

**JOHN F. KENNEDY SCHOOL OF GOVERNMENT  
HARVARD UNIVERSITY  
API-164: ENERGY POLICY  
Monday, Wednesday 8:30 – 10:00 am  
Room L332  
Spring 2009  
PROFESSOR WILLIAM W. HOGAN**

**COURSE DESCRIPTION**

This course provides an overview of energy policy issues with an emphasis on the supporting analysis needed to address the problems. The course is intended for doctoral students interested but not necessarily specializing in energy issues. The course is offered in support of the Harvard University Center for the Environment (HUCE) Graduate Consortium on Energy and Environment <http://www.energy.harvard.edu/consortium>.

**PREREQUISITES**

Multivariate calculus recommended. IGA-310 “Energy Policy: Technologies, Systems, and Markets,” or equivalent. Permission of the instructor.

**EXPECTATIONS AND GRADING**

Students will participate in the classroom discussion of readings on a series of energy policy issues.

Each student will define an energy policy problem of interest and provide: (i) a one page précis of the policy issue with identification of the key analytical questions and associated readings; (ii) a presentation to the class, leading a discussion of the policy issue and supporting analysis; and (iii) a final paper or equivalent (submitted in both hard-copy and electronic versions) describing the tasks going forward in order to address the selected energy policy issue.

Course grading will be 60% based on the student energy policy project, 40% based on classroom discussion, and follow the Harvard Kennedy School recommended grade distribution.

**COURSE MATERIALS**

The accompanying reading list provides a selection of papers and books of interest. Most materials are available online, as indicated. Some materials are on reserve in the Harvard Kennedy School Library. The links to the articles available through Harvard Library may be time-sensitive, and there’s a chance they will no longer be active when you try them. If not, go to the library’s e-research page, at <http://eresearch.lib.harvard.edu/V>, click on “Find E-Journals” on the horizontal menu near the top of the page. A new window will open. Type the title of the publication into the search box, and hit the Go button. You will then get a list of one or more online databases that archives that journal. Click on one of those and you will then be able to select by date and/or volume number the issue, and then the article, you are seeking. At some point, you will be asked to sign in using your Harvard ID and PIN before you can access the article(s).

**OFFICE HOURS**

William Hogan, Room B318, MW 1:00pm-2:00pm.  
Moeed Yusuf, TBD.

## SCHEDULE

**Monday, Wednesday 8:30 – 10:00 am**  
**Room L332, Harvard Kennedy School**

***Class 0: Monday, January 26***  
**Shopping Class**

A shortened class illustrating the discussion of an energy policy case and accompanying analysis: California Solar Initiative.

### Reading

van Benthem, Arthur, Kenneth Gillingham and James Sweeney, "Learning-by-Doing and the Optimal Solar Policy in California," *The Energy Journal*, Vol. 29, No. 3, 2008, **Pages 131-152**.  
Online through Harvard Library at  
<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=33119724&site=ehost-live&scope=site>.

***Class 1: Wednesday, January 28***  
**Getting Started: US Energy Policy**

We will discuss the purposes and structure of the course, and organize the schedule and responsibilities for student presentations.

The initial discussion will focus on an overview of US energy policy

### Readings

International Energy Agency, *World Energy Outlook 2008*, 2008. Not online (only Executive Summary at <http://www.iea.org/Textbase/npsum/WEO2008SUM.pdf>).

Joskow, Paul L., "Energy Policies and Their Consequences After 25 Years," *Energy Journal*, Vol. 24 No. 4, 2003). Online at  
[http://web.mit.edu/ceepr/www/publications/reprints/Reprint\\_170\\_WC.pdf](http://web.mit.edu/ceepr/www/publications/reprints/Reprint_170_WC.pdf).

