

Masters in International Affairs

Academic year 2009 - 2010

The Politics and Economics of International Energy

E657 – Autumn – The Politics and Economics of International Energy – 6 ECTS
Mondays 10:15-12:00, CV 502

Course Description

Economic growth requires constantly growing use of energy, and the availability of sufficient sources of energy on a global scale is not for granted. Energy – oil, gas, power – remains one of the biggest businesses, and maintains a strategic characterization that sets it aside from other economic sectors. As such, it attracts the attention of industrial, financial and political actors internationally. The course aims at providing students with the critical knowledge and skills to avoid superficial generalizations and simplifications – which unfortunately remain all too common.

> PROFESSOR

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Syllabus

Requirements: Active participation.

A mid-term and a final Q&A written exam. The exam is take-home, open book and Internet access, administered by e mail. It consists in three or four questions based on recent developments, and the student is required to select one of the questions and write a professional memo of 700 words analysing the same.

Very important organisational points:

At the first class I will make available a CD-Rom containing a large part of the readings and other important documentation. The contents of the CD-Rom will also be available on the class web page and a copy of the CD will be deposited in the Library. Readings **MUST** be completed **IN ADVANCE** of each class. However, you are not expected to read everything: you should use your judgment in selecting what is truly important.

Readings that are available only on paper are highlighted in **yellow**.

Background reading:

Daniel Yergin, "The Prize: The Epic Quest for Oil, Money, and Power"

You are expected to read this book in parallel with class proceeding although it is not listed as reading for any class in particular. It is fun to read anyhow.

Statistical references:

- BP Statistical Review of World Energy 2009
http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2009_downloads/statistical_review_of_world_energy_full_report_2009.pdf
- ENI World Oil and Gas Review 2008 http://www.eni.it/en_IT/attachments/cultura-energia/analisi-economiche-energetiche/wogr2008.pdf

Course Outline & Readings

Session	Topic	Readings
September 21	Introduction – Long-Term Energy Perspectives and Scenarios	<ul style="list-style-type: none"> EIA (DOE) International Energy Outlook 2008 Highlights and Chapters 1 & 2 http://www.eia.doe.gov/oiaf/ieo/pdf/0484(2008).pdf IEA Energy Technology Perspectives 2008 Executive Summary http://www.iea.org/G8/2008/ETP_2008_Exec_Sum_English.pdf IEA Towards a Sustainable Energy Future - IEA programme of work on climate change, clean energy and sustainable development June 2008 http://www.iea.org/G8/2008/G8_Towards_Sustainable_Future.pdf IEA Fact Sheet Blue Scenario http://www.iea.org/Textbase/techno/etp/fact_sheet_ETP2008.pdf ExxonMobil “The Outlook for Energy A View to 2030” pdf available http://www.exxonmobil.com/corporate/files/news_pub_2008_energyoutlook.pdf Royal Dutch Shell “Shell energy scenarios to 2050” pdf available http://www-static.shell.com/static/public/downloads/brochures/corporate_pkg/scenarios/shell_energy_scenarios_2050.pdf
September 28	International Oil: Reserves, Production, Technology	<ul style="list-style-type: none"> API – All About Petroleum pdf available C.J.Campbell and J.H. Laherrère, “The end of cheap oil” Scientific American March 1998 http://www.oilcrisis.com/archive/ScientificAmerican199803/EndOfCheapOil.htm M.Adelman “The Genie out of the Bottle” Ch. 2 Arnott and Skinner paper for EUROGULF project (OIES WPM29) http://www.oxfordenergy.org/pdfs/WPM29.pdf Skinner “World Energy Trends: Recent Developments and their Implications for Arab Countries” OIES SP19 http://www.oxfordenergy.org/pdfs/SP19.pdf Mabro “The Peak Oil Theory” OIES Comment September 2006 http://www.oxfordenergy.org/pdfs/comment_0906-2.pdf Lucas Herrmann, Elaine Dunphy, Adam Sieminski “European Integrated Oils - The cost of producing oil” Deutsche Bank, 24 February 2009 pdf available Alberta Royalty Review Panel Report “Our Fair Share”, pages 44-54 http://www.albertaroyaltyreview.ca/panel/final_report.pdf David McColl “The Eye of the Beholder: Oil Sands Calamity or Golden Opportunity?” Canadian Energy Research Institute Oil Sands Briefing ISBN: 1-896091-85-7 February 2009 http://www.ceri.ca/Publications/documents/CERIOilSandsBriefingFebruary2009.pdf pdf available
October 5	The International Oil Market: Functioning	<ul style="list-style-type: none"> Mabro e Hornsell “Oil Markets and Prices” Chapter 3, 12 & 15 Mabro “The International Oil Price Regime: Origins, Rationale and Assessment” JEL XI,1 June 2005, pages 3-20 pdf available Luciani paper for task 2.2 EUROGULF project pdf available Platt’s Methodology and Specifications Guide – Crude Oil http://www.platts.com/Oil/Resources/Methodology%20&%20Specifications/crudeoilspecs.pdf?S=n Bassam Fattouh “The Dynamics of Crude Oil Price Differentials” OIES WPM 36 January 2008 http://www.oxfordenergy.org/pdfs/WPM36.pdf Bassam Fattouh: “Prospects of the DME Oman Crude Oil Futures Contract” OIES Monthly Comment March 2008 http://www.oxfordenergy.org/pdfs/comment_0308-1.pdf Bassam Fattouh “The Drivers of Oil Prices: The Usefulness and Limitations of Non-Structural model, the Demand–Supply Framework and Informal Approaches” OIES WPM 32 March 2007 http://www.oxfordenergy.org/pdfs/WPM32.pdf

