



APPLIES TO ACADEMIC YEAR 2010/2011

## **GRA 5911 Energy Economics and Policy**

### **Programme**

Master of Science in Business and Economics, Master of Science in Political Economy,  
Specialization Course

### **Responsible for the course**

### **Department**

Department of Innovation and Economic Organisation

### **Term**

According to study plan

### **ECTS Credits**

6

### **Language of instruction**

English

### **Introduction**

### **Learning outcome**

The course aims at giving students an analytical introduction to energy issues, meaning oil, gas and electricity economics, policy and institutional frameworks. The course will also treat related environmental issues, such as CO<sub>2</sub> and green certificate markets, and renewables. Students will also be given an introduction to energy and development.

### **Prerequisites**

A bachelor degree in business or eq. qualifying for admission to the MSc programme.

### **Compulsory reading**

#### **Books:**

Dahl, Carol A. 2004. International energy markets : understanding pricing, policies, and profits. Tulsa, Okla. : PennWell

Hunt, Sally R. 2002. Making competition work in electricity. New York : Wiley. Selected Chapters

Noreng, Øystein. 2006. Crude power : politics and the oil market. New ed. London : I.B. Tauris

Stern, Jonathan P. 1998. Competition and liberalization in European gas markets. London : Royal Institute of International Affairs. 1-109

#### **Journals:**

International Energy Agency. latest ed. World Energy Outlook. Paris : OECD/IEA. available online from library

#### **Collection of articles:**

A compendium will be made available with selected articles from scientific journals, such as The Energy Journal, Energy Policy as well as book chapters.

#### **Other:**

-During the course there may be hand-outs and other material on additional topics relevant for the course and the examination.

Hand-outs in each lecture, posted on It's learning

OECD/IEA. 2003. Creating Markets for Energy Technologies. OECD/IEA Publications.

Selected chapters

### **Recommended reading**

#### **Books:**

Antill, Nick and Robert Arnott. 2002. Oil company crisis : managing structure, profitability and growth. Oxford : Oxford Institute for Energy Studies. 79

Cordesman, A.H. and K.R. Al-Rodhan. 2006. The global oil market : risks and uncertainties. Washington, D.C. : Center for Strategic and International Studies (CSIS)

Davis, Jerome, ed. 2006. The Changing world of oil : an analysis of corporate change and adaptation. Aldershot : Ashgate

Ebel, Robert E.. 2005. China's energy future : the Middle Kingdom seeks its place in the sun. Washington, D.C. : CSIS. 86 p.

Falola, Toyin and Ann Genova. 2005. The politics of the global oil industry : an introduction. Westport, Conn. : Praeger. 3-61

Finon, Dominique and Atle Midttun, eds. 2004. Reshaping European gas and electricity industries : regulation, markets and business strategie. Amsterdam : Elsevier

Grace, John D. 2005. Russian oil supply : performance and prospects. Oxford : Published by the Oxford University Press for the Oxford Institute for Energy Studies. 1-13, 65-103, 178-234

Hoopes, Stephanie M. 1997. Oil privatization, public choice and international forces. Houndmills, Basingstoke : MacMillan. 1-36 and 82-138

Johnston, Daniel. 2003. International exploration economics, risk, and contract analysis. Tulsa, Okla : PennWell. 251 p

Marcel, Valérie. 2006. Oil titans : national oil companies in the Middle East. London : Chatham House. 54-169

Maugeri, Leonardo. 2008. The age of oil : the mythology, history and future of the world's most controversial resource. Guildford, Conn. : The Lyons Press. s. 201-272

Midttun, Atle and Eirik Svindland, ed.. 2001. Approaches and dilemmas in economic regulation : politics, economics and dynamics. Houndsmills : Palgrave

Mitchell, John V. 2001. The new economy of oil : impacts on business, geopolitics and society. London : Earthscan

Noreng, Øystein. 2006. Crude power : politics and the oil market. New ed. London : I.B. Tauris. ch. 3

Noreng, Øystein. 2006. Crude power : politics and the oil market. New ed. London : I.B. Tauris. ch. 4

Rogers, Jim. 2007. Hot commodities : how anyone can invest profitably in the world's best market. Chichester : Wiley. 120-153

Rutledge, Ian. 2005. Addicted to oil : America's relentless drive for energy security. London : I.B. Tauris. 1-20, 37-68, 120-157

Schipper, Lee and Stephen Myers. 1992. Energy efficiency and human activity : past trends, future prospects. Cambridge : Cambridge University Press

Smil, Vaclav. 2003. Energy at the crossroads : global perspectives and uncertainties. Cambridge, Mass. : MIT Press

Smil, Vaclav. 2003. Energy at the crossroads : global perspectives and uncertainties. Cambridge, Mass. : MIT Press. 1-120 and 181-238.