National Petroleum Council, Executive Summary of *Hard Truths: Facing the Hard Truths about Energy*, July 2007. Online at  
[http://downloadcenter.connective.com/events/npc071807/pdf-downloads/NPC-Hard\\_Truths-Executive\\_Summary.pdf](http://downloadcenter.connective.com/events/npc071807/pdf-downloads/NPC-Hard_Truths-Executive_Summary.pdf)

The National Commission on Energy Policy, *Ending the Energy Stalemate: A Bipartisan Strategy to Meet America's Energy Challenges*, December 2004. Online at  
<http://www.energycommission.org/ht/a/GetDocumentAction/i/1088>

**Class 2: Monday, February 2**  
**Oil Markets and Oil Prices**

**Readings**

Commodity Futures Trading Commission, “Staff Report on Commodity Swap Dealers & Index Traders with Commission Recommendations,” September 2008. Online at <http://www.cftc.gov/stellent/groups/public/@newsroom/documents/file/cftcstaffreportonswapdealers09.pdf>.

Gately, Dermot, “What Oil Export Levels Should We Expect from OPEC?” *The Energy Journal*, Vol. 28, No. 2, 2007. **Pages 151-173**. Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=24994110&site=ehost-live&scope=site>.

Hamilton, James D., *Understanding Crude Oil Prices* (University of California, San Diego paper, 2008). Online at [http://dss.ucsd.edu/~jhamilto/understand\\_oil.pdf](http://dss.ucsd.edu/~jhamilto/understand_oil.pdf).

Pindyck, Robert S., “Gains to Producers from the Cartelization of Exhaustible Resources,” monograph, May 1976. Version from *Review of Economics & Statistics* May 1978, Vol. 60, Issue 2, **Pages 238-251**, available online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=4643882&site=ehost-live&scope=site>.

Pindyck, Robert S., “The Dynamics of Commodity Spot and Futures Markets: A Primer,” *The Energy Journal*, Vol. 22, No. 3, 2001. **Pages 1-29**. Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=4850569&site=ehost-live&scope=site>.

Pindyck, Robert S., “The Long-Run Evolution of Energy Prices,” *The Energy Journal*, Vol. 20, No. 2, 1999. **Pages 1-27**. Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=1778652&site=ehost-live&scope=site>.

Ross, Michael, “The Natural Resource Curse: How Wealth Can Make You Poor,” in Bannon, Ian and Collier, Paul (ed.), *Natural Resources and Violent Conflict* (Washington, D.C.: The World Bank, 2003). **Pages 17-42**. Online at [http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/05/24/000012009\\_20040524154222/Rendered/PDF/282450Natural0resources0violent0conflict.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/05/24/000012009_20040524154222/Rendered/PDF/282450Natural0resources0violent0conflict.pdf).

Salant, Stephen W., “Imperfect Competition in the International Energy Market: A Computerized Nash-Cournot Model,” *Operations Research*, Vol. 30, No. 2, March-April 1982). **Pages 252-280**. Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=mth&AN=4469541&site=ehost-live&scope=site>.

Salant, Stephen W., “The Economics of Natural Resource Extraction: A Primer for

Development Economists,” *The World Bank Research Observer*, Vol. 10, No. 1, February 1995. **Pages 93-111.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.jstor.org/stable/3986568>.

Smith, James L., “World Oil: Market or Mayhem?” MIT Center for Energy and Environmental Policy Research, Working Paper #08-015, September 2008. Online at <http://web.mit.edu/ceepr/www/publications/workingpapers/2008-015.pdf>.

### ***Class 3: Wednesday, February 4***

#### **Energy Security**

##### **Readings**

Cordesman, Anthony H., “Geopolitics and Energy: Key Trends – 2000-2020,” Center for Strategic and International Studies, 2002. Online at [http://www.csis.org/media/csis/pubs/geopoliticsandenergy\[1\].pdf](http://www.csis.org/media/csis/pubs/geopoliticsandenergy[1].pdf).

Deutch, John, et al., “Priority Energy Security Issues” in *Energy Security and Climate Change: A Report to the Trilateral Commission* (Washington, DC: Trilateral Commission, 2007). **Pages 1-50.** Online at <http://web.mit.edu/chemistry/deutch/policy/85EnergySecurClim2007.pdf>.

Hogan, William W., “Energy in ‘Hedging Against Uncertainty: US Strategy in an Interdependent World,’” *National Strategy Forum Review*, Vol. 17, No. 3 (Summer 2008). **Pages 24-27.** Online at [http://ksghome.harvard.edu/~WHogan/hoganenergy\\_Nat\\_Srat\\_0808.pdf](http://ksghome.harvard.edu/~WHogan/hoganenergy_Nat_Srat_0808.pdf).

