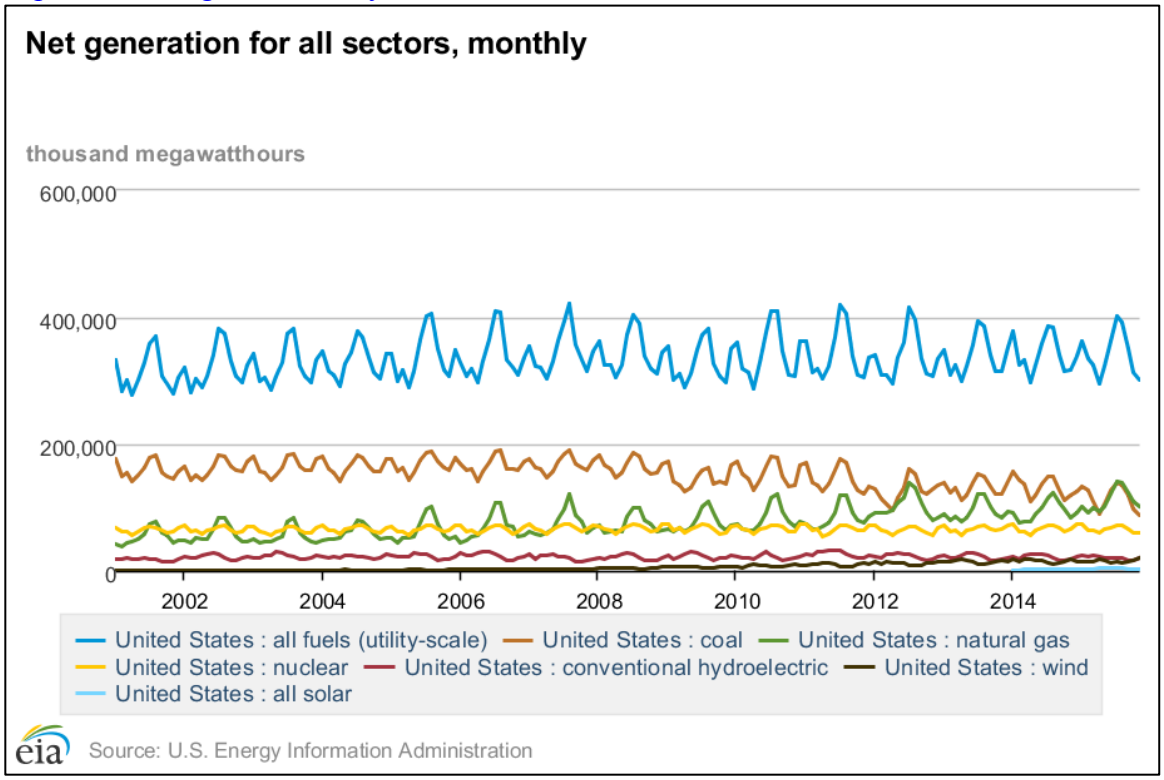
Directions: Write your name, today's date, and the class period on the upper right corner of the paper. Write the title "Renewable Energy Web Activity" on the upper left corner of the paper. Answer all of the following questions on loose-leaf paper. You do not need to write the question. However, be sure to number each answer clearly and label parts 1, 2, & 3 clearly.

Part 1- Data Analysis

http://www.eia.gov/electricity/data/browser/



1. What month and year did natural gas use match coal use as an energy fuel?

a. Approximately what quantity of electricity did each (natural gas and coal) generate (in thousands of megawatthours) at that time?

b. Approximately what quantity of electricity did nuclear generate (in thousands of megawatthours) at that time?

c. Approximately what quantity of electricity did conventional hydroelectric generate (in thousands of megawatthours) at that time?

d. Approximately what quantity of electricity did wind generate (in thousands of megawatthours) at that time?

e. Approximately what quantity of electricity did all solar generate (in thousands of megawatthours) at that time?

f. Rank the fuel sources from greatest to least according to electricity production in in thousands of megawatthours.

2. You will use the following equation to complete the calculation in the questions below.

$$\text{Percent change} = \left(\frac{\text{final amount} - \text{original amount}}{\text{original amount}}\right) \times 100\%$$

a. Compared to July 2015, what is the percent change in coal use as an energy fuel since July 2002?
b. Compared to July 2015, what is the percent change in natural gas use as an energy fuel since July 2002?
c. Compared to July 2015, what is the percent change in nuclear use as an energy fuel since July 2002?
d. Compared to July 2015, what is the percent change in conventional hydroelectric use as an energy fuel since July 2002?
e. Compared to July 2015, what is the percent change in wind use as an energy fuel since July 2002?
f. What prevents you from completing a percent change calculation for all solar?
g. Rank the fuel sources from greatest to least according percent change between July 2002 and July 2015.
h. Which energy fuel use increased the most? How would you account for this change?

3. Analyze the blue "all fuels" line on the graph. What pattern or trends do you notice?
a. How would you account for this pattern? Explain.

Part 2- Synthesis Writing

Watch the following videos and write a short synthesis essay. If you look up the definition of "synthesize" you will find that it is to "combine (a number of things) into a coherent whole." In contrast, a summary is meant to "give a brief statement of the main points of (something)." For this assignment, ensure you are synthesizing, not summarizing. You will be weaving together information from different videos into one piece of writing that covers all of the ideas and themes presented in the videos. Therefore, instead of writing a separate paragraph for each video, identify the major categories, in this case types of renewable energy resources, then describe (provide a detailed explanation as to how something works or happens) and discuss them (in other words, point out the advantages and disadvantages). *It is a good idea to take notes first, then analyze your notes to determine the common themes, organize your thoughts, and then write your synthesis essay*. **Length Requirement:** One and a half to two pages.

https://vimeo.com/40112726

https://youtu.be/0elhIcPVtKE

https://youtu.be/rO5rUqeCFY4

https://vimeo.com/40112725

https://youtu.be/EYYHfMCw-FI

https://vimeo.com/40107507

https://youtu.be/tpigNNTQix8

https://vimeo.com/40107508

https://youtu.be/IxyvVkeW7Nk

https://vimeo.com/40102638

https://youtu.be/mCRDf7QxjDk

https://youtu.be/y_ZGBhy48YI

https://youtu.be/urbpBy_Z5lE

https://youtu.be/JwRTpWZReJk

Part 3- Article Summary- Extra Credit! (30-40 points)

In three to four paragraphs, summarize the main points of the article below. Choose between downloading the PDF or reading it off of the High Country News website.

http://www.hcn.org/issues/47.18/green-energys-dirty-secret