

**NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course site for enrolled students and may be more current than this sample syllabus. Summer term courses may be accelerated – please check the Ecampus [Schedule of Classes](#) for more information.**

## **PS 473 / 573 US ENERGY POLICY (4)**

### **COURSE CREDIT:**

---

(4) This course combines approximately 120 hours of instruction, online activities, and assignments for 4 credits.

### **PREREQUISITES, CO-REQUISITES AND ENFORCED PREREQUISITES:**

---

None.

### **COURSE DESCRIPTION:**

---

Addresses US energy policy with respect to how the U.S. governs the production and use of different energy sources, along with the management of its energy infrastructure. Examines policies currently in place, as well as proposals for alternatives, while examining the economic, environmental, national security and energy security implications of different policy approaches.

This 4-credit course will address US energy policy with respect to how the U.S. governs the production and use of different energy sources, along with the management of its energy infrastructure. The goal of the course is to gain an understanding of policies currently in place, as well as proposals for alternatives, while examining the economic, environmental, national security and energy security implications of different policy approaches.

The course will involve lecture, discussion, and small group work to explore topics such as shale gas development, tax incentives for the oil industry, how policy determines the market for renewable energy, governance of the electrical grid by federal and state authorities, the potential for greater energy efficiency, nuclear power, the costs and benefits of different energy sources, and how the national security and environmental impacts of energy usage have spurred policy changes.

## CONTACT INFORMATION:

---

Professor David Bernell

Office: Gilkey Hall 312

Phone: 541-737-6281

Email: [david.bernell@oregonstate.edu](mailto:david.bernell@oregonstate.edu)

**Sample syllabi may not have the most up-to-date information. For accuracy, please check the [ECampus Schedule of Classes](#) to see the most current instructor information. You can search for contact information by name from the [OSU Home Page](#).**

## LEARNING RESOURCES:

---

### Readings

The texts for the course are John Deutch, *The Crisis in Energy Policy*, Bob Shively and John Farrare, *Understanding Today's Electricity Business*, and Philip Schewe, *The Grid*. There will also be additional articles that will be provided electronically. The reading assignment for the day must be read prior to class.

**NOTE: For textbook accuracy, please always check the textbook list at the [OSU Bookstore website](#). Sample syllabi may not have the most up-to-date information.**

**Students can also click the 'OSU Beaver Store' link associated with the course information in the [Ecampus schedule of classes](#) for course textbook information and ordering.**

## STUDENT LEARNING OUTCOMES:

---

### *Undergraduates*

- Demonstrate comprehensive knowledge of the sources and volumes of current and projected US energy production and usage
- Comprehend major legislation governing oil production and the management of the electric power generation sector
- Explain the national security, economic and environmental consequences of current US energy policy.
- Explain the structure of the electric power market and understand the roles and responsibilities in the generation, transmission, distribution, and systems operations functions.
- Describe and compare the benefits and drawbacks of different energy sources and technologies, such as oil, coal, natural gas, nuclear and renewables.
- Develop the ability to understand and navigate energy information reports and databases from the US government, NGO's and international organizations.
- Develop the ability to write strong, clear and compelling policy briefs

### *Graduates*

- All of the undergraduate learning outcomes, plus...
- Analyze and critique the economic and environmental impacts of different energy policy options involving oil and electricity generation.
- Analyze and critique the national and global security impacts of US production, usage and policy options involving oil.
- Calculate and evaluate the direct, indirect and externalized costs and benefits of different energy sources and technologies.
- Research and compose in-depth policy briefs and analyses on energy legislation and regulation.

## **COURSE CONTENT AND POLICIES:**

---

### **Policy Briefs**

You are to write a policy brief (three if you are a graduate student). A policy brief is a document that explains a policy problem and outlines the arguments for and against choosing a particular course of action in a current policy debate. The brief can be either advocate for a particular policy option (it will thus make a recommendation) or be neutral. Each policy brief should be no more than 2-3 single spaced pages. There are many different ways to organize a policy brief, and some examples are below. Generally, the brief will present the problem or issue, provide some background, give pros and cons to several alternative policies (no straw men policies allowed), and make a recommendation.