Session	Topic	Readings
		<ul style="list-style-type: none"> Bassam Fattouh "Basis Variation and the Role of Inventories: Evidence from the Crude Oil Market" OIES WPM38 January 2009 http://www.oxfordenergy.org/pdfs/WPM38.pdf Bassam Fattouh "Reinforcing Feedbacks, Time Spreads and Oil Prices" Oxford Energy Comment March 2009 http://www.oxfordenergy.org/pdfs/comment_0309-1.pdf Bassam Fattouh and Christopher Allsopp "The Price Band and Oil Price Dynamics" OIES Comment July 2009 http://www.oxfordenergy.org/pdfs/comment_01_07_09.pdf
October 12	NO CLASS	Use this week to catch up with the readings especially those for lecture 3
October 19	Guest lecture: Robert Mabro on the oil market and more	
October 26	Playing with the molecules: oil refining and more	<ul style="list-style-type: none"> File "Information from Wikipedia.doc" pdf available OPEC, World Oil Outlook 2008, section two http://www.opec.org/library/world%20oil%20outlook/WorldOilOutlook08.htm RAND "Oil Shale Development in the US" http://www.rand.org/pubs/monographs/2005/RAND_MG414.pdf "Refining and Price" in OEF#62 August 2005 page 3-9 pdf available
November 2	National and International Oil Companies	<ul style="list-style-type: none"> Valerie Marcel "Oil Titans" RIIA Chapters 1,9,10. pdf available Baker Institute "The Changing Role of National Oil Companies in International Energy Markets" Executive Summary April 2007 http://www.rice.edu/energy/publications/studies/BI_Study_35-1.pdf S.Heller, P.Hartley, K.Medlock III "Empirical Evidence on the Operational Efficiency of National Oil Companies" Baker Institute http://www.rice.edu/energy/publications/docs/NOCs/Papers/NOC_Empirical.pdf M.Chen "National Oil Companies and Corporate Citizenship" Baker Institute http://www.rice.edu/energy/publications/docs/NOCs/Papers/ J.Barnes and M.Chen "NOCs and U.S. Foreign Policy" Baker Institute http://www.rice.edu/energy/publications/docs/NOCs/Papers Robert Arnott "Fiscal Tightening: Striking the Right Balance" OEF #63 http://www.oxfordenergy.org/pdfs/oef63-arnott.pdf Robert Arnott "The Private Oil Companies: From Consolidation to Growth" OEF#60 February 2005 pages 10-12 "National Oil Companies and International Oil Companies" OEF#57 May 2004 pages 12-18 pdf available
November 9	Natural Gas: Reserves, Production, Technology, Perspectives	<ul style="list-style-type: none"> Vivek Chandra "Fundamentals of Natural Gas" Excerpts available online at http://www.natgas.info/index.html EIA (DOE) International Energy Outlook 2009 Chapter 3 http://www.eia.doe.gov/oiaf/ieo/pdf/0484(2009).pdf Jensen "The Development of a Global LNG Market" OIES 2004 http://www.oxfordenergy.org/bookdetails.php?ng5 ENCOURAGED "Future EU gas demand and external supply options: volumes, costs and transit issues" Chapters 1-3 pdf available J.Stern "Is There A Rationale for the Continuing Link to Oil Product Prices in Continental European Long-Term Gas Contracts?" OIES NG19 http://www.oxfordenergy.org/pdfs/NG19.pdf M. Foss "United States Natural Gas Prices to 2015" OIES NG18 http://www.oxfordenergy.org/pdfs/NG18.pdf Energy Charter Secretariat "International Pricing Mechanisms for Oil and Gas: Putting a Price on Energy" (2007) http://www.encharter.org/fileadmin/user_upload/document/Oil_and_Gas_Pricing_2007_ENG.pdf pdf available

