

Political Science 340  
Energy Policy  
Fall 2014

John Reynolds  
Comenius 113  
Phone: 861-1408  
E-mail: [reynoldsj@moravian.edu](mailto:reynoldsj@moravian.edu)

**Office Hours:** M, T, W, TR 10:30 – 11:30 and *by appointment*

## **Introduction and Course Objectives**

Societies use energy to do work, produce goods and meet the needs and demands of their members. Social choices in this regard have profound implications for patterns of human settlement, the structure of social life, the distribution of income, and allocations of political power. Energy choices also have implications for the viability of the environment, conditions of human health, levels of personal freedom and the possibilities of democratic government. In this context the objectives of this course are:

1. Students will understand the concepts that structure debates about energy use and policy choice regarding the sources and end-uses of energy in the U.S. and globally
2. Students will develop a sense of the interrelationships between the choices of energy technologies and the social, economic and political characteristics of a society.
3. Students will understand the key physical, economic and political dimensions of the choices that societies have available to them.
4. Students will understand the current position of energy issues on the public policy agenda and the significant domestic and international conflicts connected to the use of energy.
5. Students will learn basic information regarding the advantages and disadvantages of energy choices and consider what constitutes the best path for future energy development and use.

## **Attendance**

Students are expected to attend all classes. Absences due to extracurricular activities, a doctor's excuse or notification by the Dean of Students Office will allow a student to be excused. All other excuses are subject to the instructor's judgment.

## **Academic Honesty**

All students should be aware of their obligations under the Academic Honesty Policy published in the *Moravian College Student Handbook 2011-2012*. A copy of that document can be found at <http://www.moravian.edu/studentLife/handbook/academic/academic2.html>.

## **Learning Disability accommodations**

Students who wish to request accommodations in this class for a disability should contact Elaine Mara, Assistant Director of Learning Services for academic and disability support at the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

## **Energy Journals (20 points)**

Students will submit a typewritten report on how they used energy during the week of September 28 through October 4. These journals will have eight entries. Seven of these will be a record of the ways that the student consumed energy during a given day and to the extent possible an identification of the energy resource that was consumed in that activity. The eighth entry will be a student commentary reflecting on the record established in the journal. This commentary could focus on any of the topics in the course. The commentary could include normative judgments on lifestyle, implications for public policy or government action, lessons learned by the individual about energy use, or a discussion of a particular event or activity that yielded to the student a noteworthy insight about the issues raised by the course. **{DUE DATE: 10/7}**

## **Klare Report (50 points)**

In **Rising Powers, Shrinking Planet: The New Geopolitics of Energy**, Michael Klare focuses on the changed geopolitical context of energy production and use in the 21<sup>st</sup> Century. For this report, discuss Klare's observations regarding how the organization of the global political economy of energy has changed, the implications of those changes for relationships among nations and the implications of these changes for the United States' domestic and foreign policies. In completing this assignment, the student might consider the following questions:

- What is Klare's basic thesis?
- What does Klare identify as the most significant changes in the global system of energy production and distribution?
- What are the most important regional developments that Klare discusses?
- What are the implications of these changes for U.S. foreign and domestic policy?

The report should be 5 to 8 pages type written with appropriate citation. **{DUE DATE: 11/4}**

## **Issue Brief (60 points)**

Each student will write a report on one of the following energy resources:

- Unconventional oil
- Nuclear
- Wind
- Solar
- Energy efficiency
- "Clean" coal
- Biofuels
- Hydrogen

The specific focus of the report will be determined in conjunction with the participation of each student in congressional simulation that is explained at the end of the syllabus. The choice of the issue will depend on the issue that was researched for the congressional simulation. Those who

***Quality of Presentation (10 points):***

1. Did the students speak clearly and with sufficient volume?
2. Did the speaker use effective rhetorical means in delivery of the content? Did he or she choose effective language? Did he or she use inflection well?
3. Did the speaker engage well with those to whom they were speaking?
4. Did the speaker provide clear and effective transitions?
5. Did the student conform to the time requirements?

***Substantive Content: Clarity and Concreteness (20 points)***

1. Was the speaker well prepared? Did the information/arguments presented by the speaker appear to be well researched?
2. Was the content of the presentation concrete and evidence based?
3. Did the presentation follow a clear and logical order?