The criteria for assessing graduate level work will be different than that used to assess undergraduate work. Undergraduates will be expected to complete work that reflects an understanding of legislation, the structure of electric power markets, and/or the strengths and weaknesses of different energy sources, along with other items related to the undergraduate learning outcomes. Graduate students will need to demonstrate a higher level of understanding and ability, reflecting knowledge of how to analyze and evaluate the strengths and weaknesses of different policy options, calculating and evaluating the direct, indirect and externalized costs of energy sources, and analyzing the global and national security impacts of policy involving oil production and usage.

Examples of policy briefs, and guidelines for a policy brief:

<http://www.rff.org/RFF/Documents/RFF-IB-09-11.pdf>

[http://www.un.org/en/development/desa/policy/publications/policy\\_briefs/policybrief24.pdf](http://www.un.org/en/development/desa/policy/publications/policy_briefs/policybrief24.pdf)

[http://www.rhsupplies.org/fileadmin/user\\_upload/toolkit/B\\_Advocacy\\_for\\_RHS/Guidelines for Writing a Policy Brief.pdf](http://www.rhsupplies.org/fileadmin/user_upload/toolkit/B_Advocacy_for_RHS/Guidelines_for_Writing_a_Policy_Brief.pdf)

---

## RESEARCH PAPER OR POLICY ANALYSIS

You may choose to complete either a typical research paper on a topic of your choosing, or a policy analysis. The goal of this assignment is for you to complete in-depth research and writing on a policy or problem you would like to address. Students will present their work to the class during the last week of the term.

The policy analysis is a far more comprehensive effort than a policy brief. You can have some flexibility in what the final product looks like, but in general, you will examine a particular energy policy (either existing or proposed) at the state or national level, looking at implications involving economic, environmental, energy supply, and/or national security aspects, while also looking at the stakeholders and the politics of the policy topic. A variation on this could be to make the point of focus a particular technology or fuel, and to analyze a set of policies that govern the topic you're addressing. The links below provide some suggestions on how to approach the policy analysis, which can be structured in a way that is similar to the policy brief, but that is far more detailed and rigorous in its analysis.

As is the case with the policy briefs, the criteria for assessing graduate level work will be different than that used to assess undergraduate work. Undergraduates will be expected to complete work that reflects an understanding of legislation, the structure of electric power markets, and/or the strengths and weaknesses of different energy sources, along with other items related to the undergraduate learning outcomes. Graduate students will need to demonstrate a higher level of understanding and ability, reflecting knowledge of how to analyze and evaluate the strengths and weaknesses of different policy options, calculating and evaluating the direct, indirect and externalized costs of energy sources, and analyzing the global and national security impacts of policy involving oil production and usage.

<http://www.csulb.edu/~msaintg/ppa670/670steps.htm>

[http://www.cpa.ie/publications/HowTo\\_DoPolicyAnalysis\\_2006.pdf](http://www.cpa.ie/publications/HowTo_DoPolicyAnalysis_2006.pdf)

---

## EXAMS

Exams will cover material from the readings and course lectures and discussions. The format will involve writing 3 or 4 essays in a take home exam. The final exam will cover material addressed after the midterm exam. Graduate and undergraduate work will be assessed according to different criteria, as explained in the sections above.

---

## EXPECTATIONS FOR STUDENT CONDUCT

Students are expected to follow the academic and professional standards of the university and their academic units. These are described at

<http://oregonstate.edu/admin/stucon/achon.htm>.

---

## WEEKLY SCHEDULE OF TOPICS AND READINGS

### Week 1

#### Introduction to Energy

National Academy of Sciences, "What You Need to Know about Energy," 2008, <http://www.nap.edu/catalog/12204.html>.

#### The Domestic Context

John Deutch, *The Crisis in Energy Policy*, Introduction and Chapter 1.

Geri and McNabb, *Energy Policy in the US*, Chapters 1 and 4.

