

Sustainable Energy
10.391J/22.811J/ESD166J/11.371J/1.818J/3.564J/2.65J
3-1-8 G [2]
Tuesday and Thursday, 2 -4 pm

Instructors: M.Golay,* J. Tester, and E.Drake
Other faculty and invited speakers
***Instructor-in-Charge**

Problem Set #1 (Due: Thursday, Feb. 10, 2005)

1. Read the Foreword and Sections 1.1, 1.3, and 1.4 of the text. Look at Table 1.5 which presents % shares of World Population, GDP, and Commercial Energy Use for a set of major countries. What do you think this table should look like in a future (say 2050) more sustainable world? Write a one-page discussion presenting and explaining your positions.
2. List three examples of energy production and use practices that you think are unsustainable. Write a short paragraph explaining why they are unsustainable and how we might make each of them more sustainable.
3. Recently, *Sierra* magazine (Jan-Feb 2003 issue) published a short Ecological Footprint Quiz that was designed by The Redefining Progress Group, based in Oakland, California, to help people determine their “ecological footprint” – or how much land is needed to support their individual lifestyle. Please use their format to estimate your personal ecological footprint in acres of land.

Go to: <http://www.earthday.net/footprint/info.asp> to take the quiz.

Print out your quiz results page and submit with your homework.

4. Write two or three paragraphs about your thoughts on the ecological footprint quiz. Is it realistic? What does it omit?
5. Imagine a future lifestyle when you are at the height of your professional career. Re-estimate your footprint based on how you would like to live in the future. Is it more or less than at present? By how much?