**Final Essay (100 points)**

Imagine yourself to be a time traveler who goes back in time to 1950. You decide that it is imperative that you let the people of the United States, or at least someone about whom you care, know the type of future they face in regard to the consequences of the nation's energy usage. Draft a letter or craft some other form of communication that identifies and explains the most important energy problems that are coming, how they came to be and possible actions that could be implemented to avoid or rectify the problems at hand today. The essay should be 8 to 10 pages type written with appropriate citation. {DUE DATE: Final Exam Date}

**Reading Assignments**

{Note: On dates marked with an asterisk, the syllabus lists multiple readings for particular class meetings. On those dates, several individual members will be assigned responsibility to read a designated assignment for the purpose of reporting to the class. Assignments will be made in class.}

8/26 Introduction

**Read:** Nye, "Introduction," pp. 1-14

8/28 Work, consumption and the economy I

**Read:** 8/28: Smil, Ch. 1

Carl Behrens and Carol Glover, U.S. Energy: Overview and Key Statistics, Congressional Research Service, April 11, 2012

9/2 Work, consumption and the economy II

**Read:** Smil, Ch. 2

James Glanz, "The Cloud: Factories, Power, Pollution and the Internet," **The New York Times**, September 22, 2012 at [http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html?pagewanted=all&\\_r=1&](http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html?pagewanted=all&_r=1&)

9/4 Thermodynamics, entropy and end use

Read: David Goodstein, "Heat Engines and Entropy," Ch. 4, David Goodstein, **Out of Gas**, pp. 77-98 (New York: W.W. Norton, 2004)

9/9 Supply and the problem of exponential growth

Read: A. Bartlett, "Forgotten Fundamentals of the Energy Crisis," **American Journal of Physics**, September 1978, at [http://www.npg.org/specialreports/bartlett\\_index.htm](http://www.npg.org/specialreports/bartlett_index.htm); Smil pp. 181-195

9/11 Oil and gas supplies I

Read: Smil 195-253

9/16 Oil and gas supplies II \*

Read: Charles C. Mann, "What If We Never Run Out of Oil?" **The Atlantic**, April 24, 2013, pp. 48-63 at <http://www.theatlantic.com/magazine/archive/2013/05/what-if-we-never-run-out-of-oil/309294/>

Amory Lovins, "It Doesn't Matter If We Never Run Out of Oil: We Won't Want to Burn It Anymore," **The Atlantic**, May 13 2013 at <http://www.theatlantic.com/technology/archive/2013/05/it-doesnt-matter-if-we-never-run-out-of-oil-we-wont-want-to-burn-it-anymore/275773/>

Michael Klare, "Dear Media: Increased Oil Production Is Not Good News," **The Nation**, November 27, 2012 at <http://www.thenation.com/article/171465/dear-media-increased-oil-production-not-good-news#>

Nafeez Ahmed, "Former BP Geologist: Peak Oil Is Here and it will "Break Economies", **EarthInsight**, **The Guardian**, <http://www.theguardian.com/environment/earth-insight/2013/dec/23/british-petroleum-geologist-peak-oil-break-economy-recession/print>

Tom Whipple, **Peak Oil Review**, August 5, 2013 at <http://www.resilience.org/stories/2013-08-05/peak-oil-review-august-5>

Ambrose Evans Pritchard, "Fossil Industry is the Subprime Danger of this Cycle," **The Telegraph** at [http://www.telegraph.co.uk/finance/comment/ambroseevans\\_pritchard/10957292/Fossil-industry-is-the-subprime-danger-of-this-cycle.html?](http://www.telegraph.co.uk/finance/comment/ambroseevans_pritchard/10957292/Fossil-industry-is-the-subprime-danger-of-this-cycle.html?) , July 9, 2014

Robert Esworthy, **Federal Pollution Control Laws: How Are They Enforced?**, Congressional Research Service, May 23, 2014, pp. 1-36 at <http://fas.org/sgp/crs/misc/RL34384.pdf>

U.S. Department of Energy, "About Energy Star" at <http://www.energystar.gov/about/>, July 19 2014

