

Energy Priorities Worksheet

Engage:

You are an environmental engineer hired by the state utilities commission to investigate which form of renewable energy they should focus their efforts on as they recruit new companies using a federal renewable energy grant. Your task is to analyze potential energy data using the living lab, and then make recommendations as to what form of energy the state should focus its recruitment efforts on.

With a partner, generate a list of renewable energies. Then, brainstorm possible factors you would want to consider when deciding where to build new sites for each of these energies to be harvested. Compare with the rest of your class.

Explore:

1. Go to the Renewable Energy Living Laboratory at <http://www.teachengineering.org/livinglabs/index.php>.
2. Choose age group K-12.
3. Zoom in on your state.
4. Check the boxes under the Resources folder (located on the left under the Data Layers tab) to switch between the maps depicting the potential for the five different forms of renewable hydropower, biomass, geothermal, wind and solar. Use the icons in the lower left corner to read more information about each form of energy.

Explain:

Data Analysis

Use the living lab to determine each of the quantities below.

Energy Type	Location with <u>highest</u> potential	Value of <u>highest</u> potential	Location with <u>lowest</u> potential	Value of <u>lowest</u> potential	Estimate of "average" potential for your state
solar					
biomass					
wind					
geothermal					
hydropower					

Name: _____ Date: _____ Class: _____

Elaborate:

Based upon the data collected in the living lab, answer the questions below.

- 1. Explain how you determined the areas of highest potential and lowest potential.

- 2. Describe how you figured out the “average” potential for your state.

Evaluate:

- 1. Based upon the data in your table, on which renewable energy type would you recommend that the public utilities commission focus their recruitment efforts? Include evidence from your analysis.

- 2. Compare your recommended sites to those of another group. How are they similar? How are they different? How do you explain the differences when you used the same data source?
