ECONOMICS 471

Economics of Nonrenewable Resources

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Scope of the Course:

This course focuses on economic issues related to exhaustible resources (such as fossil fuels and minerals). Topics include questions such as whether or not resources are depleted too quickly in free markets; explanations for the observed evolution of resource prices; the sustainability of economic growth in a world with finite resources; effects of resource booms on the rest of the economy; taxation of exhaustible resources; environmental issues related to resource extraction; energy and alternatives to fossil fuels; energy and climate change; international trade issues; and others as time permits.

Related courses offered by the School of Economics include Economics 370 (Cost Benefit Analysis), 371 (Environmental Economics), 374 (Land Economics) and 472 (Renewable Resources) and 573 (Graduate Environmental Economics)

Prerequisite:

Economics 301 or 304 or equivalent (Intermediate Microeconomics); Math 104 and 105 (Calculus). [Note that Math 104 and 105 are prerequisites for Econ 301/304]. I will assume that students are familiar with the basic concepts of microeconomics at the level of Econ 301. Calculus will be used in this course.

Requirements:

Midterm Exam (30%) October 21.
Final Exam (50%) Scheduled by Registrar's Office
Assignments (20%) Will be posted on the Connect page for this course when available

Textbook:

There is no required textbook; the course will be based on material from the readings below.

Slides:

I will sometimes use prepared slides but often I will write on the board instead. This means that if you miss a class you will need to get notes from someone else in the class.
Preliminary Course Outline and Reading List

Some of the readings below are optional - required readings will be announced in class. Some additional readings may be suggested throughout the course. Especially important readings are marked with an asterisk (*) - this will be updated as the course proceeds.

1. Introduction

National Energy Board, "Canada's Energy Future 2013"

2. Resource Depletion and Resource Prices

*Hartwick and Olewiler, Ch. 8 and 9
*Fisher, A.C. Resource and Environmental Economics, Ch. 2
*Conrad, J., *Resource Economics*, Cambridge University Press, 1999; Ch. 5. Available as an online book via UBC Library. [There is also a second edition but I have not seen it yet.]

3. Scarcity, Growth and Sustainability

*Arrow, K.J. et al., "Are We Consuming Too Much?" *The Journal of Economic Perspectives*, Vol. 18, No. 3 (Summer, 2004), pp. 147-172
Fisher, A.C. Resource and Environmental Economics, Ch. 4
4. **Energy conservation; alternative energy sources**


**Conservation and the rebound effect**


**Fuel efficiency standards**


**Subsidies for green energy; feed-in tariffs; green paradox and leakage**


5. **Effects of Resource Booms on the Rest of the Economy**

W. Max Corden and J. Peter Neary, “Booming Sector and De-industrialisation in a Small Open Economy,” The Economic Journal, 1982, pp. 825–848. (The model developed in class is based on the material up to p. 831)


6. **Resource Taxation**


7. **Trade and Natural Resources**


WTO, World Trade Report 2010 : Trade in natural resources