10/16 U.S. Energy Policy in a Geopolitical Context

**Read:** Klare, Ch. 1 and 2

10/21 The changing geopolitical environment: China, India, Russia and the Caspian Region

**Read:** Klare 3, 4 and 5

10/23 The Middle East and Africa

**Read:** Klare, Ch. 6, 7 and 8

10/28 Electricity I - fundamentals of the system \*

**Read:** Smil pp. 31-44

Advanced Energy Economy, **U.S. Electric Power Industry - Context and Structure**, November 2011 at [http://info.aee.net/hs-fs/hub/211732/file-359505558-pdf/white\\_papers/U.S. Electric Power Industry - Context and Structure.pdf](http://info.aee.net/hs-fs/hub/211732/file-359505558-pdf/white_papers/U.S._Electric_Power_Industry_-_Context_and_Structure.pdf)

Timothy Brennan, et.al., "Understanding the Electric Industry," in **Alternating Currents: Electricity Markets and Public Policy**, (Washington, D.C.: Resources for the Future, 2002)

U.S. Department of Energy, "Electric Power Industry Overview 2007," Energy Information Administration, at <http://www.eia.doe.gov/cneaf/electricity/page/prim2/toc2.html>

10/30 Electricity II - Regulation and restructuring

**Read:** Timothy Brennan, et.al., "From Regulation to Competition," in **Alternating Currents: Electricity Markets and Public Policy**, (Washington, D.C.: Resources for the Future, 2002)

11/4 Electricity III - Modernizing the grid and distributed generation

**Read:** Jennifer Weeks, **Modernizing the Grid**, CQ Researcher, February 19, 2010, Volume 20, Issue 7 at <http://0-library.cqpress.com.webpac.lvlspace.org/cqresearcher/document.php?id=cqresrre2010021900>

11/6 Coal; policy presentations \*

## **Congressional Hearing Simulation**

Students in POSC 225 and POSC 340 will participate in a joint activity that is intended to simulate a congressional committee hearing. For the purposes of the simulation, the hearings will be conducted in the U.S. House of Representatives. The congressional hearing simulation will take place on Monday, November 17 from 7:00 to 9:00 p.m. in the UBC Room of the HUB.

The substantive focus of the hearing will be a proposal to offer tax credits to support research and development projects and/or increase production for a particular source of energy. The energy sources that will be under consideration will be drawn from the following list of possible alternatives presented immediately below. Six alternatives will be selected.

- Unconventional oil
- Nuclear
- Wind
- Solar
- Energy efficiency
- "Clean" coal
- Biofuels
- Hydrogen

## **Student Roles**

Students participating in the simulation will be assigned to one of three roles:

- **Members of Congress:** Seven students from POSC 225 will assume the role of elected members of the House of Representatives. Three will be assigned positions as members of the majority party and two will be members of the minority party.
- **Witnesses:** Six students from POSC 340 will assume the role of witnesses testifying before the committee. Each witness will offer testimony on one of the energy alternatives listed above. The specific areas for testimony will be chosen by each student in consultation with the instructor.
- **Staff:** Students from both classes who do not assume a role as a member of Congress or as a witness will be assigned a staff role in support of the performance of the congressional members.

## **Student responsibilities**

### **Members of Congress:**

- A committee chair will be identified who will have responsibility to run the hearings (i.e. open and close session, allocate and monitor time, assign responsibilities for who is to question whom, rule on requests from committee members, consult and direct staff)
- A ranking minority member will be selected and will work with committee chair to allocate time, assign responsibilities for questioning, consult and direct staff.

- The panels will open with each witness reading a 2 minute prepared statement that supports the use of tax credits to support the specific energy option for which the witness is advocating.
- After the statements are read, each witness will be subject to 8 minutes of questions from members of the committee. Questions will be posed to witnesses in the same order that the witnesses initially spoke.
- Majority members will be accorded a total of five minutes to ask questions of each witness and make statements in accordance to arrangements established in consultations with the chair.
- Minority members will be accorded three minutes to ask questions of each witness and make statements in accordance to arrangements established in consultations with the chair.
- The chair will monitor time allocations
- After the first the testimony of the first panel is concluded, the second panel will offer testimony and the process described above will be repeated for the second panel.
- Closing statements (1 from ranking minority member, 1 from chair)