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INTERNATIONAL ENERGY WORKSHOP

17-18-19 June

2009

Fondazione Giorgio Cini
Island of San Giorgio Maggiore
Venice - Italy

PROGRAMME BOOK



PATROCINIO
REGIONE DEL VENETO

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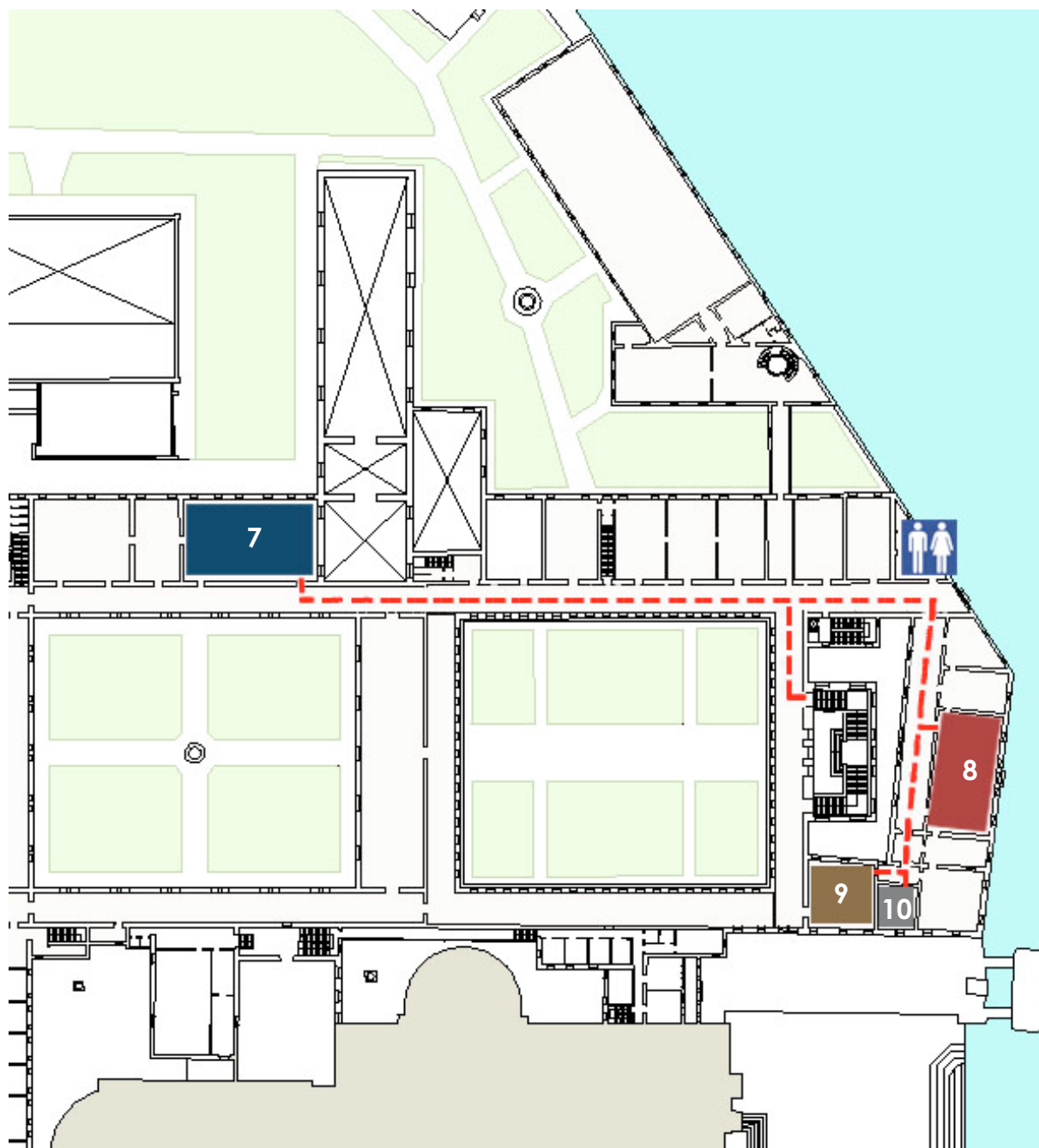
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Map of Workshop Venue – ground floor



