

Energy Policy
TESC MPA Program Summer 2014 Draft Syllabus 5 6 14
NOTE: A final version of the syllabus will be posted on the course Moodle site in early June.
June 27, 28, 29; July 12-13 & July 25. Hours: 6p-10p Fri; 9a-5p Sat/Sun
Location: Sem II C2107

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TESC MPA Mission Statement: Our students, faculty and staff create learning communities to explore and implement socially just, democratic public service. We think critically and creatively; communicate effectively; work collaboratively; embrace diversity; we value fairness and equity; advocate powerfully on behalf of the public; and imagine new possibilities to accomplish positive change in our workplaces and in our communities. "You must be the change you wish to see in the world."-- Mohandas K. Gandhi

Through energy policies, federal and state governments influence the development of energy resources, the relative cost of various types of energy and establish a vision for how we will provide for our energy needs in the years ahead. Viewed from one perspective, these policies have been remarkably successful, as they have fostered the creation of complex systems that generate vast quantities of energy at relatively low prices. Yet our energy systems are highly centralized, cause significant pollution, and have arguably bent the political process to favor the fossil fuel status quo. The very sustainability of fossil fueled civilization is now an issue, as we wrestle with how to transition to sources of energy that will provide the services we want while minimizing impacts on the climate.

This course will provide an introduction to the many dimensions of energy, including sources, technologies, systems, markets, and the economic, social, national security and environmental implications of energy use. We will examine how public policy is crafted in the energy sector in the U.S., other countries, and globally, focusing on policies supporting renewable energy.

By the completion of the course I expect students to gain:

1. An introduction to energetics, energy services and the operation of energy markets;
2. An introduction to the social and environmental effects of energy use;
3. Knowledge of how to perform basic quantitative analysis of energy systems;
4. A strong grasp of the variety of energy interventions, policy setting processes, including policy analysis, and how to influence energy policy
5. Improved skills at research, writing and analysis.

"Moodle." Lecture notes after each class session and some course readings will be available at the Evergreen Online Learning page at <http://elms.evergreen.edu/>, under the course name.

II. Texts

Alexis, Madrigal. (2011). *Powering The Dream: The History and Promise of Green Technology*. Cambridge, MA: Da Capo Press. ISBN: 9780306820991. (Paper; the hardcover/Kindle versions also OK).

Geri, Laurance and David McNabb (2011). *Energy Policy in the U.S.: Politics, Challenges and Prospects for Change*. Boca Raton, FL: CRC Press. ISBN 978-1439841891. (Hardcover; Kindle version also OK).

Nordhaus, William (2013). *The Climate Casino: Risk, Uncertainty, and Economics for a Warming World*. New Haven, CT: Yale University Press. ISBN: 9780300189773 (Hardcover; Kindle version also OK).

Optional: MacKay, David JC (2009). *Sustainable Energy - Without the Hot Air*. Cambridge, UK: UIT. (paperback). ISBN-13: 9780954452933. Available free online at: <http://www.withouthotair.com/>. (Though slightly outdated, MacKay's book is useful if you want to focus on renewable energy issues).

Note: There is no book assigned for the energetics section of the course: on energy and energy sources and uses. The Energy Information Administration's "Energy Explained" website provides an excellent overview: <http://www.eia.gov/energyexplained/index.cfm>. For those of you who want deeper knowledge in this area, Vaclav Smil's books are standard texts. *Energy: Beginner's Guide* is a fine introduction; *Energies: An Illustrated Guide* has more detail. *Energy in Nature and Society* is a detailed and technical overview. *Energy at the Crossroads* has more analysis of energy issues.

Articles and Readings (on course Moodle site, except where indicated):

Congressional Budget Office (2012). *Energy Security in the U.S.* Washington, DC: CBO.
Karl, Terry Lynn (1999). "Perils of the Petro State." *Journal of Int'l Affairs*, Fall, pp31-48.
Hine, Dougald, and Paul Kingsnorth (2009). "Uncivilization." The Dark Mountain Project.
Jasanoff, Sheila (2008). "Speaking Honestly to Power." *American Scientist*.
Klein, Naomi (2011). "Capitalism vs. the Climate." *The Nation*, November 9th.
Lewontin, Richard (2002). "The Politics of Science" *New York Review of Books*, May 9.
Miller, Richard and Stephen Sorrell (2013). "The Future of Oil Supply." *Phil. Trans. Of the Royal Society*.
Yergin, Daniel (2011). "There Will Be Oil." *Wall St. Journal*, Sept. 17th.
Gordon, Richard (2008). "The Case Against Government Intervention in Energy Markets" *Pol. Analysis*
Homans, Charles (2013). "The Experiment: How S. Chu Lost His Battle With Washington." *New Republic*.