Kalicki, Jan H. and David L. Goldwyn (ed.), *Energy & Security: Toward a New Foreign Policy Strategy* (Washington, DC: Woodrow Wilson Center Press, 2005). Not online.

Sandalow, David, *Freedom from Oil: How the Next President Can End the United States’ Oil Addiction* (New York: McGraw Hill, 2008). Not online.

Teisberg, Thomas J., “A Dynamic Programming Model of the U.S. Strategic Petroleum Reserve,” *The Bell Journal of Economics*, Vol. 12, No.2, Autumn 1981. **Pages 526-546.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.jstor.org/stable/3003570>.

### ***Class 4: Monday, February 9***

#### **Energy Externalities**

##### **Readings**

Broadman, Harry G. and William W. Hogan, “Is an Oil Tariff Justified? An American Debate: II. The Numbers Say Yes,” *The Energy Journal*, Vol. 9, No. 3, July 1988. **Pages 7-29.** Not online.

European Commission, 2005. "ExternE: Externalities of Energy—Methodology 2005 Update," Online at [http://ec.europa.eu/research/energy/pdf/kina\\_en.pdf](http://ec.europa.eu/research/energy/pdf/kina_en.pdf).

Leiby, Paul N., "Estimating the Energy Security Benefits of Reduced U.S. Oil Imports," Oak Ridge National Laboratory paper ORNL/TM-2007/028, March 2008. Online at <http://www.epa.gov/OMSWWW/renewablefuels/ornl-tm-2007-028.pdf>.

Parry, Ian W.H., Margaret Walls, and Winston Harrington, "Automobile Externalities and Policies," *Journal of Economic Literature*, Vol. 45, Issue 2, June 2007. **Pages 373-399**. Online through Harvard Library at <http://www.atypon-link.com.ezp-prod1.hul.harvard.edu/AEAP/doi/pdf/10.1257/jel.45.2.331>

Schatzki, Todd, "An Economic Perspective on the Benefits of Going Green," December 2008 presentation. Online at [http://www.hks.harvard.edu/hepg/Papers/Dec2008HEPG/Schatzki\\_Todd.pdf](http://www.hks.harvard.edu/hepg/Papers/Dec2008HEPG/Schatzki_Todd.pdf).

Schleisner, Lotte, "Comparison of Methodologies for Externality Assessment," *Energy Policy*, Vol. 28, Issue 15, December 2000. **Pages 1127-1136**. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B6V2W-41J690B-5/2/ee0b4c0a81659df1385afec4cae2f66>.

Viscusi, W. Kip and Ted Gayer, "Quantifying and Valuing Environmental Health Risks," in Karl-Goran Maler and Jeffrey T. Vincent, *Handbook of Environmental Economics, Volume 2* (Elsevier, 2005). **Pages 1029-1103**. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B7P5M-4HN7B9Y-G/2/0fa3b7bc290e5f00cc9d4f2c978f04b0>.

***Class 5: Wednesday, February 11***  
**Value of Life**

**Readings**

Howard, Ronald A., "On Fates Comparable to Death," *Management Science*, Vol. 30, No. 4, April 1984. **Pages 407-422**. Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=7350472&site=ehost-live&scope=site>.

Viscusi, W. Kip and Joseph E. Aldy, "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World," National Bureau of Economic Research Working Paper 9487, February 2003. Online at [http://www.nber.org/papers/w9487.pdf?new\\_window=1](http://www.nber.org/papers/w9487.pdf?new_window=1).

Viscusi, W. Kip, "How to Value a Life," *Journal of Economics and Finance*, Vol. 32, Issue 4, 2008. **Pages 311-323**. Online at <http://law.vanderbilt.edu/faculty/faculty-personal-sites/w-kip-viscusi/publications/download.aspx?id=3076>.

Viscusi, W. Kip, "The Value of Life," in *The New Palgrave Dictionary of Economics*, 2<sup>nd</sup> edition, Vanderbilt University Law School Working Paper 08-04, 2005. Link to download at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=827205](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=827205).

