

Syllabus: Energy Economics EC 410/510
10-11:50 a.m. Tuesdays and Thursdays

Instructor: Mike Katz
Room 325 Cramer Hall

Relationship of Energy and the Economy

Future Demand for Energy

Historical trends; past forecasts; factors affecting demand
Forecasting techniques: econometric demand forecasting models; end-use sector analysis
Uncertainties
Interfuel substitutions

Energy Conservation

Conservation as an energy resource; conceptual views
Historical trends; factors affecting conservation
Public utility regulation
Prospects; cost effectiveness; economics

Economic Management of Energy Problems

Short-term disruptions/shortages
Long-term balance of supply and demand; implications
International considerations

Oil

Price controls, rationing, allocation schemes
The economic alternative: market mechanism
Efficiency effects; equity effects
The world oil market; prospects for cartels
Imports; U.S. dependency and vulnerability

Global Energy Resources

Conventional resources; unconventional resources
Nonrenewable vs. renewable
Adequacy: U.S.; World
Trends and policies abroad

Coal

Abundance vis-a-vis other fuels
Problems; constraints; climate and health hazards

Nuclear

Fuel cycle; technology; economics
Risks; policy issues

Solar and Wind Energy

Theoretically possible v. realistically achievable
Technology; economics

Institutional Issues

Jurisdiction
Regulation
Decision-making

Role of Science and Technology

Role of Economics in the Energy Scheme: Today and Tomorrow

Text: ***Making Technology Work; Applications in Energy and the Environment***,
John M. Deutch and Richard K. Lester, Cambridge University Press, 2004
Plus contemporary supplementary materials

ECONOMICS 410/510 ENERGY ECONOMICS: AN OVERVIEW

Portland State University
Winter Term, 2012

Course Description

The course investigates the economics of energy production and consumption, global energy resources, impacts of price on economic efficiency and equity, policy trends, and, in particular, Pacific Northwest energy issues. Conventional and unconventional energy technologies will be examined. Environmental problems and the treatment of externalities will be explored. So, too, will conservation as an energy resource. Potential energy shocks, ways to address uncertainty, and reliance on the market to solve energy problems will be studied. Several expert guest lecturers are scheduled. The class will focus on contemporary Northwest as well as national and global energy issues.