

**5<sup>th</sup> BIEE Academic Conference**  
in association with the  
**UK Energy Research Centre**

**European Energy – Synergies and Conflicts**

St John's College Oxford, England  
22-23 September 2005

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**Conference Objective:**

Energy security is migrating from a predominantly national and relatively minor issue to an international and prominent one. Globalisation is felt throughout energy markets. Energy policies are becoming more and more interrelated with other policy objectives, like environmental and social ones. The EU has given impetus to a pan-European approach to establish competitive and open markets to strengthen energy security. This conference explores the synergies and conflicts that may arise in pursuit of the EU's objectives and explores the role of the UK and its neighbours in achieving sustainable energy systems.

**Conference Committee:**

Prof. Jonathan Stern (Conference chair), Oxford Institute for Energy Studies

Sarah Keay-Bright, UKERC

Dr Matthew Leach, Imperial College

Wim Thomas, Shell International

Dr Jim Watson, University of Sussex

**BIEE's** aim is to encourage the study of energy economics and energy policy by bringing together individuals with a wide range of energy expertise and encouraging the exchange of ideas and knowledge. The British Institute of Energy Economics represents the International Association of Energy Economics (IAEE) in the UK.

**UKERC's** aim is to provide a focus for energy research in the UK, and for co-operation between the UK and researchers from other countries. It is a central part of the Research Councils' programme *Towards a Sustainable Energy Economy* (TSEC).

## Thursday 22<sup>nd</sup> September

- 10:00 *Accommodation Registration*  
(Residential Main Porter's Lodge, St Giles, Oxford, OX1 3JP)
- 10:45 *Conference Registration*  
(Garden Quadrangle Foyer)
- 11:30 Opening**  
Wim Thomas, Chairman of the BIEE
- 11:45 First Plenary Session**  
Session Leader: Jonathan Stern, Conference Chairman
- “Security of Supply and Transition to a Low Carbon Economy”  
Sir Crispin Tickell, Green College Centre for Environmental Policy and Understanding, Oxford
- “Efficiency, Technology and Emissions Trading”  
Michael Grubb, Carbon Trust/Imperial College
- 13:00 Lunch in the Dining Hall**
- 14:00 First Parallel Session**
- Session 1 Demand Policies – Larkin Room**  
Session Leader: Brenda Boardman, Environmental Change Institute, University of Oxford
- 1.1 *Voluntary behaviour change: a soft option for carbon reduction from transport?* Jillian Anable (Robert Gordon University)
- 1.2 *What would a strategy of demand reduction mean for the UK?*  
Tina Fawcett (Environmental Change Institute, Oxford)
- 1.3 *The implications of tradable domestic quotas*  
Richard Starkey, (University of Manchester)
- 1.4 *Working towards a 40% carbon World*  
Brenda Boardman, (ECI, University of Oxford)
- Session 2 Emissions Trading – New Seminar Room**  
Session Leader: Steve Sorrell, Science and Technology Policy Research, University of Sussex
- 2.1 *Assessing the Performance of Emissions Trading: some early experience on the possible effectiveness, efficiency and equity impacts of NSW's 'baseline and credit' scheme*  
Iain MacGill (University of New South Wales)
- 2.2 *Modelling Power Pricing under Trading of CO<sub>2</sub> Emission Allowances: market power versus competition*

Francesco Gulli, Monica Bonacina (Università Bocconi, Milan)

2.3 *Emissions Trading to Combat Climate Change: the impact of the scheme design on transaction costs*

Regina Betz (University of New South Wales)

2.4 *The UK Climate Change Levy: an empirical analysis of the price and announcement effect*

Paolo Agnolucci (Policy Studies Institute)

**Session 3 Technology and Innovation – Prestwich Room**

Session Leader: Chris Hendry, Cass Business School, City University

3.1 *Perth's Hydrogen Fuel Cell Buses: an economic assessment*

Anthony D Owen (University of New South Wales), Colin J Cockroft (Murdoch University Perth)