- 1. Salone Arazzi** - Plenary and Parallel Sessions
- 2. Sala Cipressi** - Parallel Sessions
- 3. Slide Centre** - Deliver here your presentation file
- 4. Sala Bianca** - Registration and Information Desk
- 5. Salone Arazzi's Garden** - Coffee Breaks Area
- 6. Cipressi's Cloister** - Coffee Breaks and Lunches Area

Map of Workshop Venue – first floor



- 7. Sala Barbantini** - Parallel Sessions
- 8. Sala Consiglio** - Parallel Sessions
- 9. Sala del Soffitto** - Parallel Sessions
- 10. Sala Politico** - Job Market Room

Leo worked hard to organize this year International Energy Workshop in Venice. For this reason, and because we all want to remember Leo, the 2009 IEW will be dedicated to him. Leo was a nice and gentle person. An excellent colleague. And a very good friend. All those who knew Leo as a colleague, a friend or both, will miss him deeply.

Carlo Carraro

Welcome Letter

*It is a great pleasure to welcome you in Venice to the **2009 International Energy Workshop** organised in cooperation with the International Center for Climate Governance - a joint initiative of the Fondazione Eni Enrico Mattei and the Fondazione Giorgio Cini - and the Euro-Mediterranean Center for Climate Change. The large number of papers submitted to the programme committee, twice as many compared to the past editions, and the numerous participants, confirm the success of this year's workshop. We are proud to host such highly esteemed plenary speakers and to present so many top-notch papers at the parallel sessions.*

The programme book will give you all the necessary information about the IEW workshop, from the logistic organization to the timetable of each day, which will include an excellent scientific programme combined with meals, breaks and social events.

One of our principle aims is to organize not only a productive scientific forum but also a valid opportunity for establishing an international network of collaborations and friendships which are so essential in today's world. For this purpose we have prepared a social programme which will include a welcome reception for the participants and a boat tour in the Venetian Lagoon with a social dinner on the Torcello Island.

We hope you will not only enjoy the workshop, but also its setting, Venice, and its beautiful architecture. We will all benefit from the beauty and peace of the San Giorgio Maggiore Island, whose Monastery is the seat of the Fondazione Giorgio Cini, the actual venue of the 2009 International Energy Workshop.

In this charming and inspiring place we wish you all a very happy stay and we hope that the workshop will be a great success. We have worked hard to achieve these two aims, and we wish to extend our thanks to our sponsors ETSAP, EPRI and IEA which have generously contributed to this event.

Prof. Carlo Carraro and the Organising Committee



General Information

PRESENTATION INFORMATION

Speakers need to deliver their presentation files to the Slide Centre (see map page 2) in advance with respect to their session slot. Presentation files cannot be uploaded directly in your parallel session room. Please bring your presentation file in a USB memory stick and save it also in a .pdf version as back-up.

The time slot assigned to each presenter is 30 minutes, which includes 20 minutes of presentation plus 10 minutes of discussion and questions from the audience. The last speaker of each session is also the chair of it.

All of the rooms allocated for the scientific sessions are equipped with a screen, a beamer and a computer for Power Point presentations.

A technical assistant is present in each scientific session room at all times.

REGISTRATION AND INFORMATION DESK

The Registration and Information Desk is located in the Sala Bianca (see map page 2). The Workshop Secretariat will be pleased to provide the following services:

- general Workshop information;
- your Workshop registration;
- your personal username and password for Internet connection;
- job Market registration and room reservation;
- transport and tourist information.

In the Sala Bianca there is also a Message Board where you can find information on the scientific sessions, last minute changes, the job market agenda, a map of Venice, public transport notices, etc.

