

Annual Meeting of the
International Energy Workshop

jointly organized by EMF/IEA/ETSAP/IIASA
22-24 June 2004 at the International Energy Agency (IEA), Paris, FRANCE

Program


Tuesday - 22 June 2004

08:30-8:55 *Registration*


09:00-09:15 *Opening and Welcome Address:* Claude Mandil – IEA Executive Director
Fatih Birol, Alan Manne, John Weyant, GianCarlo Tosato, and
Leo Schrattenholzer – Coordinators



PLENARY SESSION I
CHAIRPERSON: Alan Manne

9:15-9:45 Fatih Birol World Energy Outlook: Challenges for Energy Modellers

9:45-10:15 Leo Schrattenholzer A Roadmap to a Sustainable Global Energy System 

10:15-10:45 *Coffee Break*

10:45-11:15 Peter Odell Why Carbon Fuels will Dominate the 21st Century's Global Energy Economy 

11:15-11:45 Joseph Aldy Thirteen Plus One: A Comparison of Global Climate Policy Architectures  

11:45-12:00 General Discussions

12:00-14:00 *Lunch*

14:00-18:00 Parallel Sessions (see next page)

18:00-20:00 Social Event












Paper available on workshop web site
<http://www.iiasa.ac.at/Research/ECS/IEW2004/>



PowerPoint presentation available on workshop web site.




Tuesday Afternoon - 22 June 2004 - 14:00-18:00

	PARALLEL SESSION I: LONG-TERM ENERGY-ECONOMIC-CLIMATE PROJECTIONS (1 of 2)	PARALLEL SESSION II: ENERGY TECHNOLOGY ASSESSMENT AND INNOVATION / TRANSPORTATION	PARALLEL SESSION III: METHODOLOGY
	CHAIRPERSONS: <i>Fatih Birol and Stephen Peck</i>	CHAIRPERSONS: <i>Leonardo Baretto and Laura Cozzi</i>	CHAIRPERSONS: <i>Gunter Stephan and Richard Loulou</i>
14:00-14:20	Asian Economies and Energy Balances in a Global Context  Kimio Uno	Optimal Technology R&D in the Face of Climate Uncertainty  Erin Baker , Leon Clarke, John Weyant	Top-Down vs. Bottom-Up Revisited: Lessons Learned from a CGE Application to Germany and the US Ronald D. Sands , Katja Schumacher
14:20-14:40	Assessing Four Futures for Energy Markets and Climate Change  A.J.G. Manders	Technology Experience Curves in Integrated Assessment Models and Applications to Hydrogen Scenario Analysis  S. Yeh , E.S. Rubin, D.A. Hounshell	The Very Long Energy and Environmental Model (VLEEM): Outline of the Methodology T. Hamacher , B. Chateau, M. Biberacher and the VLEEM consortium
14:40-15:00	Future of Global Energy Infrastructures: Model Results of China's Natural Gas Market Development  Yaroslav Minullin , Oleg Nikonov, Ivan Matrosov	Technology Learning in the ETP Model Dolf J. Gielen , Niclas Mattsson, Fridtjof Unander	The Dynamics of Carbon and Energy Intensity in a Model of Endogenous Technical Change  Valentina Bosetti , Carlo Carraro, Marzio Galeottia
15:00-15:20	Impacts on RD&D on Carbon Mitigation Cost  Socrates Kypreos	Evaluation of Water Electrolysis Hydrogen Production Systems taking into Account an Increase of Electricity Demand in the Electric Power System  Takeyoshi Kato , Yasuo Suzok	Investing in Energy Conversion Technologies: An Optimum Portfolio Selection Approach Adriaan van Zon , Sabine Fuss
15:20-16:00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16:00-16:20	Italy and Kyoto : Dream and Awakening  Enzo Di Giulio, Stefania Migliavacca , Alessandro Vaglio	Econometric Modelling of Technical Progress, Consumer Tastes and Seasonal Variations: An Application to the Petrol Demand in Japan  Yasushi Ninomiya	A Consumers Demand Model for Sustainable Development  Kurt Kratena , Michael Wueger
16:20-16:40	The Kyoto Protocol and Beyond  Johannes Bollen	CO ₂ Reduction and Efficiency in Road Freight Traffic: Measures, Baseline and Potential  J. Leonardi , M. Baumgartner	Evaluation of CDM Activities by Using Bi-level Optimization Method  Akinobu Murata , Mu Hailin, Yasuhiko Kondou
16:40-17:00	Modeling Renewable Energy Policies for Successfully Meeting EU-15 Renewable Energy Targets  Reinhard Haas , Claus Huber, Gustav Resch, Thomas Faber	Future Transportation Technologies and Fuels: Preliminary ETP Results Dolf Gielen , Law Fulton	Modeling Multiple Goals: GHG Mitigation and Socio-economic Development Mark Howells
17:00-17:20	A Portfolio Approach in Local Energy Planning and Building Upgrades: The Case of New York City John Lee , Edward Linky, Owen Carroll	The Role of Hydrogen and Automobile Technology in Climate Mitigation: A Long-term Analysis  Hal Turton , Leonardo Barreto	Economic Losses from Using Global Warming Potential's  D.J.A. Johansson , U.M. Persson, C. Azar
17:20-17:40	The ISEO World Sustainable Energy Mix Scenario for Environmentally Compatible Energy Strategies Gustav R. Grob		Life Cycle Assessment and Comprehensive Analysis for an Integrated Evaluation of Environmental Impact of Anthropogenic Activities  F. Pietrapertosa , C. Cosmi, M. Macchiato, G. Marmo, M. Salvia
17:40-18:00	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>
18:00-20:00	Social Event		