3.2 *Investing in Energy Conversion Technologies: an optimum portfolio selection approach*

Sabine Fuss, Adriaan von Zon (University of Maastricht)

3.3 *The Cost of Achieving Significant Reductions in CO<sub>2</sub> Emissions from Buildings: technology learning, experience curves and future policy*

Mark Hinnells, Brenda Boardman (Environmental Change Institute, Oxford)

3.4 *The Adoption and Diffusion of Innovation: demonstrating a niche application for fuel cell technology in public service vehicles (buses)*

Paul Harborne, Chris Hendry, James Brown (City University)

**Session 4 Diversity of Supply – North Lecture Room**

Session Leader: Gareth Harrison, University of Edinburgh

4.1 *Pathways to a Decarbonised Future: from rhetoric to reality*

Kevin Anderson, Alice Bows, Sarah Mander and Simon Shackley (University of Manchester), Paolo Agnolucci and Paul Ekins (PSI)

4.2 *Determining Cost of Wind-based Electricity: portfolio risk and GDP externalities*

Shimon Awerbuch (University of Sussex)

4.3 *Under what conditions could the UK invest in new nuclear capacity?*

Gordon McKerron (NERA)

4.4 *Diversified Renewable Energy Portfolios for the UK*

Graham Sinden (Environmental Change Institute, Oxford)

**16:00** *Tea break*

**16:30 Student Market Place – Garden Quad Seminar Room**

*A highly interactive parallel event in which students will set-up shop around posters, presenting their academic work in a 10 minute presentation followed by discussions with their audience.*

Session Leader: Matthew Leach, Imperial College, London

1. *Transition towards a Greener Infrastructure: case of Dutch energy system*

Anish Patil (Delft University of Technology)

2. *Development of Hydrogen Fuel Cells and the Role of Institutions*

Fatimah Zeeda

3. *Scope For Synergy between Renewables and Carbon Dioxide Capture and Storage: a bridge to sustainable electricity*  
Hannah Chalmers, Jon Gibbins (Imperial College)
4. *Neo Vernacular Design and Ecopsychology: a new approach to environmental architecture*  
Padmavathi Viswanathan (Glasgow School of Art)
5. *Gaining Insight into Energy Policy Making with Conflict Analysis and Transactional Analysis: a comparison.*  
Telli Van der Lei (Technical University of Delft)
6. *The UK Electricity System: an analysis of locational signals and their impact on renewable and embedded generation*  
Matteo Di Castelnuovo (Imperial College)
7. *Accounting for Renewable Energy Technologies in Home Energy Rating Systems*  
Will Wright (De Montfort University)
8. *Civic Structures and their Role within Renewable Energy Integration*  
Jodie West (Exeter University)
9. *Combined Gas and Electricity Network Analysis*  
Modassar Chaudry (Manchester)
10. *Design of a cost-effective seabed wave sensor*  
Helen Smith and Dean L. Millar (University of Exeter)
11. *Energy Demand in OECD and selected Non-OECD Countries: Evidence from Panel Data Analysis*  
Azlina Abd.Aziz (University of Leicester)

**18:00**      **Drinks in the Canterbury Quad**

**19:00**      **Conference dinner in the Dining Hall**

## Friday 23<sup>rd</sup> September

**From**      *Breakfast in the Dining Hall*  
**8:00**

**9:00**      **Second Plenary Session**  
Session Leader: Matthew Leach, Imperial College, London

*“Global Energy Scenarios”*  
Wim Thomas, Shell International

**10:00**      *Coffee break*

**10:30**      **Third Plenary Session**  
Session Leader: Wim Thomas, BIEE chairman

*“Energy Security Challenges of the EU and its New Member States”*  
Frank Umbach, German Council on Foreign Relations (DGAP)

*“US Climate Policies, Actions and Initiatives: Federal and State”*,  
Shirley Neff, Columbia University /President-elect, USAEE