Session	Topic	Readings
		<ul style="list-style-type: none"> • Energy Charter Secretariat “Fostering LNG Trade: Developments in LNG Trade and Pricing” 2009 http://www.encharter.org/fileadmin/user_upload/document/LNG_2009_EN_G.pdf pdf available • Polina Zhuravleva “The Nature of LNG Arbitrage, and an Analysis of the Main Barriers for the Growth of the Global LNG Arbitrage Market” OIES NG31 June 2009 http://www.oxfordenergy.org/pdfs/NG31.pdf
November 16	Geopolitics of Gas	<ul style="list-style-type: none"> • Baker Institute & Stanford “Geopolitics of Natural Gas” available from Baker Institute website http://www.rice.edu/energy/publications/geopoliticsofnaturalgas.html – especially Hayes “Algerian Gas to Europe” and Victor “The Belarus Connection” • J. Stern “The Future of Russian Gas and Gazprom” • J. Stern “The New Security Environment for European Gas: Worsening Geopolitics and Increasing Global Competition for LNG” OIES NG15 http://www.oxfordenergy.org/pdfs/NG15.pdf • J. Stern: “The Russian-Ukrainian gas crisis of January 2006” OIES January 2006 http://www.oxfordenergy.org/pdfs/comment_0106.pdf • Simon Pirani, Jonathan Stern and Katja Yafimava “The Russo-Ukrainian gas dispute of January 2009: a comprehensive assessment” OIES NG27 February 2009 http://www.oxfordenergy.org/pdfs/NG27.pdf • Aleksandar Kovacevic “The Impact of the Russia–Ukraine Gas Crisis in South Eastern Europe” OIES NG29 March 2009 http://www.oxfordenergy.org/pdfs/NG29.pdf • Gareth M Winrow “Problems and Prospects for the “Fourth Corridor”: the Positions and Role of Turkey in Gas Transit to Europe” OIES NG30 June 2009 http://www.oxfordenergy.org/pdfs/NG30.pdf • J. Stern “Gas-OPEC: a Distraction from Important Issues of Russian Gas Supply to Europe” Oxford Energy Comment February 2007 http://www.oxfordenergy.org/pdfs/comment_0207-1.pdf • ENCOURAGED “Future EU gas demand and external supply options: volumes, costs and transit issues” Chapter 4 pdf available • IEA “Security of Gas Supplies in Open Markets”, 2004 http://www.iea.org/textbase/nppdf/free/2004/security.pdf
November 21		MIDTERM (take home)
November 23	Oil and Development I: the Resource Curse; Oil and Conflicts.	<ul style="list-style-type: none"> • Richard Auty “Resource Abundance and Economic Development” United Nations University 1998 pdf available • Paul Stevens “Resource Impact: Curse or Blessing? – A Literature Survey” in Journal of Energy Literature IX 1 June 2003 pdf available • Humphreys, M., J. Sachs and J. Stiglitz eds. “Escaping the Resource Curse” Chapters 1, 6 & 7 pdf available • Frederick van der Ploeg and Steven Poelhekke “Volatility Harms Growth – New Perspectives on the Natural Resource Curse” April 2008, manuscript pdf available
November 30	Oil and Development II: Resource Nationalism	<ul style="list-style-type: none"> ▪ Timothy Fenton Krysiek “Agreements from Another Era - Production Sharing Agreements in Putin’s Russia, 2000-2007” OIES WPM 34 November 2007 http://www.oxfordenergy.org/pdfs/WPM34.pdf ▪ SECURE “The impact of resource nationalism, voluntary restriction of production and political instability on global oil supplies: quantitative analysis of historical experience”, July 2009, manuscript, pdf available. ▪ R. Ahrend and W. Tompson “Realising the Oil Supply Potential of the CIS: the Impact of Institutions and Policies”, OECD Economics Department Working Paper No. 484 http://www.oilis.oecd.org/olis/2006doc.nsf/LinkTo/NT000038CE/\$FILE/JTO3211556.PDF pdf available ▪ Stern, Luciani, Yenikayeff: “Is Russia a Threat to Energy Supplies?” Oxford Energy Forum August 2006 pdf available

