished or replaced in a short amount of time. These energy sources took millions of years to form, and once we use them up, they are gone forever.

Types of Non-Renewable Energy

1. **Fossil Fuels**
   Fossil fuels are the most common type of non-renewable energy. They include coal, oil, and natural gas. These fuels were formed from the remains of plants and animals that lived millions of years ago.

2. **Nuclear Energy**
   Nuclear energy is produced by splitting the nucleus of atoms in a process called nuclear fission.

The Pros of Non-Renewable Energy:

1. **Abundance**
   Fossil fuels, especially coal, are abundant in many parts of the world, making them readily available for use.

2. **Reliable**
   Non-renewable energy sources are reliable and can generate a constant supply of electricity.

3. **Energy-Dense**
   Non-renewable energy sources are energy-dense, meaning a small amount can produce a large amount of energy.

4. **Cost-Effective**
   Currently, non-renewable energy sources are less expensive to produce than some renewable alternatives.

The Cons of Non-Renewable Energy:

1. **Finite Supply**
   Non-renewable energy sources are limited and will eventually run out.

2. **Environmental Impact**
   The extraction and burning of fossil fuels release greenhouse gases, contributing to climate change and air pollution.

3. **Non-Renewable**
   Once non-renewable energy sources are used up, they cannot be replaced.

4. **Harmful Accidents**
   Nuclear energy can be hazardous, and accidents at nuclear power plants can have severe consequences.

5. **Economic Dependency**
   Many countries rely heavily on non-renewable energy, leading to economic challenges when supplies become scarce.

1. What is non-renewable energy?
   A) Energy that comes from sources that can be replenished quickly
   B) Energy that comes from sources that cannot be replenished
   C) Energy that is abundant and readily available
   D) Energy that comes from renewable sources

2. Which of the following is a type of non-renewable energy?
   A) Solar energy
   B) Wind energy
   C) Natural gas
   D) Geothermal energy

3. Why are fossil fuels considered non-renewable energy sources?
   A) They are not abundant
   B) They took millions of years to form and cannot be replaced quickly
   C) They are expensive to extract
   D) They are harmful to the environment

4. What is the most common type of non-renewable energy?
   A) Solar energy
   B) Wind energy
   C) Nuclear energy
   D) Fossil fuels

5. What is the process of splitting the nucleus of atoms to produce nuclear energy called?
    A) Fossilization
    B) Solarization
    C) Nuclear fission
    D) Renewable energy

6. What is one advantage of using non-renewable energy?
    A) It is unlimited and will never run out
    B) It is costly and difficult to extract
    C) It is harmful to the environment
    D) It can generate a constant supply of electricity

7. What is a disadvantage of using non-renewable energy?
    A) It is abundant and readily available
    B) It releases greenhouse gases and contributes to air pollution
    C) It is safe and has no risks associated with its use
    D) It is less cost-effective than renewable energy sources

8. What term is used to describe the amount of energy produced by a small amount of non-renewable resources?
    A) Renewable
    B) Energy-dense
    C) Green
    D) Cost-effective

9. Why is economic dependency on non-renewable energy a concern?
    A) Non-renewable energy is abundant and will never run out
    B) It can lead to economic challenges when supplies become scarce
    C) It is the least expensive energy source
    D) Non-renewable energy has no impact on the environment

10. What is a potential hazard associated with nuclear energy?
    A) It releases greenhouse gases
    B) It is costly to produce
    C) It is difficult to extract
    D) Accidents at nuclear power plants can have severe consequences

ANSWERS & EXPLANATIONS

1. B - Energy that comes from sources that cannot be replenished.
    - Non-renewable energy is derived from sources that cannot be replenished in a short amount of time.

2. C - Natural gas.
    - Natural gas is a type of fossil fuel and is considered a non-renewable energy source.

3. B - They took millions of years to form and cannot be replaced quickly.
    - Fossil fuels took millions of years to form, and their formation process is very slow, making them non-renewable.

4. D - Fossil fuels.
    - Fossil fuels, including coal, oil, and natural gas, are the most common type of non-renewable energy.

5. C - Nuclear fission.
    - Nuclear energy is produced through the process of nuclear fission, which involves splitting the nucleus of atoms.

6. D - It can generate a constant supply of electricity.
    - One advantage of using non-renewable energy is that it can provide a reliable and constant supply of electricity.

7. B - It releases greenhouse gases and contributes to air pollution.
    - A disadvantage of using non-renewable energy is that it has a negative impact on the environment, including the release of greenhouse gases and air pollution.

8. B - Energy-dense.
    - Non-renewable energy sources are energy-dense, meaning a small amount can produce a large amount of energy.

9. B - It can lead to economic challenges when supplies become scarce.
    - Economic dependency on non-renewable energy can create challenges when supplies are limited or running out.

10. D - Accidents at nuclear power plants can have severe consequences.
    - Nuclear energy has potential hazards, and accidents at nuclear power plants can result in serious consequences.