US Energy Information Administration, *Annual Energy Outlook 2015*, <http://www.eia.gov/forecasts/aeo/>

Pew Center on Global Climate Change, "US DOE Recovery Act Spending," Dec 2009, <http://www.c2es.org/docUploads/DOE-recovery-act-spending-dec-2009.pdf>

### Week 2

#### The Global Context

Michael Klare, *Rising Powers, Shrinking Planet*, Prologue and Chapters 1-2.

US Energy Information Administration, *International Energy Outlook 2014*, <http://www.eia.gov/forecasts/ieo/>.

International Energy Agency, *World Energy Outlook 2010, Executive Summary*, 2010, [http://www.iea.org/weo/docs/weo2011/executive\\_summary.pdf](http://www.iea.org/weo/docs/weo2011/executive_summary.pdf)

#### Energy and Climate Change

John Deutch, *The Crisis in Energy Policy*, Chapter 2.

David McKay, *Sustainable Energy - Without The Hot Air*, Chapter 1, <http://www.withouthotair.com/>.

Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report – Summary for Policymakers*, [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf)

Burton Richter, "Energy in Three Dimensions," *Issues in Science and Technology*, Spring 2011, <http://www.issues.org/27.3/richter.html>

Ian W.H. Parry and William Pizer, "Emissions Trading vs. CO2 Taxes vs. Standards," *Assessing US Climate Policy Options*, A Report by Resources for the Future, 2007, pp. 80-87, [http://www.rff.org/News/Features/Documents/CPF\\_COMPLETE\\_REPORT.pdf](http://www.rff.org/News/Features/Documents/CPF_COMPLETE_REPORT.pdf).

N. Gregory Mankiw, "One Answer to Global Warming: A New Tax," *New York Times*, 9/16/2007,

[http://www.economics.harvard.edu/faculty/mankiw/files/One\\_Answer\\_to\\_Global\\_Warming.pdf](http://www.economics.harvard.edu/faculty/mankiw/files/One_Answer_to_Global_Warming.pdf)

### Week 3

#### Oil – National Security Implications

John Deutch, *The Crisis in Energy Policy*, Chapter 3.

Council on Foreign Relations, “National Security Consequences of US Oil Dependency,” 2006, <http://www.cfr.org/energy-security/national-security-consequences-us-oil-dependency/p11683>

Christopher Dickey, “The Oil Shield,” *Foreign Policy*, April 2006, [http://www.foreignpolicy.com/articles/2006/04/25/the\\_oil\\_shield](http://www.foreignpolicy.com/articles/2006/04/25/the_oil_shield)

Thomas Friedman, “The First Law of Petropolitics,” *Foreign Policy*, May/June 2006, [http://www.foreignpolicy.com/articles/2006/04/25/the\\_first\\_law\\_of\\_petropolitics](http://www.foreignpolicy.com/articles/2006/04/25/the_first_law_of_petropolitics)

### Week 4

#### Oil – Current Policy

Readings TBD by students. Students will search the literature of their chosen topic, and make electronic copies of readings available for the class. Possible topics include: Tax incentives, public lands and offshore leasing, royalty-in-kind and royalty relief, ethanol, CAFE standards, gas taxes, shale oil, Keystone (Canada-US) pipeline, shale gas, Energy Policy Act of 2005, Energy Security and Independence Act of 2007, ARRA energy provisions.

### Week 5

#### Oil – Policy Options

Amory Lovins, *Winning the Oil Endgame*, “Crafting Coherent Supportive Policies,” pp. 169-213.

Alan Krupnick, Tony Knowles, et al., “Policies to Reduce Oil Consumption,” *Toward a New National Energy Policy*, A Report by RFF and NEPI, 2010, pp. 45-67, [http://www.energypolicyoptions.org/wp-content/uploads/reports/RFF-Rpt-NEPI\\_Tech\\_Manual\\_Final.pdf](http://www.energypolicyoptions.org/wp-content/uploads/reports/RFF-Rpt-NEPI_Tech_Manual_Final.pdf).

