

ES 70 Energy Economics Assignment

Question 1. List three reasons why economic analyses are important when applied to energy projects.

Question 2. What are some of the limitations described in the lecture that you must be aware of before performing an economic analysis?

Question 3. As we discussed in the lecture, there are some assumption you need to make before you can start an economic analysis. As an example, if you were going to buy a new heating unit for your home, how would you go about obtaining information to start your own analysis? Please be practical and specific.

Question 4. On the attached sheet you will find the first cost and efficiency for a new heating unit. Following the example in class for San Francisco, please provide the simple payback for the same heating unit in Juneau and Phoenix.

Remember the formula for simple payback is:

Simple payback (in years) = cost/savings

Where cost equals the difference in first cost between the two alternatives (in dollars).

Where savings equals the difference in energy consumption between the two alternatives (in dollars).

Question 5. In which city does our heating unit have the quickest payback? Why?

Question 6. Would you consider it a good investment to pay an additional \$500 for a new heating unit if the efficiency improved from 90% to 95%? Why?