

UNIT 2 RENEWABLE ENERGY AND RURAL DEVELOPMENT – Part 2



The carbon footprint

As we need more and more energy, it is very important to choose sources that have less negative impact on the environment. As CO₂ is one of the most important greenhouse gases, the negative impact of our activities is usually measured by the amount of carbon dioxide we emit, which is called our carbon footprint.

to measure – to calculate the size of sth

amount – quantity, number

to emit – to let out, to release

Watch this video that explains the meaning of the carbon footprint.

https://www.youtube.com/watch?v=8q7_aV8eLUE

Are these sentences true or false on the basis of the video?

- | | |
|---|-------|
| 1. Your carbon footprint is a mark you leave upon the environment with every action that releases carbon dioxide and other harmful gases. | true |
| 2. Burning fossil fuels causes harmful greenhouse gases. | true |
| 3. The more fuel is used, the smaller the carbon footprint will be. | false |
| 4. You have no carbon footprint when you brush your teeth. | false |
| 5. You can reduce your carbon footprint by choosing less polluting options. | true |

Match the words to make phrases.

climate	change
to reduce	your carbon footprint
to release harmful	gases
to emit carbon	dioxide

Read the text below about the benefits of renewable energy. Try to understand it without a dictionary.

Benefits of Renewable Energy Use

Renewable energy – wind, solar, geothermal, hydroelectric, and biomass – provides a lot of benefits for our climate, our health, and our economy.

Human activity is overloading our atmosphere with carbon dioxide and other greenhouse gas emissions, which trap heat, steadily drive up the planet's temperature, and create significant and harmful impacts on our health, our environment, and our climate.

Electricity production accounts for more than one-third of U.S. greenhouse gas emissions, with the majority generated by coal-fired power plants, which produce approximately 25 percent of total U.S. greenhouse gas emissions; natural gas-fired power plants produce 6 percent of total emissions. In contrast, most renewable energy sources produce little to no greenhouse gas emissions. (...)

Generating electricity from renewable energy rather than fossil fuels offers significant public health benefits. (...) Replacing fossil fuels with renewable energy has been found to reduce premature mortality and lost workdays, and it reduces overall health care costs. (...)

Compared with fossil fuel technologies, which are typically mechanized and capital intensive, the renewable energy industry is more labor-intensive. This means that, on average, more jobs are created for each unit of electricity generated from renewable sources than from fossil fuels. (...)

While renewable facilities require upfront investments to build, once built they operate at very low cost and, for most technologies, the fuel is free. As a result, renewable energy prices are relatively stable over time. (...) In contrast, fossil fuel prices can vary dramatically and are prone to substantial price swings.

http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/public-benefits-of-renewable.html#.VpjQVKSVvb0

There are six paragraphs in the previous text. Answer the questions about their contents. Write the number(s) of the paragraph in the box.

1. Which paragraph is about the health benefits of renewable energy? (4)
2. Which paragraphs are about the environmental benefits of renewable energy? (2, 3)
3. Which paragraphs are about the economic benefits of renewable energy? (5, 6)

Choose the best answer on the basis of the previous text.

Renewable energy has ...

- a) a lot of benefits. yes
b) very few benefits.

Carbon dioxide is a

- a) greenhouse gas. yes
b) renewable gas.

Electricity generation

- a) is responsible for more than 1/3 of greenhouse gas emissions in the US. yes
b) reduces greenhouse gas emissions by one-third in the US.

Most of the energy in the US is

- a) generated by coal-fired power plants. yes
b) natural gas-fired power plants.

Premature mortality means

- a) early deaths. yes
b) early births.

Renewable energy facilities (e.g. wind farms, solar panels) are expensive ... and cheap ...

- a) to use; to build
b) to build; to use yes

Now, you can check the meanings of the following words in a dictionary. They are the most important words from the text that you should know.

benefit

economy

to trap heat

to account for 30 percent

majority

power plant

approximately

to generate electricity / to produce electricity

public health

to replace sg with sg

Compared with sg, ...

capital

labour

on average

to require

investment

to operate

cost

to vary dramatically

Match the words in bold with their meanings.

1. Coal-fired power plants **emit** a lot of greenhouse gases.
release, let out
2. Greenhouse gases **trap** heat, and drive up the planet's temperature.
capture, catch
3. Natural gas-fired power plants account for **approximately** 5% of total emissions.
about
4. The renewable energy industry **is labour-intensive**.
needs a lot of workers

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- Which type of energy source do the following statements refer to?**

a) fossil fuels yes
b) renewable energy sources

a) fossil fuels
b) renewable energy sources

a) fossil fuels

b) renewable energy sources yes

a) fossil fuels yes

b) renewable energy sources no

a) fossil fuels yes

b) renewable energy sources no

Forum topic:

Watch this video: <https://www.youtube.com/watch?v=lWUaE-Oaek8>

What is the story of Gratiot County? Summarize it in 5 sentences.