

Name:

Student ID:

ATOC 1060: Our changing environment

Homework assignment 1

The Hansens' letter to the Obamas

Due: in class 1:45 pm, Thursday 10 September 2009

While discussion with class mates is encouraged, the homework you hand in should reflect your own work. ***Hand in this page*** at the end of class.

Late last year, James (Jim) Hansen and his wife Anniek wrote a letter to Barack and Michelle Obama, offering their suggestions on how the new administration might consider developing climate change and energy policies. This was delivered shortly after inauguration.

Read the letter (4 pages). Then, provide your assessment by answering the below. Some of the questions will require your opinion (meaning the answer can be yes or no!), so reasoning and explanation are important. A link to the letter is on our class web site. The letter itself starts on the 4th page of the document (and you are certainly encouraged to read the first part too!). Your answer should fit into the space provided on this page and can be brief bullet points, or given as short sentences.

1) Who is Jim Hansen? Find some biographical information about him on the web, and list 3 aspects that might give him qualifications for writing such a letter. The source of the information is important! Along with your answer, give the source of your information (e.g., name or URL of web site).

1)

2)

3)

2) Given his background, do you think he is justified/qualified in giving recommendations on climate and energy to a President? (Explain why?)

3) What is the “safe” level of CO₂ concentrations (in units of parts per million , ppm) that the letter suggests? Given you knowledge of the CO₂ records from Mauna Loa (from the figure in class), roughly what year did we reach this concentration?

CO₂ concentration: _____ ppm

Year: _____

4) What reason do the Hansens give for being particularly concerned about coal, rather than other fossil fuels?

5) What is a “cap-and-trade” scheme for limiting fossil fuel use?

6) What reasons do the Hansens give for disliking cap-and-trade approaches?

7) Instead of cap-and-trade, what type of policy do the Hansens suggest?

8) What reason do the Hansens give to justify calling coal burning power plants “factories of death”?

9) What is “4th generation nuclear power” and how is this different from existing nuclear power reactors?

10) What are some counter points to the Hansens’ arguments? Give two reasons that the United States might not adopt a climate and energy policy as suggested in the letter.

1)

2)