## **Monday, February 16** **No Class. Presidents Day**

### **Class 6: Wednesday, February 18** **Tax, Subsidies and Pricing**

**Student Deadline: Submit a one page précis of the policy issue with identification of the key analytical questions and associated readings. Include links to or copies of the proposed readings.**

#### **Readings**

Energy Information Administration, *Federal Financial Interventions and Subsidies in Energy Markets* 2007, 2008. Online at [http://tonto.eia.doe.gov/FTP/ROOT/service/srcneaf\(2008\)01.pdf](http://tonto.eia.doe.gov/FTP/ROOT/service/srcneaf(2008)01.pdf).

European Commission, "Excise Duty Tables: Part II—Energy Products and Electricity," July 2008. Online at [http://ec.europa.eu/taxation\\_customs/resources/documents/taxation/excise\\_duties/energy\\_products/rates/excise\\_duties-part\\_II\\_energy\\_products-en.pdf](http://ec.europa.eu/taxation_customs/resources/documents/taxation/excise_duties/energy_products/rates/excise_duties-part_II_energy_products-en.pdf)

Huntington, Hillard H., "Should GNP Impacts Preclude Oil Tariffs?" *The Energy Journal*, Vol. 9, No. 2, April 1988. **Pages 31-44**. Not online.

Liski, Matti and Olli Tahvonen, "Can Carbon Tax Eat OPEC's Rents?" *Journal of Environmental Economics and Management*, Vol. 47, Issue 1, January 2004. **Pages 1-12**. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B6WJ6-48KFBK2-1/2/60bde749becfe8a32e65534b3eb15713>.

Metcalf, Gilbert E., "Using Tax Expenditures to Achieve Energy Policy Goals," *American Economic Review*, Vol. 98, Issue 2, May 2008. **Pages 90-94**. Online through Harvard Library at <http://www.ingentaconnect.com/ezp-prod1.hul.harvard.edu/content/aea/aer/2008/00000098/00000002/art00014;jsessionid=5ib1oe6g1t9nf.alexandra>.

Strand, Jon, "Importer and Producer Petroleum Taxation: A Geo-Political Model," International Monetary Fund Working Paper WP/08/35, February 2008. Online. Link to download at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1094217](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1094217).

van Benthem, Arthur, Kenneth Gillingham and James Sweeney, "Learning by-Doing and

the Optimal Solar Policy in California,” *The Energy Journal*, Vol. 29, No. 3, 2008. **Pages 153-176.** Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=33119724&site=ehost-live&scope=site>.

**Class 7: Monday, February 23**  
**Climate Change**

**Readings**

Edmonds, Jae and John Reilly, “A Long-Term Global Energy-Economic Model of Carbon Dioxide Release from Fossil Fuel Use,” *Energy Economics*, Vol. 5, Issue 2, April 1983. **Pages 74-88.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B6V7G-458XJWV-7G/2/9db9430421b2b87cf17f5ecc9239b7ac>.

Jorgensen, Dale W. et al., “The Economic Costs of a Market-Based Climate Policy,” Pew Center on Global Climate Change White Paper, April 2008. Online at <http://www.pewclimate.org/docUploads/economic-costs-market-based-climate-policy-june2008.pdf>.

Intergovernmental Panel on Climate Change, “Climate Change 2007: Synthesis Report,” 2007. Online at [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf).

Manne, Alan and Richard Richels, “The Greenhouse Debate: Economic Efficiency, Burden Sharing and Hedging Strategies,” *The Energy Journal*, Vol. 16, No. 4, 1995. **Pages 1-37.** Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9601113541&site=ehost-live&scope=site>.

Nordhaus, William D., “Economic Growth and Climate: The Carbon Dioxide Problem,” *American Economic Review*, Vol. 67, No. 1 1977. **Pages 341-346.** Online at <http://www.econ.yale.edu/~nordhaus/homepage/carbondioxideproblem.pdf>.

Nordhaus, William, *A Question of Balance: Weighing the Options on Global Warming Policies* (New Haven: Yale University Press, 2008). Online at [http://nordhaus.econ.yale.edu/Balance\\_2nd\\_proofs.pdf](http://nordhaus.econ.yale.edu/Balance_2nd_proofs.pdf).