**12:30**      *Lunch in the Dining Hall*

**13:30**      **Second Parallel Session**

**Session 1**    **Energy and Environmental Regulation and Policy – Prestwich Room**  
Session Leader: Peter Pearson, Imperial College, London

1.1 *Factors Influencing the Likelihood of a Regulatory Change in  
Renewable Electricity Policies*

Paolo Agnolucci (Policy Studies Institute)

1.2 *Can Virtual Utilities Revive the Consolidation Market?*

Charlotte Ramsay (Imperial College)

1.3 *The Economics of Energy Service Contracting*

Steve Sorrell (University of Sussex)

1.4 *Policy Processes for Low Carbon Innovation in the UK: successes,  
failures and lessons*

T.J. Foxon, P.J. Pearson (Imperial College)

**Session 2**    **Social Cohesion and Energy Interdependence – Dolphin Lecture Room**  
Session Leader: Patrick Devine-Wright, De-Montfort University

2.1 *Perceived Procedural Justice as a Conflict Factor in Wind Energy  
Plants Planning Processes*

Petra Schweizer-Ries, Heidi Ittner, Jan Zoellner (University of  
Magdeburg)

2.2 *Stakeholder Opinion on a Proposed 21.5 MWe Biomass Gasifier in  
Winkleigh, Devon: implications for bioenergy planning and policy*

Paul Upham, Simon Shackley (University of Manchester)

2.3 *Accounting for Wind Power Outcomes: a pan-European study*

David Toke (University of Birmingham)

2.4 *A Cross-national Comparison of Factors Affecting Social Cohesion and Division in Wind Energy Development*

Joe Szarka (Bath University)

**Session 3 EU Relations with Neighbours – Larkin Room**

Session Leader: Jonathan Stern, Oxford Institute for Energy Studies

3.1 *Ukraine: EU Neighbourhood Policy and Natural Gas Security*

Jonathan Stern (Oxford Institute for Energy Studies)

3.2 *Natural Gas in the Mediterranean: a note for the 10<sup>th</sup> anniversary of the Barcelona process*

Hadi Hallouche (City University)

3.3 *Russia-Belarusian Relationship: the pivotal role of gas transit routes*

Katja Yafimava (Oxford University)

3.4 *Neighbourhood as an International Energy Policy Concept*

Pierre Noel (IFRI), Nadia Campaner (University of Paris III)

**Session 4 Fossil Fuel Futures – New Seminar Room**

Session Leader: Jim Watson, Science and Technology Policy Research, University of Sussex

4.1 *Advanced Cleaner Coal Technologies for Power Generation: can they deliver?*

Jim Watson (University of Sussex)

4.2 *Possible Routes for Early Implementation of Carbon Capture and Storage from Fossil Fuel Utilisation*

Jon Gibbins (Imperial College)

4.3 *“Clean coal” Technologies: new impulses for the deadlocked dispute about German coal?*

Barbara Praetorius (DIW Berlin)

4.4 *The Capacity Credit of Micro Combined Heat and Power in the UK*

Adam Hawkes, Matthew Leach (Imperial College)

4.5 *The Future Role of Gas Fired Power Generation in Europe*

Anouk Honore (Oxford Institute for Energy Studies)

**Session 5 Energy Modelling – North Lecture Room**

Session Leader: Paul Ekins, Policy Studies Institute

*5.1 Introduction to UKERC Energy Systems Modelling Theme*

Paul Ekins (Policy Studies Institute)

*5.2 Inducing Low-carbon Technological Change in the UK Economy Using an Integrated E3 Modelling Approach*

Terry Barker (University of Cambridge)

*5.3 Modelling a Transition to a Hydrogen Economy Using the MARKAL Model*

Gerard Martinus, ECN

*5.4 Energy Demand Asymmetries and the Underlying Energy Demand Trend: are they substitutes or complements? Evidence from the UK*

Lester Hunt (University of Surrey), Guy Judge (University of Portsmouth)

**15:30**      **Conference close**