Stern, Jonathan P. 2005. The future of Russian gas and Gazprom. Oxford : Oxford University Press. 1-63, 201-222

Stoft, Steven. 2002. Power system economics : designing markets for electricity. Piscataway, N.J. : IEEE Press

Yergin, Daniel. 2008. The prize : the epic quest for oil, money & power. New York : Free Press. Ch. 3,6,31. Finnes i flere utgivelser

#### **Articles:**

Jesse, Jan-Hein og Coby van der Linde. June 2008. Oil Turbulence in the Next Decade. An Essay on High Oil Prices in a Supply-Constrained World. Clingendael International Energy programme, netherlands Institute of International Relations

Noreng, Øystein. 2001. The World Natural Gas Market and Its Implications for the World Oil Market. In: The Future of natural gas in the world energy market. Abu Dhabi : The Emirates Center for Strategic Studies and Research

#### **Journals:**

Osmundsen, Petter; Asche, Frank; Misund, Bård; Mohn, Klaus. 2006. "Valuation of International Oil Companies". Energy Journal. Vol. 27 Issue 3. 49-64, 16

Andersen, Svein S, in, eds. Svein S. Andersen and Kjell. A. Eliassen. London 2001. "Energy policy: Interest interaction and supranational authority". Making Policy in Europe. Second Edition

Asche, Frank; Osmundsen, Petter; Sandsmark, Maria. 2006. "The UK Market for Natural Gas, Oil and Electricity: Are the Prices Decoupled?". Energy Journal. Vol. 27 Issue 2. 27-40, 14

Bachmeier, Lance J.; Griffin, James M. 2006. "Testing for Market Integration Crude Oil, Coal, and Natural Gas.". Energy Journal. Vol. 27 Issue 2. 55-71, 17

Barker, Terry; Ekins, Paul. 2004. "The Costs of Kyoto for the US Economy". Energy Journal. Vol. 25 Issue 3. 53-71, 19p, 2 charts

Claes, D.H.. 2003.. 'Globalization and the state oil companies: The case of Statoil'. Journal of

Energy and development. Vol. 29, No 1

Ewing, Bradley T.; Hammoudeh, Shawkat M.; Thompson, Mark A.. 2006. "Examining Asymmetric Behavior in US Petroleum Futures and Spot Prices". Energy Journal. Vol. 27 Issue 3. 9-23, 15

Fischer, Carolyn; Morgenstern, Richard D.. 2006. "Carbon Abatement Costs: Why the Wide Range of Estimates?". Energy Journal. Vol. 27 Issue 2. 73-86, 14

Fouquet, Roger; Pearson, Peter J. G. 2006. "Seven Centuries of Energy Services: The Price and Use of Light in the United Kingdom (1300-2000)". Energy Journal. Vol. 27 Issue 1. 139-177, 39

Fri, Robert W.. 2003. "The Role of Knowledge: Technological Innovation in the Energy System". Energy Journal. Vol. 24 Issue 4. 51-74, 24

Gately, Dermot

. 2007. "What Oil Export Levels Should We Expect From OPEC?". Energy Journal. Vol. 28, Issue 2

Gately, Dermot. 2004. "OPEC's Incentives for Faster Output Growth". Energy Journal. Vol. 25 Issue 2. 75-96, 22

Griffin & Teece. 1982. "Elements of the Crude Oil Production Decision: Implication from Economic Theory" and "Models of OPEC behavior". OPEC Behavior and World Oil Prices,. George Allen & Unwin. 13-35

Griffin, James M.; Schulman, Craig T.. 2005. "Price Asymmetry In Energy Demand Models: A Proxy for Energy-Saving Technical Change?". Energy Journal. Vol. 26 Issue 2. 1-21, 21p, 3 charts, 4 graphs

Hammar, Henrik; Löfgren, Åsa; Sterner, Thomas. 2004. "Political Economy Obstacles to Fuel Taxation". Energy Journal. Vol. 25 Issue 3. p1-17, 17p, 2 charts, 4 graphs

Joskow, Paul L. 2003. "Energy Policies and Their Consequences After 25 Years". Energy Journal. Vol. 24 Issue 4. 17-49, 33