**Class 8: Wednesday, February 25**  
**Uncertainty and Discounting**

**Readings**

Heal, Geoffrey and Bengt Kristrom, "Uncertainty and Climate Change," *Environmental and Resource Economics*, Vol. 22, Issues 1-2, June 2002. **Pages 3-39**. Online through Harvard Library at <http://www.springerlink.com.ezp-prod1.hul.harvard.edu/content/x0lge549x54uvhk9/fulltext.pdf>.

Newell, Richard G. and William A. Pizer, "Discounting the Distant Future: How Much Do Uncertain Rates Increase Valuations?" *Journal of Environmental Economics and Management*, Vol. 46, Issue 1, July 2003. **Pages 52-71**. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B6WJ6-47YY389-4/2/f09da96e938e00c1d453fcb6b0114272>.

Nordhaus, William D., "Major Issues in the Economic Modeling of Global Warming," 2008 PowerPoint presentation. Online at [http://nordhaus.econ.yale.edu/WorldBank\\_091108\\_post.ppt#256.1.The%20Challenge%20of%20Global%20Warming%20for%20the%20Global%20Economy](http://nordhaus.econ.yale.edu/WorldBank_091108_post.ppt#256.1.The%20Challenge%20of%20Global%20Warming%20for%20the%20Global%20Economy).

Nordhaus, William, "The Real Meaning of Weitzman's Dismal Theorem," September 2008 draft paper. Not online.

Pizer, William A., "The Optimal Choice of Climate Change Policy in The Presence of Uncertainty," *Resource and Energy Economics*, Vol. 21, Issues 3-4, August 1999. **Pages 255-287**. Online through Harvard Library at <http://www.sciencedirect.com/science/article/B6VFJ-3WNNMV5S-3/2/4d602456d06358e6654ed7fd7e4acc10>.

Stern, Nicholas, "The Economics of Climate Change," *American Economic Review*, Vol. 98, Issue 2, 2008. **Pages 1-37**. Online through Harvard Library at <http://www.atypon-link.com.ezp-prod1.hul.harvard.edu/AEAP/doi/pdfplus/10.1257/aer.98.2.1>.

Tol, Richard S.J., "Is the Uncertainty About Climate Change Too Large for Expected Cost-Benefit Analysis?" *Climatic Change*, Vol. 56, Issue 3, February 2003. **Pages 265-289**. Online through Harvard Library at <http://www.springerlink.com.ezp-prod1.hul.harvard.edu/content/rw640173v426572j/fulltext.pdf>.

Weitzman, Martin L., "On Modeling and Interpreting the Economics of Catastrophic Climate Change," July 2008 paper. Online at <http://www.economics.harvard.edu/faculty/weitzman/files/REStatFINAL.pdf>.

Weitzman, Martin L., "Why the Far-Distant Future Should Be Discounted at Its Lowest Possible Rate," *Journal of Environmental Economics and Management*, Vol. 36, Issue 3, November 1998. **Pages 201-208**. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.sciencedirect.com/science/article/B6WJ6->

[45J59VN-1/2/9f191e453031cb82eaa9c808c7b2e323.](http://www.rff.org/RFF/Documents/RFF-DP-08-28.pdf)

***Class 9: Monday, March 2***

**Political Economy of Climate Agreements**

**Readings**

Burtraw, Dallas, Rich Sweeney, and Margaret Walls, “The Incidence of U.S. Climate Policy: Where You Stand Depends on Where You Sit,” Resources for the Future Discussion Paper RFF DP 08-28, 2008. Online at <http://www.rff.org/RFF/Documents/RFF-DP-08-28.pdf>.

Cooper, Richard C., “The Case for Charges on Greenhouse Gas Emissions,” The Harvard Project on International Climate Agreements, Discussion Paper 08-10, October 2008. Online at <http://belfercenter.ksg.harvard.edu/files/CooperWeb4.pdf>.

Frankel, Jeffrey, “An Elaborated Proposal for Global Climate Policy Architecture: Specific Formulas and Emission Targets for All Countries in All Decades,” Discussion Paper 2008-08, Cambridge: Harvard Project on International Climate Agreements, October 2008. Online at <http://belfercenter.ksg.harvard.edu/files/FrankelWeb4.pdf>.