The opening hours of the Registration and Information Desk are:

Wednesday, June 17th 8.30 – 18.30

Thursday, June 18th 8.30 – 18.30

Friday, June 19th 8.30 – 18.30

VENUE

The Workshop is entirely held on the Island of San Giorgio Maggiore, just in front of St. Mark's Square, Venice, Italy. The Island is a great testimonial to central moments in the history of Italian art and architecture. The cultural centres based on the Island render it an important cultural reference point at an international level. These centres develop research projects and permanent activities of a social, educational, cultural and artistic character. The Island's facilities host the conferences and congresses of qualified scientific and cultural organisations from Italy and abroad, offering them an unparalleled urban and monumental context for their work.

The Island boasts an ancient Benedictine monastery with cloisters and gardens; a beautiful Palladian church; an ancient library; a theatre dedicated to shows of music and dance, surrounded by a large park; and a small harbour. Together these elements make the Island a pleasant and suitable setting both for cultural, communications and leisure activities.

Today the Island is maintained by the Fondazione Giorgio Cini, which rescued and restored it after it had suffered its period of greatest decline at the hands of Napoleon, its architectural treasures haphazardly divided and in disrepair, and later under the domination of the Austrians who left the Island cluttered with sheds, huts and other utilitarian structures.

The church was reopened in 1808 and from 1829 the island became a free port after the construction of two Istrian-stone lighthouses.

The church of San Giorgio Maggiore is one of the most impressive Venetian buildings by Andrea Palladio. The design for the facade was completed in 1566, but with his death in 1580, work was only started in 1597 and concluded in 1610.

Palladio believed that white was the colour most pleasing to God, and the overall effect both inside and out is of impressive luminosity and harmony, decoration being confined to a minimum. The church is dedicated to St. George and St. Stephen (the mortal remains of the latter are conserved in the church) and houses many masterpieces of the Venetian Renaissance. The aisles contain sepulchral monuments to doges and other dignitaries and the paintings include masterpieces such as *The Last Supper* and *The Fall of Manna* by Jacopo Tintoretto, and other canvases by Domenico Tintoretto, Jacopo Bassano, Palma il Giovane and Sebastiano Ricci. In the upper chapel hangs a painting by Carpaccio representing St. George slaying the dragon.

The lift to the top of the bell tower is operated by one of the monks, and admission is € 3,00. The view of Venice is extraordinary and on a clear day you can see the mountains beyond, as well as the cloisters and gardens of the monastery on the Island below.

COFFEE BREAKS AND LUNCHES

Coffee breaks will be served in the Salone Arazzi's Garden and in the Cipressi's Cloister (see map page 2).

Buffet lunches will be served in the Cipressi's Cloister (see map page 2).

Please see the Programme Overview for the daily coffee break and lunch schedule.

INTERNET

A wireless Internet connection is available inside the Salone Arazzi, Sala Bianca and their neighbours. Get your personal username and password from the Registration and Information desk. As per the Italian law you will be asked to provide a copy of your ID card or passport.

PARTICIPANT IDENTIFICATION

All participants are required to wear the personal name badge at all times. It provides access to the scientific sessions, lunches, coffee breaks and all social events. The accompanying person's badge enables access to the social events only.

You are kindly requested to report the loss of your badge to the Information and Registration Desk immediately.

Everyone wearing a yellow name badge works for the local organization, so if you have any questions you may ask them.

International Energy Workshop

The International Energy Workshop (IEW) is an informal network of analysts actively working on international energy issues. The IEW provides a venue for scholars and researchers to compare quantitative energy projections and to understand the reasons for diverging views of future developments. The annual meetings typically include three plenary sessions and approximately 100 presentations in parallel sessions focused on a wide array of topics, including energy supply and price forecasts, energy efficiency, climate change, renewable energy, and the interface of energy, environmental, and economic issues.

The original idea to establish this international network was introduced by the late Alan Manne, one of the founding fathers of energy economics and a long-time professor at Stanford University, who organized the first IEW in December 1981.