Session	Topic	Readings
		<ul style="list-style-type: none"> ▪ B. Fattouh "How Secure are Middle East Oil Supplies?" OIES WPM33 http://www.oxfordenergy.org/pdfs/WPM33.pdf ▪ Bernard Mommer "Sovereignty and Oil" OEF#50 August 2002 page 16-17 pdf available ▪ Mommer "Fiscal Regimes and Oil Revenues in the UK, Alaska and Venezuela" OIES June 2001 http://www.oxfordenergy.org/pdfs/WPM27.pdf?PHPSESSI%20D=a5f4cd5bfe859f3d446c41b8462aae35 ▪ Boue' "The Internationalisation Programme of PDVSA" http://www.oxfordenergy.org/pdfs/Internationalisation.pdf ▪ D.Mares and N.Altamirano "Venezuela's PDVSA and World Energy Markets" Baker Institute http://www.rice.edu/energy/publications/docs/NOCs/Papers/NOC_PDVSA_Mares-Altamirano.pdf
December 7	Energy Policies in the US and Europe: Security of Supply and Competition	<ul style="list-style-type: none"> • Solana-Piebalgs Paper on External Energy Policy http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressdata/EN/reports/90082.pdf • European Commission "An Energy Policy for Europe" January 10, 2007 http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0001en01.pdf • European Commission Final Report Gas and Electricity Competition Inquiry January 2007 http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0851en01.pdf • European Council, Presidency Conclusions of the Brussels European Council (8-9 March 2007) http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf • INDES project papers: Executive Summary, CEPS Policy Briefs n. 49, 50, 51, 52, 53 http://shop.ceps.eu/BooksList.php?category_id=6&FormList_Page=8#List • Docs third package "Commission welcomes the Council agreement on oil stocks which improves EU's readiness in case of supply crises" IP/09/914 Brussels, 12 June 2009 http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/914&format=HTML&aged=0&language=EN&guiLanguage=en • "Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC" Brussels, 16.7.2009 COM(2009) 363 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52009PC0363:EN:NOT • "The Commission adopts new rules to prevent and deal with gas supply crises" IP/09/1153 Brussels, 16 July 2009 http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1153&format=HTML • "THE JANUARY 2009 GAS SUPPLY DISRUPTION TO THE EU: AN ASSESSMENT" Commission staff working document accompanying the Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC Brussels, 16.7.2009 SEC(2009) 977 final http://ec.europa.eu/energy/strategies/2009/doc/2009_ser2_autre_document_travail_service_part1_ver2.pdf • Baker Institute "Sustainable US Policy Options to Adress Climate Change: Highlights of the Debate" June 2009 pdf available http://www.bakerinstitute.org/publications/EF-pub-PolicyReport41-061909.pdf

