Syllabus

Course Description: In the past 25 years, energy markets have changed from quiet, often heavily regulated, areas of the business landscape to some of the most dynamic markets in the world economy. Regulation of oil, natural gas, motor fuel, and electricity markets has been reduced dramatically in the U.S. and in many other countries. Electricity deregulation is currently sweeping the developed and developing world. Drawing heavily on the tools of economics and finance, we study the business and public policy issues that these changes have raised. Topics include the development and effect of organized spot, futures, and derivative markets in energy, the political economy of deregulation, motor fuel and congestion taxes, competition in wholesale electricity markets, market power and antitrust, and the transportation of energy commodities. We will examine the economic determinants of industry structure and evolution of competition among firms in these industries; investigate successful-and unsuccessful-strategies for entering new markets and competing in existing markets; and analyze the rationale for and effects of public policies in energy markets.


Email Contact: borenste@haas and bushnell@haas.

Office Hours: Office Hours will be held between the first and second meeting of the course each week, 7:30pm-8:15pm, and by appointment.

Grading: 30% final exam, 30% course project, 30% Electricity Strategy Game (ESG), 10% class participation. The course project, due on the last day of class and described in detail in a separate handout, will address an applied management or regulatory topic: e.g., business plan for a new product; entry strategy for new line of business; or public policy analysis of pending (de)regulatory decision. Group projects are encouraged, but not required. The grading for the (ESG) will be based on the memo teams will write (due around April 10), the performance of the team in the ESG, and the explanations of that performance during the wrap-up on May 4. The final exam will be Tuesday, May 11, 6-9 p.m.

Course Website: http://haas.berkeley.edu/Courses/Spring1999/BA212
Course Prerequisites: BA201A or equivalent (MBA-level Microeconomics), BA203 or equivalent (MBA-level Finance).

Readings: There is one required textbook: Viscusi, K., Vernon, J., and J. Harrington, *The Economics of Regulation and Antitrust*, Cambridge, MA: MIT Press, 1995 (hereafter VVH). All other readings are available in one of the two course readers, on the course website, or will be handed out in class. Those labeled [R1] are in the first course reader, which is now available. Those labeled [R2] are in the second course reader, which will be available some time in February. Those labeled [W] are or will be available (or linked to) the course website. Those labeled [H] will be handed out in class.

Course Schedule: Please complete all readings for each meeting before the day on which the material will be covered.

January 19: Introduction and Organization of Course (0.5)

OVERVIEWS OF ENERGY MARKETS

January 19: Overview of Natural Gas Markets (0.5)


January 19: Overview of Oil and Gasoline Markets (0.5)


S. Borenstein and R. Gilbert, “Uncle Sam at the Gas Pump,” *Regulation*, no. 2, Spring 1993, pp. 63-68.[R1]

January 19: Overview of Electricity Markets (0.5)


REGULATION AND DEREGULATION OF ENERGY MARKETS
January 26: Economic Regulation of Natural Monopoly Markets (2)

VVH, Ch. 12, “Natural Monopoly Regulation,” pp. 377-396.
“PUC Staff Says PG&E Should Pay for Diablo,” San Francisco Chronicle, 5/15/87.[R1]
“Diablo Canyon Pact Calls for PG&E to Pay Full Cost,” Los Angeles Times, 6/28/88.[R1]

February 2: Economic Regulation of Competitive Markets (2)

VVH, Ch.16, “The Regulation of Potentially Competitive Markets,” pp. 519-536.
VVH, Ch. 18, “Economic Regulation of Energy.”

February 9: Economic Deregulation of Markets (1)


MARKETS FOR NATURAL RESOURCES

February 9: Pricing and Extraction of Natural Resources (1)


February 16: The Role of Storage (1)

February 16: Auction Design and Implementation

“Going, going, gone! A Survey of Auction Types,” Agorics, Inc. [W]

February 23: Guest Speaker: George Sladoje, CEO, California Power Exchange

Readings on California Power Exchange and Independent System Operator [W]

February 23-March 2: Commodity Exchanges (1.5)


March 2: Forward and Derivative Contracts (1.5)


INDUSTRIAL ORGANIZATION AND COMPETITION IN ENERGY INDUSTRIES

March 9: Peak-Load Pricing (1)

VVH, Ch. 12, “Natural Monopoly Regulation,” pp. 396-403


March 9: Electricity Strategy Game: Introduction and Description (1)

S. Borenstein and J. Bushnell, “Instructions for the Electricity Strategy Game”. [W]

March 16: Electricity Strategy Game: Auction of Generating Companies (0.5)
March 16: Horizontal Market Power (1.5)

VVH, Ch. 6, “Market Structure and Strategic Competition,” pp. 145-166.


Borenstein, Bushnell and Knittel, “Beyond Concentration Measures,” [W]


March 23: SPRING BREAK

March 30: Vertical Integration (1)

S. Borenstein and R. Gilbert, “Uncle Sam at the Gas Pump,” Regulation, no. 2, Spring 1993, pp. 68-75.[R1]

VVH, Ch. 8, “Vertical Mergers and Restrictions,” pp. 225-238.

March 30/April 6: The Role of Transportation/Transmission (2)


April 6: Transmission in the Electricity Strategy Game (1)

S. Borenstein and J. Bushnell, “Transmission in the Electricity Strategy Game”,[W]

April 13: Guest Speaker from Enron on Retail Competition (1)
April 13: Wholesale versus Retail Competition (1)


ENERGY AND THE ENVIRONMENT

April 20: Environmental Regulation and Markets (2)

VVH, CH. 21, “Environmental Regulation.”


April 27: Energy Efficiency Regulation and Markets (2)


May 4: Electricity Strategy Game: Wrap-up