Metcalf, Gilbert E., “Designing a Carbon Tax to Reduce U.S. Greenhouse Gas Emission,” National Bureau of Economic Research Working Paper 14375, October 2008. Online at [http://www.nber.org/papers/w14375.pdf?new\\_window=1](http://www.nber.org/papers/w14375.pdf?new_window=1).

Pacala, S. and R. Socolow, “Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies,” *Science*, Vol. 305, 13 August 2005. Online at <http://www.carbonsequestration.us/Papers-presentations/htm/Pacala-Socolow-ScienceMag-Aug2004.pdf>.

Stavins, Robert N., “A U.S. Cap-and-Trade System to Address Global Climate Change,” The Hamilton Project Discussion Paper 2007-13, The Brookings Institution, October 2007. Online at [http://www.brookings.edu/~media/Files/rc/papers/2007/10climate\\_stavins/10\\_climate\\_stavins.pdf](http://www.brookings.edu/~media/Files/rc/papers/2007/10climate_stavins/10_climate_stavins.pdf).

***Class 10: Wednesday, March 4***

**Restructuring Electricity Markets**

**Readings**

Bohn, Roger E., Michael C. Caramanis and Fred C. Schweppe, “Optimal Pricing in Electrical Networks over Space and Time,” *The RAND Journal of Economics*, Vol. 15, No. 3, Autumn 1984, Pages 360-376. Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.jstor.org/stable/2555444>.

Hogan, William W., “Contract Networks for Electric Power Transmission,” *Journal of*

*Regulatory Economics*, Vol. 4, No. 3, 1992. **Pages 211-242.** Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=16580807&site=ehost-live&scope=site>.

Hogan, William W., "Competitive Electricity Market Design: A Wholesale Primer," Harvard University, December 17, 1998. Online at <http://ksghome.harvard.edu/~whogan/empr1298.pdf>.

Hogan, William W., "Electricity Market Restructuring: Reform of Reforms," *Journal of Regulatory Economics*, Vol. 21, No. 1, 2002. **Pages 103-132.** Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=17768581&site=ehost-live&scope=site>.

Joskow, Paul L., "Challenges for Creating a Comprehensive National Electricity Policy," 2008 presentation paper. Online at [http://www.hks.harvard.edu/hepg/Papers/Joskow\\_Natl\\_Energy\\_Policy.pdf](http://www.hks.harvard.edu/hepg/Papers/Joskow_Natl_Energy_Policy.pdf).

### ***Class 11: Monday, March 9***

#### **Market Power and Power Markets**

##### **Readings**

Borenstein, Severin "The Trouble with Electricity Markets: Understanding California's Restructuring Disaster," *The Journal of Economic Perspectives*, Vol. 16, No. 1, Winter 2002, **Pages 191-211.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.jstor.org/stable/2696582>.

Borenstein, Severin, James B. Bushnell and Frank A. Wolak, "Measuring Market Inefficiencies in California's Restructured Wholesale Electricity Market," *The American Economic Review*, Vol. 92, No. 5, December 2002. **Pages 1376-1405.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://www.jstor.org/stable/3083255>.

Harvey, Scott M. and William W. Hogan, "Market Power And Market Simulations," Working Paper, Harvard University, July 16, 2002. Online at [http://ksghome.harvard.edu/~whogan/H-H\\_Market\\_Power&Simulations\\_071602.pdf](http://ksghome.harvard.edu/~whogan/H-H_Market_Power&Simulations_071602.pdf).

Hogan, William W., "A Market Power Model with Strategic Interaction in Electricity Networks," *The Energy Journal*, Vol. 18, No. 4, 1997. **Pages 107-141.** Online through Harvard Library at <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9710253512&site=ehost-live&scope=site>.

Joskow, Paul L. and Edward Kahn, "A Quantitative Analysis of Pricing Behavior in California's Wholesale Electricity Market During Summer 2000," *The Energy Journal*,

Vol. 23, No. 4, 2002. **Pages 1-35.** Online through Harvard Library at <http://ezp-prod1.hul.harvard.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=7535527&site=ehost-live&scope=site>.

