

Sustainable Energy Proposals

Assignment:

Your team is charged with assembling a proposal for a sustainable energy future which will stabilize (or reduce) greenhouse gas emissions using current-day technology over the next fifty years. The framework for this assignment will be Socolow and Pacala's sustainability wedges: you should select the combination of wedges which, in your team's judgment, are most sustainable (as suggested by the broad provisions of the Brundtland report).

The final product of this assignment will be a 12-page proposal including the following 6 sections. The executive summary will be written collectively; one student from the team will be the lead author on each of the remaining 5 sections.

#1. Executive Summary. 2 pages. The executive summary should provide a concise overview that synthesizes the key points of your group's proposal into a single page. (A table or illustration may be useful in summarizing the 7+ wedges which make up your sustainability triangle. You will write this last.)

#2. Overview of Science. 2 pages. This section should explain in 2 pages the scientific consensus behind climate change and why it poses a threat to society. In short, this section should explain the problem (to set up the rest of the report, which outlines a solution).

#3. Overview of Policy Framework. 2 pages. This section should address three topics: 1) explain the framework for the wedge/sustainability triangle; 2) explain relevant policy debates over target levels for reduction; 3) indicate what your group's chosen target level of reductions is and how many wedges are necessary to meet it. Reference materials for this section will be posted to First Class.

#4. Overview of Energy Sector Strategies. 2 pages. Potential wedges for energy sector are: #3, #4, #6, #8, #9, #10, #11.

#5. Overview of Transportation Sector Strategies. 2 pages. Potential wedges for transportation sector are: #1, #2, #6, #7, #12, #13.

#6. Overview of Sequestration Sector Strategies. 2 pages. Potential wedges for sequestration sector are: #5, #6, #7, #14, #15.

Collectively, these three sector reports (#4-#6) should explain the 7+ wedges your group has chosen to implement and indicate why you've chosen these wedges (giving attention to the most relevant environmental, economic, social, and political factors). If your group has chosen fewer than 3 wedges from a particular sector, then the author of that sector should explain additional wedges (from that sector) which your group considered but rejected. In the end, each sector write-up should address at least 3 wedges.

Guidelines for choosing wedges:

1. Review the 15 wedge strategies (drawing on your fellow students' research for Assignment #6) and the attached materials (which include rough cost estimates).
2. Your team should choose 7+ wedges to fill in the sustainability triangle based on #2.
3. Many strategies can be used more than once, but **no more than 2/3 wedges** can come from any one sector and one wedge must come from each sector.

Guidelines for write-up:

1. Please observe the page limits strictly. (Writing succinctly is an important skill.) Each write-up should be no more than 2 pages, including footnotes. Please format the document as follows: 12-point type, 1 1/2 spaced, and 1" margins.
2. Citations: Please cite your sources using footnotes. If you are citing fellow students' Assignment #6, do so as follows: Author 1 and Author 2, Wedge #6 (for instance, Al-Mashouk and Barnes, Wedge #1). If you are citing web pages, please use the same convention as outlined for Assignment #6.
3. Audience: Please write this report such that it would present a compelling argument to your U.S. Senator. Presumably this person will be intelligent, but not well versed in climate change or related energy issues.
4. Each individual will be the lead author on one section of the report (this will be your grade for Assignment #7). The entire team will receive a grade for the entire portfolio (this will be your grade for Assignment #8). You will be given time in class to collaborate; it is expected that you work together outside of class to discuss, proof-read, and revise one another's work. FirstClass conferences will be set-up for each group to facilitate this process.
5. Your end goal is a well-organized, clearly written, and careful argument for a sustainable energy future.
6. Please use tables, figures, and illustrations if, and only if, they enhance your portfolio and if you explicitly refer to the table, figure, and/or illustration in your analysis.
7. Let me know if I can help at any step of the process!