ESRP 285: Class Paper due December 8, 2011

Each student will write a paper on a climate topic of personal interest. The papers are due at the final class meeting on December 8, 2011. The paper can deal with topics from either part of the class:

- Part 1: The Science of Climate Change
- Part 2: Policies to Reduce the Threat of Climate Change

Students can select a topic of personal interest. Two examples of recent student interests will illustrate.

One student is interested in learning more about the science, especially the geologic sciences. She wants to learn more about how the geologic record can build our understanding of climate change. She understands the class lectures on the 400-thousand year geologic record shown in Figure 1. And she understands Spencer Weart’s description of the geologic record in the text for Part 1 of the class. Her paper will deal with lessons from the geologic record in the more distant past (going further than 400 thousand years into the past). Her paper will describe what geologists can teach us about the climate system based on the more distant record.

A challenge for every student paper is to connect conclusions of personal interest to the conclusions from the class. In this example, the student will need to describe whether the lessons from the more distant record reinforce or contradict lessons drawn from Figure 1. For example, the paper could describe whether the distant record supports the finding that positive feedback loops are responsible for the rapid warmings at the conclusion of each of the four ice ages depicted in Figure 1. The paper could also comment on whether and how Spencer Weart and the IPCC describe lessons from the more distant geologic record.

![Image of CO₂ and the “Ornery Climate Beast”](image)

**Figure 1. Geologic record stressed in ESRP 285 lectures.**

The second student example involves electric vehicles. This student enjoyed learning about policies for more efficient and cleaner cars. He was especially interested in the case for the Corporate Average Fuel Efficiency standards to improve MPG of conventional vehicles. And he was even more interested in the feebates policy to promote increased sale of electric vehicles. The student was fascinated by vehicle technology, so he wrote his paper about the prospects for
electric vehicles to be developed with greater range and greater horsepower. He wrote quite a strong paper about battery technologies and electric vehicle designs.

Like all students, he then faced the challenge of connecting his conclusions about the batteries and vehicle design to the findings in the ESRP 285 class. The lectures dealt with vehicle regulations (like the MPG goals), feebate incentives and the different ways to put a price on CO2 emissions. The student then wrote about which of these policies would be most effective in promoting the development and sale of the advanced form of electric vehicles.

**Freedom of Choice**

These two examples provide concrete examples of students using the class paper to explore a topic of personal interest. You should do the same. For example, if you are interested in carbon policy in other countries, you may write your paper about the other country’s policies. You would then describe how those policies compare with the policies in the USA (that were described in ESRP 285). Perhaps you want to learn more about the climate policies in your favorite state. (Washington, Oregon and California all have interesting policies with website access.) You could use your class paper to describe your state’s policies and how they compare with the policies described in ESRP 285.

**Format and Length of the Report**

The TEXT portion of previous students’ reports have required around 3 pages (single spaced) to do a good job. When previous students added in figures, tables or images, the papers were around 5-6 pages in length.

Your own paper can be shorter or longer than the previous examples. You should aim for clarity, not for length.

You will be explaining findings from various reports, articles, books and websites. These sources of information should be cited when you make use of them, and there should be a list of references at the end of the paper. Follow the format for citations and references used in my book chapter on “Global Climate Change and the Electric Power Industry.” (The book chapter may be downloaded from [http://public.wsu.edu/~forda/285/esrp285t.html](http://public.wsu.edu/~forda/285/esrp285t.html))