Charles Krauthammer, “The Net Zero Gas Tax” *The Weekly Standard*, 1/5/09, <http://www.weeklystandard.com/Content/Public/Articles/000/000/015/949rsrgi.asp?pg=1>

McKinsey & Co., *Energy Efficiency: A Compelling Global Resource*, “Electrifying Cars,” pp. 53-60, 2010, <http://www.mckinsey.com/Search.aspx?q=energy%20efficiency>.

Walter Russell Mead, “Chitty Chitty Bang Bang: The Electric Car Industry Isn’t Going to Save Us,” *The National Interest*, 9/28/10, <http://blogs.the-american-interest.com/wrm/2010/09/28/chitty-chitty-bang-bang-the-electric-car-industry-isnt-going-to-save-us/>

## Week 6

### Electricity – How the Electric Power System Works

Bob Shively and John Farrare, *Understanding Today's Electricity Business*, Sections 1 thru 7.

Phillip Schewe, *The Grid*, 2007, Chapters 1 and 5.

### Electricity – Changing the Electric Power System

Bob Shively and John Farrare, *Understanding Today's Electricity Business*, Sections 8 thru 15.

Phillip Schewe, *The Grid*, 2007, Chapters 6, 7 and 9.

Power Marketing Administrations, Information Sheet, AllGov.com,  
[http://www.allgov.com/Agency/Power\\_Marketing\\_Administrations](http://www.allgov.com/Agency/Power_Marketing_Administrations)

## Week 7

### Electricity – Policy Options

John Deutch, *The Crisis in Energy Policy*, Chapters 5-6.

Thomas Friedman, "The Energy Internet," from *Hot, Flat and Crowded*, pp. 270-287.

Lawrence Makovich, "The Smart Grid: Separating Perception from Reality," *Issues in Science and Technology*, Spring 2011,  
<http://www.issues.org/27.3/makovich.html>

Peter Huber, "The Million Volt Answer to Oil," *Energy Policy and the Environment Report*, Oct. 2008, [http://www.manhattan-institute.org/html/eper\\_03.htm](http://www.manhattan-institute.org/html/eper_03.htm)

Jeffrey Leonard, "Get the Energy Sector off the Dole," *Washington Monthly*, Jan/Feb 2011,

<http://www.washingtonmonthly.com/features/2011/1101.leonard-2.html>

Richard Munson, "Reduce Greenhouse Gases Profitably," *Issues in Science and Technology*, Winter 2009, <http://www.issues.org/25.2/munson.html>

Center for American Progress, "Carbon Capture and Sequestration 101," March 6, 2009, [http://www.americanprogress.org/issues/2009/03/ccs\\_101.html/print.html](http://www.americanprogress.org/issues/2009/03/ccs_101.html/print.html)

Center for Climate and Energy Solutions, CCS Factsheet,  
<http://www.c2es.org/technology/factsheet/ccs>

Carolyn Wingard, "Is Carbon Capture and Storage Poised for Widespread Adoption?" *Electric Perspectives*, Sept/Oct 2010,  
<http://www.eei.org/magazine/EEI%20Electric%20Perspectives%20Article%20Listing/2010-09-01-ENVIRONMENT.pdf>

## Week 8

### Nuclear Power

John Deutch, *The Crisis in Energy Policy*, pp. 95-109.

David McKay, *Sustainable Energy – Without the Hot Air*, Chapter 24, “Nuclear?” 2009, <http://www.withouthotair.com/>.