Wednesday Morning - 23 June 2004 – 9:00-12:00

PLENARY SESSION II: Energy Modeling Forum (EMF) Study

CHAIRPERSON: *John Weyant*

09:00-09:30	Francisco De la Chesnaye, Casey Delhotal, John Weyant	EMF 21: Multi-Gas Mitigation and Climate Change
09:30-10:00	John P. Weyant	EMF 22: Climate Policy Scenarios in the Long Run and in Transition
10:00-10:30	Hillard G. Huntington	EMF 23: World Natural Gas Markets and Trade 
10:30-11:00	<i>Coffee Break</i>	
11:00-11:30	Jean Laherrere	Natural gas supply future 
11:30-12:00	Shunsuke Mori	Project Phoenix - Integrated Assessment of Global Warming Impacts, Mitigation and Adaptation with Multi-region and Multi-sector Model and Scenario Development 
12:00-14:00	<i>Lunch</i>	

14:00-17:30 Parallel Sessions (see next page)

Wednesday Afternoon - 23 June 2004 - 14:00-18:00

	PARALLEL SESSION IV: LONG-TERM ENERGY-ECONOMIC-CLIMATE PROJECTIONS (2 Of 2)	PARALLEL SESSION V: CLIMATE MITIGATION AND ADAPTATION (1 Of 2)	PARALLEL SESSION VI: POLICY AND MITIGATION
	CHAIRPERSONS: <i>Hill Huntington and Rebecca Gaghen</i>	CHAIRPERSONS: <i>Carmen Difiglio and Evasio Lavagno</i>	CHAIRPERSONS: <i>Socrates Kypreos and Marzio Galeotti</i>
14:00-14:20	Climate Policy, Distortionary Taxation: A General Equilibrium Analysis of the Swiss Case Alain Bernard, Marc Vielle , Laurent Viguier	Intensity Targeting: Can Endogenous Technological Progress Solve the Climate Problem? Gunter Stephan , Georg Müller-Fürstenberger	European Energy Socio-economic Research  Domenico Rossetti Di Valdalbero
14:20-14:40	Long-term Energy-emission Scenarios with the World-TIMES Model Amit Kanudia , Kathleen Vaillancourt, Richard Loulou, GianCarlo Tosato	Climate Uncertainty and the Necessity to Transform Global Energy Supply   Bob van der Zwaan , Reyer Gerlagh	Climate Policies and Induced Technological Change: Impacts and Timing of Technology Subsidies   Snorre Kverndokk, Knut Einar Rosendahl , Thomas F. Rutherford
14:40-15:00	Multi-gas GHG Mitigation Scenarios for Finland Diversified Energy Supply with Reduced Air Pollution  S. Syri , A. Lehtilä, I. Savolainen	Analysis of Energy Strategy by Country for Global Warming Mitigation beyond Kyoto with a World Energy Systems Model Keigo Akimoto , Takashi Homma, Takanobu Kosugi, Toshimasa Tomoda	European Electricity Market between Liberalisation and Climate Protection Markus Blesl , Uwe Remme, Ulrich Fahl
15:00-15:20	Dynamic Energy Systems Analysis for the Assessment of the Perspectives of New Energy Technologies  Stephan Ramesohl , Manfred Fischechick	The Potential and Timing of Biological Carbon Sequestration in the Context of Uncertainty and Learning Vincent Gitz , Jean-Charles Hourcade	The Innovation Dimension of Liberalisation: The Case of Electricity Sector  Tooraj Jamasb , Michael Pollitt