III. Assignments. Please use an 11-point font; single space if you wish. **Bring a hard copy to class.**

1. The global economy and US society in particular are heavily dependent on petroleum, our primary fuel for transport. From an "energy security" perspective—the need to ensure that we have the fuels/energy needed to support our economy—how concerned should we be about the arrival of "peak oil"? Weigh the arguments in the articles by Yergin, and Miller/Sorrell. What other issues, if any, concern you after reading these articles? **DUE Saturday, June 28th.**

2. The text by Geri/McNabb describes many of the ongoing subsidies and other interventions in U.S. energy markets and systems. The article by Gordon makes the case for a free market approach to US energy policy. What is your preference? How much "should" government intervene in energy markets? What should be the goals of our energy policies? What would happen were the US to pursue a purely market-based approach to energy? **DUE Sunday, June 29th.**

3. Climate change/environmental science has become a major driver of change in energy policies at all levels of government. The articles by Lewontin, Jasanoff (critiquing the work of Pielke, Jr.) and Hansen (in his TED talk) describe various roles scientists could take in a democratic system. In your view, what should be the role of the scientist as analyst providing advice to policymakers? Has Hansen's "conversion" to activism helped his cause? ~2 pages; **DUE Saturday, July 12th.**

4. In *The Climate Casino*, Nordhaus makes a case for a carbon tax as a primary policy response to climate change. What are the political barriers in the U.S. to the enactment of such a tax? What kind of circumstances can you imagine that would lead to such a tax being passed by Congress and enacted into law? **DUE Sunday, July 13th.**

5. Final paper: Research and write a paper of 5-10 pages (single spaced) in which you analyze an energy policy issue. *Come to the first class session with two or three potential topics for this paper.* The paper should be written as a policy brief in which you explore an important energy issue in depth and provide recommendations to policy makers. More details on the format will be provided in class. **Due Saturday, July 28th.** Prepare a 10-minute presentation summarizing your findings; be prepared to deliver it in class on **July 25th.**

IV. Workshops. There will be two in-class workshops for which some pre-class research will be required. Spend 30-60 minutes doing some quick internet research on each topic, prior to the class day shown. No paper is required; just bring your notes to class and be ready to discuss the topic.

1. Bill McKibben, among others, is leading a movement urging investors and institutions-particularly in higher education—to divest their investment portfolios of stocks in big energy companies, especially oil and coal. Do some research into this effort. Do you believe this is a useful/viable approach to accomplishing change in the energy sector? **Sunday, June 29th.**

2. Madrigal begins chapter 21 of his text with an overview of Google's RE<C challenge...how renewables can be made cheaper than coal. Do some Internet research into the state of the markets for photovoltaic solar and wind energy, and compare prices to those offered by the EIA's Electric Power Monthly (see link below). How close are we to accomplishing that feat? Is this a useful way to frame the "conversation" about renewable energy in the U.S.? **Sunday, July 13th.**

V. Tentative Class Schedule. Subject to Change.

Friday/Saturday, June 27/28

Introductions, Concepts, definitions. Oil, Gas, Coal.

The World of Energy

Readings: Geri and McNabb, Introduction, Ch. 1-6;

On "Peak Oil" articles by Miller/Sorrell, and Yergin.

Hine and Kingsnorth, "Uncivilization"

Skim: *Survey of Energy Resources 2013 Exec. Summary*, World Energy Council

Due: Assignment 1.

Sunday, June 29th Electricity; International Dimensions of Energy Policy

Readings: Madrigal, Sections I, II, III (Chapters 1-15)

CBO, *Energy Security in the US*; Karl, "Perils of the Petro State"

Skim: EIA, *Annual Energy Outlook 2014*

Skim: BP, *Energy Outlook 2035; Statistical Review of World Energy 2013*

Due: Assignment 2. Prep for Workshop 1.