Nuclear Energy Institute, “Policies that Support New Nuclear Plant Development,” Fact Sheet, Oct. 2009, <http://www.nei.org/resourcesandstats/documentlibrary/newplants/factsheet/policies/supportnewplantdevelopment/?print=true>

Nuclear Energy Institute, “US Needs New Nuclear Plants to Meet Energy Demand,” Policy Brief, Jan 2011, <http://www.nei.org/resourcesandstats/documentlibrary/newplants/policybrief/usneedsnewplants/>

Nuclear Energy Institute, “Financing New Nuclear Power Plants,” Policy Brief, March 2010, <http://www.nei.org/resourcesandstats/documentlibrary/newplants/policybrief/>

World Nuclear Association, “US Nuclear Policy,” Oct. 2011, [http://world-nuclear.org/info/inf41\\_US\\_nuclear\\_power\\_policy.html](http://world-nuclear.org/info/inf41_US_nuclear_power_policy.html)

Public Citizen, “Nuclear Giveaways in the Energy Policy Act of 2005,” <http://www.citizen.org/documents/NuclearEnergyBillFinal.pdf>

Public Citizen, “A Look at the Five Fatal Flaws of Nuclear Power,” 2010 [http://www.citizen.org/cmep/article\\_redirect.cfm?ID=13447](http://www.citizen.org/cmep/article_redirect.cfm?ID=13447)

Ernest Moniz, “Why We Still Need Nuclear Power,” *Foreign Affairs*, Nov/Dec 2011.

Mark Cooper, “The Implications of Fukushima,” *Bulletin of the Atomic Scientists*, July 2011, <http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=55ce7548-0379-4cc3-9004-64944b499298%40sessionmgr114&vid=9&hid=125>

William Beaver, “The Failed Promise of Nuclear Power,” *Independent Review*, Winter 2011, [http://www.independent.org/pdf/tir/tir\\_15\\_03\\_5\\_beaiver.pdf](http://www.independent.org/pdf/tir/tir_15_03_5_beaiver.pdf)

OECD, “Nuclear Energy Today,” Policy Brief, Feb 2005. <http://www.oecd.org/dataoecd/32/62/34537360.pdf>

## Week 9

### Renewable Energy and Energy Efficiency

John Deutch, *The Crisis in Energy Policy*, pp. 79-95.

David Bernell, “US Energy Security and Renewables,” Unpublished Draft, February 2010.

Joshua Green, “The Elusive Green Economy,” *The Atlantic*, July/Aug 2009, <http://www.theatlantic.com/magazine/archive/2009/07/the-elusive-green-economy/7554/>

H. Sterling Burnett, *Solar Power Prospects*, National Center for Policy Analysis, Rept. 334, May 2011 <http://www.ncpa.org/pdfs/st334.pdf>

Solar Energy Industries Association, *US Solar Market Insight – 2010 Year in Review*, Executive Summary, <http://www.seia.org/galleries/pdf/SMI-YIR-2010-ES.pdf>.

National Academy of Sciences, *Electricity from Renewable Resources: Status, Prospects, and Impediments*, Summary, pp. 1-14, 2010, [http://www.nap.edu/catalog.php?record\\_id=12619](http://www.nap.edu/catalog.php?record_id=12619)

Frank Laird, "A Full Court Press for Renewable Energy," *Issues in Science and Technology*, Winter 2009, <http://www.issues.org/25.2/laird.html>

American Wind Energy Association, *Wind Energy Basics* (Various Reports), 2011, [http://www.awea.org/learnabout/publications/factsheets/factsheets\\_windenergybasics.cfm](http://www.awea.org/learnabout/publications/factsheets/factsheets_windenergybasics.cfm)

Database of State Incentives for Renewable Energy (DSIRE), <http://www.dsireusa.org/>.

Lisa Margonelli, "Energy Security for American Families," *Issues in Science and Technology*, Winter 2009, <http://www.issues.org/25.2/margonelli.html>

McKinsey & Co., *Energy Efficiency: A Compelling Global Resource*, "Energy Efficiency: Unlocking the US Opportunity," pp. 4-17, 2010, <http://www.mckinsey.com/Search.aspx?q=energy%20efficiency>.

## Week 10

### Student Presentations of Research Papers/Policy Analyses

## Evaluation of Student Performance

### Course requirements

#### Undergraduates

Policy Brief	15%
Research Paper	25%
Midterm exam	25%
Final Exam	25%
Participation/Presentation	10%

#### Graduates

Policy Briefs (3)	35%
Midterm exam	10%
Final exam	10%
Research Paper/Policy Analysis	35%
Participation/Presentation	10%

## Course site login information

Information on how to login to your course site can be found [HERE](#).

