

2022 - 2023 Energy Education Workshop - Pre/ Post Assessment - Climate

Your answers in this assessment are used to shape NEED curriculum and training.

Please answer to the best of your ability. Completely fill in the circle next to your selected answer.

Location: _____ Date: _____

- (A) Pre
(B) Post

Answer Selection: Correct = ● Incorrect = ✕ ✓ ⊖

Is this your first NEED workshop?

- (A) Yes
(B) No

1. Which sector of the economy consumes the most energy?

- (A) transportation
(B) industry
(C) residential/commercial
(D) electric power

2. Most of the energy consumed in the U.S. is stored in which form of energy?

- (A) kinetic
(B) thermal
(C) chemical
(D) mechanical

3. In which form do all energy flows begin?

- (A) electrical
(B) chemical
(C) radiant
(D) nuclear

4. Which of the following is not a primary source of energy?

- (A) petroleum
(B) natural gas
(C) electricity
(D) all of the above

5. Which energy source is used to generate the largest percentage of **electricity** in the U.S.?

- (A) hydropower
(B) petroleum
(C) coal
(D) natural gas

6. What is the national average cost of a residential kWh of electricity?

- (A) 8 – 10 cents
(B) 12 – 14 cents
(C) 15 – 17 cents
(D) 18 – 20 cents

7. When considering **total energy** consumption (including transportation, industry, and electricity), which of the **renewable** energy sources provides the U.S. with the greatest amount of energy?

- (A) biomass
(B) hydropower
(C) wind
(D) solar

8. When considering **total energy** consumption (including transportation, industry, and electricity), which of the **nonrenewable** energy sources provides us with the greatest amount of energy?

- (A) petroleum
(B) natural gas
(C) coal
(D) nuclear

9. **Nonrenewable** sources of energy make up what percentage of U.S. **energy consumption**?

- (A) less than 60%
(B) 60 – 70%
(C) 70 – 80%
(D) 80 – 90%

10. What are the top five sources of energy used in the United States?

- (A) uranium, wind, natural gas, hydropower, biomass
(B) petroleum, natural gas, coal, uranium, biomass
(C) coal, petroleum, uranium, hydropower, solar
(D) solar, coal, petroleum, geothermal, natural gas

Continued on other side ⇨

11. What do coal, natural gas, nuclear, and some solar power plants have in common?

- (A) all utilize cooling towers
- (B) all burn a fuel to drive the turbine generator
- (C) all emit CO₂
- (D) all use thermal energy to drive the turbine generator

12. Which country provides the largest portion of imported oil to the U.S.?

- (A) Egypt
- (B) Saudi Arabia
- (C) Venezuela
- (D) Canada

13. Which **renewable** energy source generates the largest percentage of **electricity** in the U.S.?

- (A) wind
- (B) solar
- (C) hydropower
- (D) biomass

14. Which of the following is **not** a greenhouse gas?

- (A) H₂O (water vapor)
- (B) CO₂ (carbon dioxide)
- (C) CH₄ (methane)
- (D) N₂ (nitrogen)

15. When considering most thermal power plants, how efficient is the system, or, roughly how much energy will reach the consumer as electricity?

- (A) one-third (1/3)
- (B) one-fourth (1/4)
- (C) one-half (1/2)
- (D) three-fourths (3/4)

16. *Opinion:* I will take energy into consideration when I make my daily decisions.

- (A) always
- (B) most of the time
- (D) some of the time
- (E) never

17. Climate change focuses on an increase in the levels of which gas in our atmosphere?

- (A) methane (CH₄)
- (B) carbon dioxide (CO₂)
- (C) F-gases (CFCs)
- (D) more than one of these

18. Which of the following energy sources produces significant carbon dioxide emissions?

- (A) uranium
- (B) petroleum
- (C) wind
- (D) all of the above

19. Since the industrial revolution, levels of carbon dioxide in the atmosphere have risen by over ____%

- (A) 100%
- (B) 90%
- (C) 75%
- (D) 45%

20. Carbon moves from the atmosphere into green plants through the process of:

- (A) dissolution
- (B) degassing
- (C) respiration
- (D) photosynthesis