

Chapter 17 Section 4 Guided Reading

1. How is electricity made at a power plant?
2. Draw the energy pathway from the power plant to your home.

3. A _____ is the name for a fuel that is not replaced as it is used. _____ are a good example of this type of energy.
4. What is a fossil fuel? Name three major fossil fuels

5. In 2006, what percentage of electricity in the U.S. is generated by:
 - a) Burning Coal _____
 - b) Natural gas _____
 - c) Nuclear power _____
 - d) Hydroelectric power _____

6. What are two harmful gases produced from the burning of fossil fuels?

7. The amount of carbon dioxide in the atmosphere has increased by about _____ since the 1800's, and Earth's average temperature has increased to _____ over the same time period. These increases have warmed the _____ and caused sea level to rise _____ to _____ inches.

8. What element does a nuclear power plant split apart to produce nuclear energy?
 - a) Carbon
 - b) Nitrogen
 - c) Uranium
 - d) Hydrogen

9. What are the advantages and disadvantages of nuclear energy?

10. What is a renewable resource?
11. A _____ power plant uses energy from falling water to generate electricity.
12. Name the advantages and disadvantages of hydroelectric power.
13. _____ power plants use Earth's internal heat energy, in the form of water or steam, to produce electricity. _____ produces most of its electricity from this type of energy.
14. Explain how a geothermal heat pump system works in winter and in summer.
15. What are the advantages and disadvantages of geothermal energy?
16. _____ is organic material from plants or animals.
17. How is biomass used to produce electricity?
18. What are the advantages and disadvantages of burning biomass for electricity?
19. _____ captures the energy of motion from moving air and turns the energy into electricity.
20. Name the top three U.S. states to use electricity from wind energy.
21. What are the advantages and disadvantages of using wind energy?

22. The sun's energy is called _____ . A solar cell is also known as a _____ and can convert solar energy to electricity.

23. What are the advantages and disadvantages of solar energy?

24. Electrical power is the _____ at which electrical energy is changed into other forms of energy such as _____, _____ or _____. The unit for power is the _____, equal to one _____ per second.

25. How can you save money on your household's electric bill?