The motivation for the first IEW meeting in December 1981 was partly inspired by the Stanford-based Energy Modelling Forum (EMF). One of the EMF's functions is to compare energy projections. Modelling teams closely interact to apply their models to the same topic and using a largely standardized set of assumptions. This type of close cooperation was beyond the reach of this newly established network that aimed at analyzing international energy studies. The IEW has therefore taken the practical approach and asks for the results first and later worries about the method that led to them without attempting to provide feedback.

From 1981 to 1997, the IEW published annual editions of the IEW Poll, which documented GDP, energy and carbon dioxide emission projections for the world and major world regions. The data base behind these publications contributed to the 'Morita Database', which was compiled as a basis for the IPCC Special Report on Emission Scenarios (SRES).

In recent years, IEW has been organized by Leo Schrattenholzer and Joseph E. Aldy. Leo Schrattenholzer suddenly passed away on April 29, 2009. This year IEW is dedicated to him.

Current members of the Steering Committee are:

- Fatih Birol, International Energy Agency
- Carlo Carraro, Fondazione Eni Enrico Mattei, Università Ca' Foscari Venezia, Euro-Mediterranean Center for Climate Change, Vice Chair IPCC Working Group III
- Alison Hughes, Energy Research Centre, University of Cape Town
- Shunsuke Mori, Tokyo University of Science
- Holger Rogner, International Atomic Energy Agency
- Giancarlo Tosato, Energy Technology Systems Analysis Programme
- David Victor, Program on Energy & Sustainable Development, Stanford University
- John Weyant, Energy Modeling Forum

Scientific Program Committee

- Fatih Birol, International Energy Agency
- Christoph Boehringer, Centre for European Economic Research (ZEW)
- Francesco Bosello, Fondazione Eni Enrico Mattei and Università di Milano
- Valentina Bosetti, Fondazione Eni Enrico Mattei, Centro Euro-Mediterraneo per i Cambiamenti Climatici and Princeton University
- Barbara Buchner, International Energy Agency
- Carlo Carraro, Fondazione Eni Enrico Mattei, Università Ca' Foscari Venezia, Centro Euro-Mediterraneo per i Cambiamenti Climatici, Vice Chair IPCC Working Group III
- Reyer Gerlagh, University of Manchester
- Mark Howells, International Atomic Energy Agency
- Alison Hughes, Energy Research Centre, University of Cape Town
- Holger Rogner, International Atomic Energy Agency
- Thomas Rutherford, ETH Zürich
- Leo Schrattenholzer, IEW Co-director
- Massimo Tavoni, Fondazione Eni Enrico Mattei, Centro Euro-Mediterraneo per i Cambiamenti Climatici and Princeton University
- Giancarlo Tosato, Energy Technology Systems Analysis Programme
- Bob van der Zwaan, Energy research Centre of the Netherlands
- David Victor, Program on Energy & Sustainable Development, Stanford University

Organizing Committee

- Leo Schrattenholzer, IEW Co-director
- Carlo Carraro, Fondazione Eni Enrico Mattei, Università Ca' Foscari Venezia, Centro Euro-Mediterraneo per i Cambiamenti Climatici, Vice Chair IPCC Working Group III
- Angela Marigo, Fondazione Eni Enrico Mattei
- Ughetta Molin Fop, Fondazione Eni Enrico Mattei

Support staff to the organization

- Mathilde Carraro
- Enrica de Cian, Fondazione Eni Enrico Mattei
- Fabio Eboli, Fondazione Eni Enrico Mattei
- Paolo Gittoi, Fondazione Eni Enrico Mattei
- Mathis Hampel, Università Ca' Foscari Venezia
- Elisa Lanzi, Fondazione Eni Enrico Mattei
- Nicola Pavanini, University of Warwick
- Maria Pivotti, Fondazione Eni Enrico Mattei
- Pier Lorenzo Stella, Università Ca' Foscari Venezia
- Soraya Torres Lopez, Fondazione Eni Enrico Mattei
- Lucia Zaltron, Fondazione Eni Enrico Mattei

