



M.Sc. PROGRAM IN ECONOMIC
AND BUSINESS STRATEGY



UNIVERSITY OF PIRAEUS
DEPARTMENT OF ECONOMICS

BUSINESS STRATEGIES IN ENERGY MARKETS



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COURSE OUTLINE

1. Course description

Energy markets (oil industry, electricity and gas) constitute one of the most dynamically growing sectors not only in Greece but also in the global economy. Given the large scale of capital investment required for most projects in the energy sector, the entrepreneur takes the investment decisions after a thorough analysis of policy variables in an environment characterized by uncertainties and business risks. This course will cover a variety of theoretical and empirical topics related to energy demand, energy supply, energy prices, regulation and competition policies, environmental consequences of energy consumption and production, and various public policies affecting energy demand, supply, prices, and environmental effects.

The main objectives of this course are: a) To familiarize students with the concept of energy economics and businesses strategies in a market structure that is not competitive, b) To provide students with the necessary tools so that they will be able to apply them in practice, c) To analyze the behavior, strategy and goals of energy companies in a non-competitive environment and d) To provide case studies that will support the theoretical analysis and enhance the intuition and conception of students on energy issues. The field of "Business strategies in energy markets" is addressed both to students and to business executives and private sector organizations interested in developing entrepreneurial activity in the energy markets. After successful completion of the course, the student will know in depth the business strategies that characterize the energy markets and the incentives for firms intending to proceed with the implementation of such strategies.

2. Course objectives

The learning objectives of the course are the following:

- To familiarize students with the concept of energy economics and businesses strategies in a market structure that is not competitive
- To provide students with the necessary tools so that they will be able to apply them in practice.
- To analyze the behavior, strategy and goals of energy companies in a non-competitive environment
- To provide case studies that will support the theoretical analysis and enhance the intuition and conception of students on energy issues

3. Grading

- a. Students must complete a case study on a topic of their choice that deals with energy issues and present it in the class. The case study will have a 30% weight on the final mark.
- b. Final exam 60% weight on the final mark.
- c. Overall participation during the class lectures 10%.

4. Detailed Schedule

Session 1: Introduction and Background, Review of the Basics of Supply, Demand and Price formation in Competitive Markets.

Session 2: Energy Demand: Short Run and Long Run Price and Income Elasticities Introduction to Multivariate Regression Analysis.

Session 3: Energy Supply.

Session 4: Energy and Economic Growth

Session 5: Energy and Climate Change, Market Based Instruments, Taxation and Tradable Permits.

Session 6: World oil markets and Energy Security.

Session 7: Structure of the Electricity Industry.

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Session 8: Structure of the Natural gas Industry.

Session 9: Energy Pricing.

Session 10: Energy Efficiency Policies and Strategies.

Session 11: Regulatory and competition policies in the energy markets.

Session 12: Presentation of case studies and discussion of selected applied issues.

5. Readings

Essential Reading

Sustainable Development, Environment and Energy, Sotiris Karkalakos and Michael Polemis (in Greek). Self Publishers (2015)

Complementary reading

1. Energy, Economics and the Environment, Second Edition (University Casebook Series) Hardcover – 2005, by Fred Bosselman, Joel B. Eisen, Jim Possi, David B. Spence, Jacqueline Weaver, Foundation Press.
2. Energy Economics: A Modern Introduction Hardcover, 2000, Ferdinand E. Banks, Springer Science and Business Media, LLC
3. Pascual, Carlos, and Jonathan Elkind, eds., Energy Security: Economics, Politics, Strategies, and Implications, Washington, Brookings Institution Press, 2009.
4. Selected papers