Session	Topic	Readings
December 14	Renewable Sources, CCS and the Carbon Market	<ul style="list-style-type: none"> ▪ EREC & Greenpeace: Energy [r]evolution - A SUSTAINABLE GLOBAL ENERGY OUTLOOK http://www.greenpeace.org/raw/content/usa/press-center/reports4/energy-r-evolution-a-sustain.pdf ▪ McKinsey "Carbon Capture and Storage: Assessing the Economics" 2008 http://www.mckinsey.com/client-service/ccsi/pdf/ccs_assessing_the_economics.pdf pdf available ▪ Niels Jungbluth, et al. "LIFE CYCLE ASSESSMENT OF BIOMASS-TO-LIQUID FUELS" ESU Services GmbH 2008 pdf available ▪ EREC "European Energy Technology Roadmap" 2008 http://www.erec.org/fileadmin/erec_docs/Documents/Publications/Renewable_Energy_Technology_Roadmap.pdf ▪ DESERTEC Foundation "Clean Power from Deserts" February 2009 http://www.desertec.org/fileadmin/downloads/DESERTEC-WhiteBook_en_small.pdf ▪ ExxonMobil "Algae Biofuels Research and Development Program" http://www.exxonmobil.com/corporate/files/news_pub_algae_brochure.pdf ▪ European Commission "The EU Emission Trading System" 2009 edition http://ec.europa.eu/environment/climat/pdf/brochures/ets_en.pdf ▪ Martin I. Hoffert, and others "Advanced Technology Paths to Global Climate Stability: Energy for a Greenhouse Planet" <i>Science</i> Nov 1 2002: 981-987 pdf available
Date TBA	The comeback of nuclear energy	<ul style="list-style-type: none"> • Pierre-René Bauquis and Bertrand Barre "Understanding the Future – Nuclear Power" Editions HIRLE 2007 (disponible aussi en français: "Energie Nucléaire, comprendre l'avenir") www.editions-hirle.com • IAEA Nuclear Technology Review 2009 http://www.iaea.org/About/Policy/GC/GC53/GC53InfDocuments/English/gc53inf-3_en.pdf • Pierre-René Bauquis "A reappraisal of energy supply and demand in 2050" Available at: http://ogst.ifp.fr/index.php?option=article&access=standard&Itemid=129&url=/articles/ogst/pdf/2001/04/bauquis_v56n4.pdf • Pierre-René Bauquis from Peak Oil to Nuclear Energy OEF February 2007 pdf available • IAEA "Great Expectations" pdf available http://www.iaea.org/Publications/Magazines/Bulletin/Bull501/Great_Expectations.html • IAEA "Energy, Electricity and Nuclear Power Estimates for the Period up to 2030" August 2008 http://www-pub.iaea.org/MTCD/publications/PDF/RDS1-28_web.pdf • IAEA "Nuclear Power and Sustainable Development" 2006 http://www.iaea.org/OurWork/ST/NE/Pess/assets/06-13891_NP&SDBrochure.pdf another document with the same title but apparently completely different also exists!
December 19		FINAL (take home)