Programme Overview

WEDNESDAY, 17 JUNE 2009

- 08.30 - 09.00 REGISTRATION
09.00 - 09.30 OPENING and WELCOME ADDRESS (Corrado CLINI and Carlo CARRARO)
09.30 - 11.00 PLENARY SESSION (Richard G. RICHELIS and Kejun JIANG)
11.00 - 11.30 BREAK
11.30 - 13.00 PARALLEL SESSION 1
13.00 - 14.30 LUNCH
14.30 - 16.30 PARALLEL SESSION 2
16.30 - 17.00 BREAK
17.00 - 18.30 PARALLEL SESSION 3
18.30 WELCOME RECEPTION and PETER GREENAWAY'S SHOW

THURSDAY, 18 JUNE 2009

- 09.00 - 11.00 PLENARY SESSION (Raymond J. KOPP, Domenico SINISCALCO and Thomas C. HELLER)
11.00 - 11.30 BREAK
11.30 - 13.00 PARALLEL SESSION 4
13.00 - 14.30 LUNCH
14.30 - 16.30 PARALLEL SESSION 5
16.30 - 17.00 BREAK
17.00 - 18.30 PARALLEL SESSION 6
18.30 BOAT TOUR in the Venetian Lagoon, VISIT OF THE CATHEDRAL and SOCIAL DINNER in the Torcello Island

FRIDAY, 19 JUNE 2009

- 09.00 - 11.00 PLENARY SESSION (William D. NORDHAUS, Leonardo MAUGERI and Adam E. SIEMINSKI)
11.00 - 11.30 BREAK
11.30 - 13.00 PARALLEL SESSION 7
13.00 - 14.30 LUNCH
14.30 - 16.30 PARALLEL SESSION 8
16.30 - 17.00 BREAK
17.00 - 18.30 PARALLEL SESSION 9

Overview of Parallel Sessions

WEDNESDAY, 17 JUNE 2009

ROOM	PARALLEL SESSION 1 11.30 - 13.00	PARALLEL SESSION 2 14.30 - 16.30	PARALLEL SESSION 3 17.00 - 18.30
Salone Arazzi	Climate Policy 1	Electricity Systems	Climate Policy 2
Sala Cipressi	R&D and Technology Diffusion	Land Use and Spatial Analysis	Renewable Energy 1
Sala Barbantini	Energy Demand 1	Regional Climate Policies 1	Energy Markets and Prices 1
Sala Consiglio	Uncertainty	International Negotiations	Sustainable Development 1
Sala Soffitto	Policy Instruments 1	Innovation	Sectoral Analysis

THURSDAY, 18 JUNE 2009

ROOM	PARALLEL SESSION 4 11.30 - 13.00	PARALLEL SESSION 5 14.30 - 16.30	PARALLEL SESSION 6 17.00 - 18.30
Salone Arazzi	Climate Policy 3	PLANETS Project Special Session	Climate Policy 4
Sala Cipressi	Adaptation	Sustainable Energy	Renewable Energy 2
Sala Barbantini	Energy Demand 2	Regional Climate Policies 2	Energy Markets and Prices 2
Sala Consiglio	European Climate Policy 1	Empirical Studies	Sustainable Development 2
Sala Soffitto	Policy Instruments 2	Innovation and Technology Transfer	Energy Scenarios

FRIDAY, 19 JUNE 2009

ROOM	PARALLEL SESSION 7 11.30 - 13.00	PARALLEL SESSION 8 14.30 - 16.30	PARALLEL SESSION 9 17.00 - 18.30
Salone Arazzi	Climate Policy 5	Regional Analysis of the Power Sector	
Sala Cipressi	Transport	Energy Efficiency	Power Generation
Sala Barbantini	Energy Demand 3	Renewable Energy 3	Finance, Climate and Energy
Sala Consiglio	European Climate Policy 2	Carbon Markets	Power Sector: Regional Studies
Sala Soffitto	Policy Instruments 3	Technology Learning and Diffusion	