15:20-16:00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16:00-16:20	The Integrated National Energy Planning (INEP) in Iran: A Proposed Energy Master Plan Alimorad Sharifi , Mehdi Sadeghi	The Modelling Experiment IV of the German Energy Modelling Forum Sebastian Briem, Ulrich Fahl, Markus Blesl, Ingo Ellersdorfer , Uwe Remme	Carbon Finance as a Catalyst for Renewable Energy in Developing Countries Evidence from Early Projects, Potential, and Barriers Veronique Bishop, Franck Lecocq
16:20-16:40	Environmental, Economic, and International Trade Effects of the EU Energy Tax Harmonization  M. Kohlhaas, K. Schumacher , J. Diekmann, D. Schumacher, M. Cames	Mitigation and Adaptation: Trade-Offs, Synergies and Optimal Balance Franck Lecocq, Zmarak Shalizi	How Consistent are Alternative Short-term Climate Policies with Long-term Goals?  Valentina Bosetti, Marzio Galeotti, Alessandro Lanza
16:40-17:00	Assessing the Potential of Energy Efficiency Programmes in South Africa by Modelling Selected Policy Interventions Allison Hughes	Analysis of the Economic Implications of Russia's Participation in the Kyoto Protocol using the MERGE Model Vyacheslav Maksimov , Gerhard Totschnig, Yaroslav Minullin	The EU Emissions Trading Scheme - Efficient Climate Policy or a Danger for the European Competitiveness   Gernot Klepper, Sonja Peterson
17:00-17:20	Scenarios for the Introduction of Hydrogen into New Zealand's Transport Fleet  Andrew Baglino , Jonathan Leaver, James Sweeney	Addressing the Policy Implications of Potential Abrupt Climate Change induced by Greenhouse Gas Emissions Peter Read	Emissions Trading and Investment Decisions in the Power Sector A Case Study in Finland  Harri Laurikka , Tiina Koljonen
17:20-17:30	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>



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Thursday Morning - 24 June 2004 – 9:00-12:00

PLENARY SESSION III

CHAIRPERSON: *Leo Schrattenholzer*

- 09:00-09:30 **William Nordhaus** The Outlook for Energy Three Decades after the Energy Crisis  
- 09:30-10:00 **Fridtjof Unander** Oil Crises and Climate Challenges: 30 Years of Energy Use in IEA Countries
- 10:00-10:30 **Nebojša Nakićenović** Long-term Drivers of Climate Change
- 10:30-11:00 *Coffee Break*
- 11:00-11:30 **Alan Manne** MERGE: An Integrated Assessment for Global Climate Change  
- 11:30-12:00 **Soichiro Seki** Developing a Future Regime beyond the Kyoto Protocol: Bottom-up Approach 
- 11:45-12:00 Discussions
- 12:00-14:00 *Lunch*
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- 14:00-17:30 Parallel Sessions (see next page)
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Thursday Afternoon - 24 June 2004 - 14:00-18:00