***Class 12: Wednesday, March 11***  
**Resource Adequacy and Infrastructure**

**Readings**

Hogan, William W., "Transmission Market Design," Electricity Deregulation: Where to From Here? Conference at Bush Presidential Conference Center, Texas A&M University, April 4, 2003. Online at [http://ksghome.harvard.edu/~whogan/trans\\_mkt\\_design\\_040403.pdf](http://ksghome.harvard.edu/~whogan/trans_mkt_design_040403.pdf).

Hogan, William W., "On An 'Energy Only' Electricity Market Design For Resource Adequacy," Harvard University, September 23, 2005. Online at [http://ksghome.harvard.edu/~whogan/Hogan\\_Energy\\_Only\\_092305.pdf](http://ksghome.harvard.edu/~whogan/Hogan_Energy_Only_092305.pdf).

Hogan, William W. "Resource Adequacy Mandates and Scarcity Pricing, ("Belts and Suspenders")," Harvard University, February 23, 2006. Online at [http://ksghome.harvard.edu/~whogan/Hogan\\_PJM\\_Energy\\_Market\\_022306.pdf](http://ksghome.harvard.edu/~whogan/Hogan_PJM_Energy_Market_022306.pdf).

Hogan, William W., "Electricity Market Structure and Infrastructure," Conference on Acting in Time on Energy Policy, Harvard University, September 18-19, 2008, September 25, 2008. Online at [http://ksghome.harvard.edu/~whogan/Hogan\\_Elec\\_r\\_092508.pdf](http://ksghome.harvard.edu/~whogan/Hogan_Elec_r_092508.pdf).

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[http://www.hks.harvard.edu/hepg/Papers/Littlechild\\_Regulation\\_Transmission\\_Expansion\\_Argentina\\_PartII.pdf](http://www.hks.harvard.edu/hepg/Papers/Littlechild_Regulation_Transmission_Expansion_Argentina_PartII.pdf).

***Class 13: Monday, March 16***

**Student Presentation 1**

Presenter \_\_\_\_\_

**Student Presentation 2**

Presenter \_\_\_\_\_

***Class 14: Wednesday, March 18***

**Student Presentation 3**

Presenter \_\_\_\_\_

**Student Presentation 4**

Presenter \_\_\_\_\_

***March 23 and 25.***  
**No Class. Spring Break.**

***Class 15: Monday, March 30***

**Student Presentation 5**

Presenter \_\_\_\_\_

**Student Presentation 6**

Presenter \_\_\_\_\_

***Class 16: Wednesday, April 1***

**Student Presentation 7**

Presenter \_\_\_\_\_

**Student Presentation 8**

Presenter \_\_\_\_\_

***Class 17: Monday, April 6***

**Student Presentation 9**

Presenter #1 \_\_\_\_\_

**Student Presentation 10**

Presenter \_\_\_\_\_

***Class 18: Wednesday, April 8***

**Student Presentation 11**

Presenter \_\_\_\_\_

**Student Presentation 12**

Presenter \_\_\_\_\_

*Class 19: Monday, April 13*

**Student Presentation 13**

Presenter \_\_\_\_\_

**Student Presentation 14**

Presenter \_\_\_\_\_

*Class 20: Wednesday, April 15*

**Student Presentation 15**

Presenter \_\_\_\_\_

**Student Presentation 16**

Presenter \_\_\_\_\_

*Class 21: Monday, April 20*

**Student Presentation 17**

Presenter \_\_\_\_\_

**Student Presentation 18**

Presenter \_\_\_\_\_

*Class 22: Wednesday, April 22*

**Student Presentation 19**

Presenter \_\_\_\_\_

**Student Presentation 20**

Presenter \_\_\_\_\_

*Class 23: Monday, April 27*

**Student Presentation 21**

Presenter \_\_\_\_\_

**Student Presentation 22**

Presenter \_\_\_\_\_

*Class 24: Wednesday, April 29*

**Student Presentation 23**

Presenter \_\_\_\_\_

**Student Presentation 24**

Presenter \_\_\_\_\_