WEDNESDAY, 17 JUNE 2009

8.30 - 9.00: REGISTRATION

Participants' registration will be held in Sala Bianca

9.00 - 9.30: OPENING and WELCOME ADDRESS

Corrado CLINI - *Ministry for the Environment, Land and Sea, Italy*

Carlo CARRARO - *Fondazione Eni Enrico Mattei and Università Ca' Foscari Venice, Italy*

9.30 - 11.00: PLENARY SESSION

Why Post-Kyoto Climate Policy Must Look East

Feasible Climate Targets

Richard G. RICHELIS - *Electric Power Research Institute, USA*

Low Carbon Scenario for China in 2050

Kejun JIANG - *Energy Research Institute, China*

Discussion

Salone Arazzi

11.00 - 11.30: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

11.30 - 13.00: PARALLEL SESSION 1

Climate Policy 1

Chair: Romain DUVAL

Coupling Bottom-Up and Top-Down Energy Models: Challenges and Results with TIAM and GEMINI-E3

Maryse LABRIET - *Energy and Environment Consultant, Spain*

The Role of Technological Flexibility for the Distributive Impacts of Climate Change Mitigation Policy

Michael LÜKEN - *Potsdam Institute for Climate Impact Research, Germany*

The Role of R&D and Technology Diffusion in Climate Change Mitigation: New Perspectives Using the Witch Model

Romain DUVAL - *OECD, France*

Salone Arazzi

R&D and Technology Diffusion

Chair: Sabine FUSS

Upper Limits for Renewable Electricity Penetration by 2050

Peter D. LUND - *Helsinki University of Technology, Finland*

Green Electricity and Access Charges *(Job Market Paper)*

Chéma Abderrazak MSALLEM - *Université Paris-Sud 11, France*

The Threat of Carbon Regulation & Business Hedging Strategy

Sabine FUSS - *International Institute of Systems Analysis, Austria*

Energy Demand 1

Chair: Hillard HUNTINGTON

Measuring the Potential Value of Demand Response Using Historical Market Data

Graziano ABRATE - *Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Italy*

Application of Pinch Analysis Approach to CO2 Dioxide Emission Constrained Energy Planning: Targeting Minimum Low-Carbon Energy Demand for China

Dingjiang CHEN - *Tsinghua University, China*

Efficiency and the Shape of Future Energy Demand: Initial Findings from Energy Modeling Forum Study 25

Hillard HUNTINGTON - *Stanford University, USA*

Uncertainty

Chair: Alexander GOLUB

Providing Global Public Goods under Uncertainty

Vincent BOUCHER - *Université de Montréal, Canada*

Evaluating Uncertain CO2 Abatement over the Very Long Term

Reyer GERLAGH - *University of Manchester, UK*

Economics of Controlling Climate Change under Uncertainty

Alexander GOLUB - *Environmental Defense Fund, USA*

Policy Instruments 1

Chair: Joris MORBEE

Households under Carbon Constraint and the Burden Sharing Issue

Jean-Michel CAYLA - *Mines ParisTech, France*

Carbon Tax or Cap-and-Trade: a Computable General Equilibrium Analysis of China

Yan XU - *Macaulay Land Use Research Institute, UK*

Political Economy of Resource Taxation in Petroleum-Producing Countries

Joris MORBEE - *KULeuven-CES and KULeuven Energy Institute, Belgium*

13.00 - 14.30: LUNCH

Buffet lunch served in the Cipressi's Cloister

14.30 - 16.30: PARALLEL SESSION 2

Salone Arazzi

Electricity Systems

Chair: Claude CRAMPES

Regulation of Continuity of Supply in the Electricity Sector and Cost of Energy not Supplied

Ilaria LOSA - CESI RICERCA S.p.A., Italy

Transmission Network Unbundling and Grid Investments: Evidence from the UCTE

Countries (Job Market Paper)

