Course Description: This course examines issues in the provision and management of renewable natural resources (e.g., fish stocks and forests), non-renewable natural resources (e.g., oil, natural gas, and coal), and energy products and services (e.g., electricity and gasoline). It offers both theory and empirical methods related to: (1) market structure, pricing, and performance of important energy and resource industries; (2) sources of market failure in these industries; and (3) alternative regulatory approaches. Students are encouraged to take this course as part of a two-course sequence that includes Economics 250. Prerequisites: Economics 202, 203, 204, and a course in econometrics; or equivalent with consent of the instructor.

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Office Hours: Wed. 3:30-5:00, By appointment

Readings: Course readings are listed below. There is no textbook.

Prerequisite: Economics 202, 203, 204, and a course in econometrics; or equivalent with consent of the instructor.

Course Format and Grading:

Some key goals of the course are to acquaint students with key issues in natural resource and energy economics, to convey important theoretical and empirical findings, and to provide tools for continued research in these areas. Toward these ends, classes will involve lectures by the instructors, student presentations of specified readings, and class discussion. More specifically, parts of many of the class meetings will focus on a pre-assigned paper. We will ask all students to prepare and turn in at the beginning of class a “referee report” on the paper. In addition, one student will be assigned to present and lead a class discussion of the paper. This approach facilitates close reading and analysis of key papers and a good grasp of the important theoretical and empirical issues.

Grading:
Presentation: 20%
Referee reports and class discussion: 40%
Final exam: 40%
Note re Special Accommodation:

Students who have a physical, psychological, or learning disability that may necessitate an academic accommodation or the use of auxiliary aids and services in a class must initiate the request with the Disability Resource Center (DRC), not with the instructor. The DRC will evaluate the request along with the required documentation, recommend appropriate accommodations, and prepare a verification letter dated in the current academic term in which the request is being made. Students should contact the DRC as soon as possible as timely notice is needed to arrange for appropriate accommodations. The DRC is located at 563 Salvatierra Walk.

TOPICS AND READINGS

Note: The asterisk (*) identifies required readings, and the double-asterisk (**) identifies readings for referee reports and student presentations.

GENERAL THEMES AND PRINCIPLES

1. Introduction to Natural Resource and Energy Economics


2. Efficiency, Distribution, and Potential Roles for Government


ENERGY ECONOMICS

3. Introduction to Energy Markets: Market Power, Regulation and Deregulation


4. Electricity Markets: Supply


5. Electricity Markets: Demand


Ito, Koichiro. 2011. Do Consumers Respond to Marginal or Average Price? Evidence from Nonlinear Electricity Pricing


6. Economics of Renewable Energy


national renewable energy laboratory. 2010. “windpowering america: estimates of windy land area and wind energy potential, by state, for areas >= 30% capacity factor at 80m.” http://www.windpoweringamerica.gov/docs/wind_potential_80m_30percent.xlsx.

(*) novan, kevin. “valuing the wind: renewable energy policies and air pollution avoided” (job market paper). http://econ.ucsd.edu/~knovan/pdfs/Valuing_the_Wind.pdf

schmalensee, richard. forthcoming. “evaluating policies to increase the generation of electricity from renewable energy.” review of environmental economics and policy.


7. oil and gasoline markets

anderson, soren t., ryan kellogg, and james m. sallee, “what do consumers believe about future gasoline prices?” working paper (2010).


borenstein, s., bushnell j. and lewis, m. (2005), “market power in california’s gasoline market, csem working paper no. 132 (available at http://www.ucei.berkeley.edu/PDF/csemwp132.pdf)

cuddington, j.t. and moss, d.l. (2001) “technological change, depletion, and the u.s. petroleum industry, “ american economic review, 1135-1148 (cuddington_and_moss.pdf)

griffin, j.m. and xiong, w. (1997) “the incentive to cheat: an empirical analysis of opec, journal of law and economics, 40(2), 289-316.


8. Fuel Economy Standards and Automobile Markets


(*) Knittel, Christopher R., "Reducing Petroleum Consumption from Transportation," forthcoming *Journal of Economic Perspectives*.


9. Energy Efficiency


10. R&D and Innovation in Energy Markets


MANAGEMENT OF NONRENEWABLE AND RENEWABLE RESOURCES


### 12. Renewable Resource Management: The Fishery

a. Theory

(*) Grafton et al., *op. cit.*, chapter 4.


b. Policy:

1. Individual Fishing Quotas


2. Marine Reserves and Spatial Modeling

   (*) “Effectiveness of Marine Reserves for Large-Scale Fisheries Management”, *Canadian Journal of Fisheries and Aquatic Sciences*.


13. Resource Scarcity and Economic Growth


(*) Fisher, op. cit., ch. 4, sections 4 and 5.

Dasgupta and Heal, op. cit., ch. 7.

Grafton et al., chapter 11.


Grafton et al., chapter 12.


