

Lecture Questions: Energy from Combustion

These questions are largely taken from chapter 4 of the textbook, though some might require a little external research.

1. What are the major sources of energy used globally?
2.
 - a) What are the first two Laws of Thermodynamics?
 - b) How do these Laws ultimately determine the theoretical maximum efficiency of thermoelectric power plants?
3. Define *exothermic* and *endothermic* chemical reactions.
4. What are the top five energy sources in the US? List them in descending order of use.
5.
 - a) What is natural gas?
 - b) What are the advantages and disadvantages of natural gas as an energy source?
6.
 - a) What is coal?
 - b) What are the advantages and disadvantages of coal as an energy source?
7.
 - a) What is oil?
 - b) What are the advantages and disadvantages of oil as an energy source?
 - c) How is oil refined?
 - d) How is it used?
8. What is meant by the term *peak oil*? What is its significance?
9. What is biofuel? What are the major sources? What are the advantages and disadvantages of biofuels?