Paolo NARDI - Università Commerciale Luigi Bocconi, Italy

The Integration of Renewable Energies in the European Electricity Grid

Katrin SCHABER - Max-Planck-Institute for Plasmaphysics, Germany

Electricity Production with Intermittent Sources of Energy

Claude CRAMPES - Toulouse School of Economics, France

Sala Cipressi

Land Use and Spatial Analysis

Chair: Shunsuke MORI

Implications of Limiting CO2 Concentrations for Land Use and Energy

Katherine CALVIN - Pacific Northwest National Laboratory, USA

Seeking CLEWS - Climate Land Energy Water Strategies: A Case Study

Mark HOWELLS - International Atomic Energy Agency, Austria

GIS Based Model to Optimize the Utilization of Renewable Energy Carriers and Related Energy Flows

Markus BIBERACHER - Research Studios Austria, Austria

GISELA - GIS-based Evaluation of Land-use and Agriculture Market Analysis and the Effects of Income Distribution

Shunsuke MORI - Tokyo University of Science, Japan

Sala Barbanfini

Regional Climate Policies 1

Chair: Alison HUGHES

Cap-and-Trade or Renewable Portfolio Standard: An Analysis of President Obama's Energy and Environment Agenda (Job Market Paper)

Thomas ALFSTAD - Brookhaven National Laboratory, USA

A Stochastic Game Model for the Optimal Timing of Regional Climate Policies

Olivier BAHN - GERAD and HEC Montréal, Canada

Alain HAURIE - ORDECSYS, Switzerland

Technological Choices for Achieving the EU-Objectives on Climate Change and Renewable Energy in Belgium, a Sensitivity Analysis

Nijs WOUTER - VITO-Vision on Technology, Belgium

Long Term Mitigation Scenarios for South Africa

Alison HUGHES - University of Cape Town, South Africa

International Negotiations

Chair: Valentina BOSETTI

Revised Emissions Growth Projections for China: Why Post - Kyoto Climate Policy Must Look East

Geoffrey BLANFORD - *Electric Power Research Institute, USA*

The Impact of Climate Change on the Balanced-Growth-Equivalent: An Application of FUND

David ANTHOFF - *The Economic and Social Research Institute, Ireland*

Future IPCC Scenarios-Lessons Learned and Challenges to Scenario Building in Climate Change Policy *(Job Market Paper)*

Thomas FLÜELER - *ETH Zürich, Switzerland*

Bastien GIROD - *ETH Zürich, Switzerland*

Modelling Economic Impacts of Alternative International Climate Policy Architectures. A Quantitative and Comparative Assessment of Architectures for Agreement

Valentina BOSETTI - *Fondazione Eni Enrico Mattei, Italy and Princeton University, USA*

Innovation

Chair: Shunsuke MANAGI

The Optimal Timing of Transition to New Environmental Technology in Economic Growth

Akira MAEDA - *Kyoto University, Japan*

Makiko NAGAYA - *Kyoto University, Japan*

The Determinants of Innovation in Electricity Generation Technologies

Elisa LANZI - *Fondazione Eni Enrico Mattei, Italy*

Determinants of Innovations in Clean Coal Technologies

Sebastian VOIGT - *Centre for European Economic Research, Germany*

Energy Price-Induced and Exogenous Technological Progress: Analysis of the Economic and Environmental Effects

Shunsuke MANAGI - *Yokohama National University, Japan*

16.30 - 17.00: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

17.00 - 18.30: PARALLEL SESSION 3

Climate Policy 2

Chair: Massimo TAVONI

Co-benefits of Climate Policy

Johannes BOLLEN - *Netherlands Environmental Assessment Agency, The Netherlands*

Business as Unusual: The Role of Existing Policies in Energy and Emissions Baselines

Neil STRACHAN - *King's College London, UK*

Sharing Global CO2 Emission Reductions among 1 Billion High Emitters

Massimo TAVONI - *Fondazione Eni Enrico Mattei, Italy*

Renewable Energy 1

Chair: Cornelia OHL

Perspectives of CCS Power Plants under Different Climate Policy Regimes in Europe

