

Name: _____

Exploring Energy Production and Consumption Exploration Sheet

In this activity, you will

1. Examine regional energy production in the United States.
2. Analyze energy production, imports, and consumption in the United States.
3. Analyze electricity generation in the United States.

Read **all** instructions and answer **each** question.



Step 1: Open Web page.

- a. Open your Web browser. Go to **www.ei.lehigh.edu/learners/energy/**
- b. Click on **US Energy Production and Consumption**.
- c. Look at the pie charts to see which types of energy sources each of the five states produced in 2006.



Use the five pie charts to complete the data charts below.

2006 Regional Energy Production

States	Main Type of Energy Produced	Percentage (%)
California		
Illinois		
Pennsylvania		
Texas		
Washington		

States	Percent (%) Sustainable (renewable) Energy Produced	Percent (%) Non-Renewable Energy Produced
California		
Illinois		
Pennsylvania		
Texas		
Washington		

1. Which of the five states produced the most **non-renewable** energy?

2. Which of the five states produced the most **sustainable (renewable)** energy?

3. Did all the states produce the same amount of **sustainable (renewable)** energy?

4. Why do you think Pennsylvania is a producer of **non-renewable** energy?



Step 2: Examine US energy production and imports.

- a. Click on the **Next** button at the bottom right of your Web page to view the **2007 US Energy Production and Imports** pie charts.



Use these pie charts to answer the questions below.

5. What percentage of energy did the US **produce** in 2007? _____
6. How much more energy did the US **produce** than **import** in 2007? _____
7. Which **type of energy** did the US import the most in 2007? _____
8. Which **type of energy** did the US import the least in 2007? _____



Step 3: Analyze US energy production.

- a. Click on the **Next** button at the bottom right of your Web page to view the 2007 Energy Production in the United States data.



Use the two charts to answer the questions below.

9. Which type of energy did the US produce the **most** in 2007? _____
 What was the amount produced? _____ Quadrillion BTU _____ %
10. What do the three **least** produced energy sources have in common?

11. Which **sustainable (renewable)** energy did the US produce the most in 2007? _____
 What was the amount produced? _____ Quadrillion BTU _____ %

12. How many more BTUs of **non-renewable** energy did the US produce than **sustainable (renewable)** energy?

_____ Quadrillion BTU



Step 4: Analyze US energy consumption.

- a. Click on the **Next** button at the bottom right of your Web page to view the 2007 Energy Consumption in the United States data.



Use the two charts to answer the questions below.

13. Which type of energy did the US **consume** the most in 2007? _____

What was the amount consumed? _____ Quadrillion BTU _____ %

14. How much **sustainable (renewable)** energy did the US consume?

_____ Quadrillion BTU

15. How many more BTUs of **non-renewable** energy did the US consume than **sustainable (renewable)** energy?

_____ Quadrillion BTU



Step 5: Analyze US energy consumption by sector.

- a. Click on the **Next** button at the bottom right of your Web page to view the 2007 US Energy Consumption by Sector data.



Use the charts on the next two Web pages to answer the questions below.

16. Which sector consumed the **most** amount of energy? _____

What was the amount consumed? _____ Quadrillion BTU

17. Which type of energy was mainly used in the **commercial sector**? _____

18. What percentage of **sustainable (renewable)** energy was used in the US **commercial sector** in 2007?

_____ %

19. What percentage of **non-renewable** energy was used in the US **commercial sector** in 2007?

_____ %

20. Which type of energy was mainly used in the **industrial sector**? _____

21. What percentage of **sustainable (renewable)** energy was used in the US **industrial sector** in 2007?

_____ %

22. What percentage of **non-renewable** energy was used in the US **industrial sector** in 2007?

_____ %

b. Click on the **Next** button at the bottom right of your Web page to view two more pie charts.

23. Which **two** types of energy were mainly used in the **residential sector**?

24. What do you think the energy was used for? _____

25. What percentage of **sustainable (renewable)** energy was used in the US **residential sector** in 2007?

_____ %

26. What percentage of **non-renewable** energy was used in the US **residential sector** in 2007?

_____ %

27. Which type of energy was mainly used in the **transportation sector**? _____

28. What percentage of **sustainable (renewable)** energy was used in the US **transportation sector** in 2007?

_____ %

29. What percentage of **non-renewable** energy was used in the US **transportation sector** in 2007?

_____ %

30. How could the US **decrease** the percentage of petroleum (crude oil) consumed in the transportation sector?

**Step 6: Analyze US electricity generation.**

- a. Click on the **Next** button at the bottom right of your Web page to view 2007 electricity generation US data.



Use the two pie charts to answer the questions below.

31. Which **non-renewable** energy source generated the most electricity? _____
32. What percentage of all **sustainable (renewable)** energy sources generates electricity?
_____ %
33. What percentage of electricity was **distributed for use**? _____ %
34. What percentage of electricity was lost during **generation (as electricity is made)**? _____ %
35. What percentage of electricity was lost during **transmission and distribution (as electricity travels across wires)**? _____ %
36. Why is the electricity generation process in the US today inefficient?