Kaufmann, Robert K.; Dees, Stephane; Karadeloglou, Pavlos; Sanchez, Marcelo. 2004. "Does OPEC Matter? An Econometric Analysis of Oil Prices". Energy Journal. Vol. 25 Issue 4. 67-90, 24

Kuper, Gerard H.; van Soest, Daan P.. 2006. "Does Oil Price Uncertainty Affect Energy Use?". Energy Journal. Vol. 27 Issue 1. 55-78, 24

March 11 2007. 'The new seven sisters'. Financial Times

Murillo-Zamorano, Luis R.. 2005. "The Role of Energy in Productivity Growth: A Controversial Issue?". Energy Journal. Vol. 26 Issue 2. 69-88, 20

Newbery, David. 2005. Energy Journal. Vol. 26 Issue 3. 1-39, 39

Smith, James L. 2005. Energy Journal. Vol. 26 Issue 4. 53-68, 16p, 4 graphs

Smith, James L. 2005. "Inscrutable OPEC? Behavioral Tests of the Cartel Hypothesis".. Energy Journal. Vol. 26 Issue 1. 51-82, 32

Wirl, Franz; Kujundzic, Azra. 2004. "The Impact of OPEC Conference Outcomes on World Oil Prices 1984-2001". Energy Journal. Vol. 25 Issue 1. 45-62, 18

#### **Collection of articles:**

Nore, Petter. Oslo 2003. Norsk Hydro's Takeover of Saga Petroleum in 1999,. BI Norwegian School of Management

#### **Other:**

IPCC. 2007. Synthesis Report. [www.ipcc.ch](http://www.ipcc.ch)

Kroes, N.. 2006. 'Cross border mergers and energy markets'. vol. 4- issue 4 November 2006. At: [www.gasandoil.com/ogel/](http://www.gasandoil.com/ogel/)

Mayer, S.. 2006. 'EU's international energy security policy since the end of the cold war: origins and developments. vol. 4- issue 4 November 2006. At: [www.gasandoil.com/ogel/](http://www.gasandoil.com/ogel/) November 2005. EU-Russia dialogue'. Euractiv

: Reynolds, D.B. and Kolodziej, M.. 'Institutions and the supply of oil: A case study of Russia'. U of Alaska, Fairbanks.. Case material

#### **Course outline**

Themes:

1. Energy Policy and Current Energy Challenges
2. Regulation of Electricity Industry
3. Regulation of Gas Industry
4. Regulation of Oil Industry
5. Energy Economics I
6. Energy Economics II
7. The Oil Market and Business
8. The Natural Gas Markets and Business
9. The Electricity Markets and Business
10. Climate issues and "green markets"
11. Innovation and Renewable Energy

## 12. Energy and Development

### **Computer-based tools**

It's learning/homepage

### **Learning process and workload**

A course of 6 ECTS credits corresponds to a workload of 160-180 hours.

Please note that while attendance is not compulsory in all courses, it is the student's own responsibility to obtain any information provided in class that is not included on the course homepage/It's learning or text book.

### **Examination**

A three-hour written exam and a term paper, each weighing 50 %.

The term paper is to be written in groups of three students.

All parts of the evaluation must be passed in order to obtain a grade in the course.

Specific information regarding student evaluation beyond the information given in the course description will be provided in class. This information may be relevant for requirements for term papers or other hand-ins, and/or where class participation can be one of several elements of the overall evaluation.

### **Examination code(s)**

GRA 59115 for the term paper (50%)

GRA 59116 for the three hour exam (50%)

### **Examination support materials**

BI approved exam calculator. A bilingual dictionary

Exam aids at written examinations are explained under exam information in our web-based Student handbook. Please note use of calculator and dictionary.

<http://www.bi.edu/studenthandbook/examaids>

### **Re-sit examination**

It is only possible to retake an examination when the course is next taught.

The assessment in some courses is based on more than one exam code.

Where this is the case, you may retake only the assessed components of one of these exam codes.

Where this is not the case, all of the assessed components of the course must be retaken.

All retaken examinations will incur an additional fee.

### **Additional information**

#### **Honor Code**

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honor code system. This is a most significant university tradition.

Students are responsible for familiarizing themselves with the ideals of the honor code system, to which the faculty are also deeply committed.

Any violation of the honor code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academic integrity. If you have any questions about your responsibilities under the honor code, please ask.