## Statement Regarding Students with Disabilities

Oregon State University is committed to student success; however, we do not require students to use accommodations nor will we provide them unless they are requested by the student. The student, as a legal adult, is responsible to request appropriate accommodations. The student must take the lead in applying to Disability Access Services (DAS) and submit requests for accommodations each term through DAS Online. OSU students apply to DAS and request accommodations at our [Getting Started with DAS](#) page.

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Additionally, Canvas, the learning management system through which this course is offered, provides a [vendor statement](#) certifying how the platform is accessible to students with disabilities.

## Academic Integrity and Student Conduct (OSU policy)

Students are expected to be honest and ethical in their academic work. Intentional acts of academic dishonesty such as cheating or plagiarism may be penalized by imposing an “F” grade in the course.

Student conduct is governed by the universities policies, as explained in the Office of the Dean of Student Life: Student Conduct and Community Standards. In an academic community, students and faculty, and staff each have responsibility for maintaining an appropriate learning environment, whether online or in the classroom. Students, faculty, and staff have the responsibility to treat each other with understanding, dignity, and respect.

Students are expected to conduct themselves in the course (e.g. on discussion boards, email postings, etc.) in compliance with the university's regulations regarding civility. Students will be expected to treat all others with the same respect as they would want afforded to themselves. Disrespectful behavior (such as harassing behavior, personal insults, inappropriate language) or disruptive behaviors are unacceptable and can result in sanctions as defined by Student Conduct and Community Standards.

For more info on these topics please see:

[Statement of Expectations for Student Conduct](#)  
[Student Conduct and Community Standards - Offenses](#)

## [Policy On Disruptive Behavior](#)

### **Plagiarism**

You are expected to submit your own work in all your assignments, postings to the discussion board, and other communications, and to clearly give credit to the work of others when you use it. Academic dishonesty will result in a grade of "F."

## [Statement of Expectations for Student Conduct](#) [Avoiding Academic Dishonesty](#)

### **Turnitin Plagiarism Prevention**

Your instructor may ask you to submit one or more of your writings to **Turnitin**, a plagiarism prevention service. Your assignment content will be checked for potential plagiarism against Internet sources, academic journal articles, and the papers of other OSU students, for common or borrowed content. Turnitin generates a report that highlights any potentially unoriginal text in your paper. The report may be submitted directly to your instructor or your instructor may elect to have you submit initial drafts through Turnitin and you will receive the report allowing you the opportunity to make adjustments and ensure that all source material has been properly cited.

Papers you submit through Turnitin for this or any class will be added to the OSU Turnitin database and may be checked against other OSU paper submissions. You will retain all rights to your written work. For further information on Turnitin please click [HERE](#).

### **Technical Assistance**

If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email [osuhelpdesk@oregonstate.edu](mailto:osuhelpdesk@oregonstate.edu) or visit the [OSU Computer Helpdesk](#) online.

## [COURSE DEMO](#) [GETTING STARTED](#)

### **Tutoring**

For information about possible tutoring for this course, please visit our Ecampus [NetTutor](#) page. Other resources include:

## [Writing Center](#) [Online Writing Lab](#)

### **Student Evaluation of Teaching**

The online Student Evaluation of Teaching form will be available in week 9 and close at the end of finals week. Students will be sent instructions via ONID by the Office of Academic

Programs, Assessment, and Accreditation. Students will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted. Course evaluation results are very important and are used to help improve courses and the learning experience of future students. Results from questions are tabulated anonymously and go directly to instructors and unit heads/supervisors. Unless a comment is “signed,” which will associate a name with a comment, student comments on the open-ended questions are anonymous and forwarded to each instructor. “Signed” comments are forwarded to the unit head/supervisor.

### **Refund Policy information**

Please see the [Ecampus website](#) for policy information on refunds and late fees.