	PARALLEL SESSION VII: ENERGY TECHNOLOGY SYSTEMS ANALYSIS	PARALLEL SESSION VIII: CLIMATE MITIGATION AND ADAPTATION (2 of 2)	PARALLEL SESSION IX: LOW-CARBON AND CARBON-FREE FUEL AND TECHNOLOGIES
	CHAIRPERSONS: <i>GianCarlo Tosato and Denise van Regemorter</i>	CHAIRPERSONS: <i>Nebojsa Nakićenović and Bob van der Zwaan</i>	CHAIRPERSONS: <i>Dolf Gielen and Koen Smekens</i>
14:00-14:20	Demand Supply: The South African Electricity Sector  Joshua M. Bushinsky , Mark I. Howells, David G. Victor, Thomas Alfstad	Economic Impact Assessment of Climate Change: A Multi-gas Investigation with WIAGEM-ICM Claudia Kemfert , Truong Truong, Thomas Bruckner	The Role and Impact of CO ₂ Capture and Sequestration in Long Term Energy Scenarios Koen Smekens
14:20-14:40	Nuclear Fusion as a New Energy Technology in a Single-Regional TIMES Model of the Global Energy System Christian G. Eherer , Martin Baumann, Jörg Düweke, Thomas Hamacher	Contingent Climate Policy Decision-Making: A Framework which places an emphasis on the vintage structure of the capital stock A First Application to the Issue of Membership in a Climate Treaty Stephen C. Peck	Future Prospects of Renewable Electricity Supply under the Renewables Portfolio Standard in Japan  Kenichiro Nishio , Hiroshi Asano
14:40-15:00	Modeling Methane and Deriving Mitigation Cost Curves in US-EPA MARKAL  Casey Dehotal, Pat Delaquil, Gary Goldstein	Technical Change and the Future Marginal Cost of Methane Mitigation in the Natural Gas Industry  Casey Delhotal, Michael Gallaher	Optimal Mix of Policy Instruments for Bio-diesel Production from Energy Crops Chung-Huang Huang , Yunn-ming Wang, Ping-Yi Huang
15:00-15:20	Integrated MARKAL Modeling of World Cooperative and Non-cooperative CO ₂ Mitigation Strategies Maryse Labriet , Richard Loulou, Amit Kanudia	Multigas Climate Mitigation  Atsushi Kurosawa	Biomass based Energy System for a Rural Area in Japan  Toshihiko Nakata , Kazuo Kubo
15:20-16:00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16:00-16:20	Optimisation of Electricity Production Capacity under Uncertainty  Olev Liik , Mati Valdma, Matti Keel, Heiki Tammoja	Sequential Target Setting Using Projected Greenhouse Gas Intensities  Neil Strachan	Hydrogen and Electricity Production from Pebble Bed Modular Nuclear Reactor Andrew Kenny
16:20-16:40	Generation and Analysis of Alternative Technological Scenarios Using MARKAL-MGA: Application in the Transportation Sector  Daniel H. Loughlin	Potential for Reducing Carbon Emissions from Non-Annex B Countries through Changes in Technology  Paul M. Bernstein, W. David Montgomery , Sugandha D. Tuladhar	Hydrogen Scenarios and their Impact on Global Climate and Air Pollution  Martin G. Schultz
16:40-17:00	Future Role of Renewable Energy in Germany against the Background of Climate Change Mitigation and Liberalization Uwe Remme	Carbon Reduction Potential and Economic Impacts in Japan: Application of AIM  Mikiko Kainuma, Yuzuru Matsuoka, Toshihiko Masui , Junichi Fujino	Policy, Diffusion, and Experience Curves Margaret Taylor , Dorothy Thornton, Gregory Nemet, Michael Colvin
17:00-17:20	Small-size Nuclear Power Plants Inherently Safe: A Short-term Technology Option for the Future of Nuclear Energy Federico Santi		Strategies for the Expansion of Renewable Energy Sources in Germany under the Constraints of Nature Conservation  Wolfram Krewitt , Joachim Nitsch
17:20-17:30	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>	<i>Discussions/Conclusions</i>



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The organizers wish to thank EPRI, Palo Alto, California for their financial support of the meeting.



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