

Quiz Chapter 4 Energy

- 1. How would you classify the energy sources? Give at least one example for each type.**

Energy can be either renewable (solar, wind, hydro, and biomass) or nonrenewable (fossil fuels).

- 2. If society continues consuming nonrenewable energy resources at rate c indefinitely, when will extraction cease, if the stock of resources cannot equal 0?**

Extraction will cease when the cost of extraction exceeds the market price for that resource.

- 3. What causes the emission of greenhouse gases? Name two gases that are considered GHG.**

Greenhouse gases are emitted by burning fossil fuel. Carbon dioxide (CO_2) and nitrous oxide (N_2O) are two examples of gases. (+ types of hydrofluorocarbon HFC, perfluorinated compound PFC).

- 4. Why does deforestation in particular represent a threat to our planet and humanity?**

Deforestation reduces the number of trees, thereby reducing the planet's CO_2 sequestration capability, and furthermore, energy, especially diesel, is required to operate the heavy equipment to cut down the trees.

- 5. According to this chapter, which three struggles are mentioned when talking about energy transitions. Explain the challenge known as the "backfire" phenomena.**

Fossil-to-renewable transition faces the challenges of time, money, and backfire. Backfire refers to the situation when an increase in energy efficiency leads to an increase in energy consumption.

- 6. What is the rebound effect?**

The rebound effect refers to the situation when a rise in money allows to invest in new machines and equipment with higher energy efficiencies, which leads to less money being spent on obtaining energy.