Saturday, July 12th Science, Policy and Climate Change; Introduction to Energy Policy

Readings: Geri and McNabb, Chapters 7-11

Skim website of the Intergovernmental Panel on Climate Change, <http://www.ipcc.ch/>, esp. summaries of the 5th Assessment reports.

Articles: Lewontin, "The Politics of Science," Jasonoff, "Speaking Honestly to Power"

Watch James Hansen's TED talk:

http://www.ted.com/talks/james_hansen_why_i_must_speak_out_about_climate_change

DUE: Assignment 3.

Sunday, July 13th Alternatives; Renewable Energy, Energy Policy; Energy Interventions

Readings: Nordhaus, *The Climate Casino*

Madrigal, Parts IV and V

Klein, "Capitalism vs. The Climate"

Homans, ""The Experiment: How S. Chu Lost His Battle With Washington."

DUE: Assignment 4. Prep for Workshop 2.

July 25th Student Presentations

DUE: Final Paper.

V. Credit and Evaluation. Students will receive four graduate or undergraduate credits based upon satisfactory and on-time completion of all course requirements and assignments. Plagiarism, failing to complete one or more assignments, or any non-excused absences, may lead to automatic denial of credit. Students will receive 4 credits at the completion of the course if all course requirements have been successfully completed. Plagiarism (i.e., using other peoples' work as your own), failing to complete one

or more assignments, completing one or more assignments late (without having made arrangements before the due date), or multiple absences may be grounds for denial of credit. Partial credit or incompletes will be awarded only under unusual circumstances. If you believe you will have difficulty submitting the final paper by its due date, contact me immediately. Students are expected to attend each class meeting and to be on time. If an absence from class is unavoidable, contact me prior to class. Because of the intensive nature of this course, missing one day of class will necessitate a make-up assignment. Missing a second day of class will result in a reduced award of credit, or a no credit. Makeup work must be completed by the end of summer quarter. Consistent with MPA program requirements, a self evaluation will be required for credit.

VI. Expectations of Students and faculty. We will promote a cooperative, supportive atmosphere within this learning community; give everyone opportunity for self-reflection and expression; Use high standards in reading the text and preparing our papers, lectures, and comments in seminar; Handle all disputes in a spirit of goodwill. Discuss any problems involving others in the learning community directly with the individuals involved (so long as the concerned party feels safe doing so), with the right to support from other program members during those discussions. We will abide by the student conduct code (Chapter 174-120 WAC Student Conduct Code & Grievance/Appeals; <http://apps.leg.wa.gov/wac/default.aspx?cite=174>) and social contract <http://www.evergreen.edu/about/social.htm>; WAC 174-121-010. Conflict Resolution: <http://www.evergreen.edu/policies/policy/conflictresolution>. Student rights and responsibilities: <http://www.evergreen.edu/studentaffairs/rightsandresponsibilities.htm#matrix>

VII. A Sample of Online Resources on Energy

US Gov page on energy policy: <http://www.whitehouse.gov/energy/>

DOE's Energy Efficiency and Renewable Energy Program: <http://www.eere.energy.gov/>

Foreign Policy on energy: <http://www.foreignpolicy.com/category/topic/energy/>.

Journal of Energy Security: <http://www.ensec.org/>.

Energy Policy (a journal): Available online at TESC Library site

International Energy Agency: <http://www.iea.org/>.

The IEA's *World Energy Outlook* on renewables:

http://www.worldenergyoutlook.org/media/weowebiste/2013/WEO2013_Ch06_Renewables.pdf

International Energy Agency (IEA): <http://www.iea.org/>

Council of Foreign Relations on Energy Security: <http://www.cfr.org/issue/energy-security/>

National Geographic's Energy Challenge:

<http://environment.nationalgeographic.com/environment/energy/great-energy-challenge/>

US DOE, Energy Information Admin: <http://www.eia.gov/>

EIA, Electric Power Monthly:

http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a

EIA's "Energy Explained" website: <http://www.eia.gov/energyexplained/index.cfm>;

US Global Change Research Program: <http://www.globalchange.gov/what-we-do/assessment>

World Energy Council, 2013 World Energy Resources Survey:

<http://www.worldenergy.org/publications/2013/world-energy-resources-2013-survey/>