Tom KOBER - *University of Stuttgart, Germany*

Regional Systems Analysis of Introduction of Hydrogen in Norway

Kari Aamodt ESPEGREN - *Institute for Energy Technology, Norway*

How to Cope with Externalities of Wind Power Development? - Combining /Ecological-Economic Modelling and Choice Experiments in a German Case Study

Cornelia OHL - *Helmholtz Centre for Environmental Research, Germany*

Energy Markets and Prices 1

Chair: Joseph F. DECAROLIS

The Pass Through of Oil Prices into Consumer Liquid Fuel Prices in an Environment of High and Volatile Oil Prices

Aidan MEYLER - *European Central Bank, Germany*

Disentangling the Effects of Oil Shocks: the Role of Rigidities and Monetary Policy

Baltasar MANZANO - *Universidad de Vigo, Spain*

Application of a Novel Optimization Technique to Produce Maximally Different Energy Futures

Joseph F. DECAROLIS - *North Carolina State University, USA*

Sustainable Development 1

Chair: Chung-Huang HUANG

Determinants of Clean Development Mechanism Projects

Janina KETTERER - *Ifo Institute for Economic Research, Germany*

Sustainability, Neutrality and Beyond in the Framework of Swiss Post-2012 Climate Policy

André SCEIA - *Swiss Federal Institute of Technology at Lausanne, Switzerland*

Measurement of Energy Efficiency: A New Economic Indicator

Chung-Huang HUANG - *Kainan University and National Tsing Hua University, Taiwan*

Sectoral Analysis

Chair: Franziska HOLZ

Social MARKAL: First Modeling Attempts in the Nyon Residential and Commercial Sectors Taking into Account Behavioral Uncertainties

Denis LAVIGNE - *Royal Military College, Canada*

Assessing the Impact of Subglobal Climate Agreements on the Location of Copper Production Activities

Bruno LANZ - *ETH Zürich, Switzerland*

COALMOD-World: The Security of Coal Supplies in Europe and Other Importing Regions Until 2030

Franziska HOLZ - *DIW Berlin, Germany*

18.30: WELCOME RECEPTION in the Cipressi's Cloister and PETER GREENAWAY'S SHOW in the Palladian Refectory

The participants and accompanying persons will meet and enjoy a cocktail that will be served in the splendid cloister of the ancient monastery, Fondazione Giorgio Cini.

During the cocktail all the participants will have the possibility to attend the extraordinary multimedia performance: **The Wedding at Cana by Paolo Veronese. A vision by Peter Greenaway**, the result of the collaboration between Peter Greenaway, the director of photography Reiner van Brummelen and the Franco Laera's production company Change Performing Arts, with the initiative of Fondazione Giorgio Cini.

Peter Greenaway is well-known for his work combining images from art history and the language of film. Now after Rembrandt's *Night Watch* and Leonardo da Vinci's *Last Supper*, the English artist will tackle Paolo Veronese's *Wedding at Cana* and its setting of the Palladian Refectory on the Island of San Giorgio Maggiore.

The *Wedding at Cana* facsimile offers Peter Greenaway the opportunity for an innovative and original interpretation via a state-of-the-art interplay of images, lighting, music, voices and sounds that will seem to emerge directly from the painting and the walls of the Refectory. The performance – a true multimedia event lasting about 50 minutes – will make spectators relive the episode of the marriage feast at Cana where Christ accomplished his first miracle, as narrated in Gospel of John. Greenaway will point out to the public the painting's scores of characters, from the servants preparing dishes, to the banquet guests, to the guests of honour – Jesus Christ and his mother Mary – seated at the centre of the painting's architectural composition, in an on-going *crescendo* culminating in the narration's crucial moment: the miracle of water turning into wine.

Dress code: Business Casual.



THURSDAY, 18 JUNE 2009

9.00 - 11.00: PLENARY SESSION

Salone Arazzi

The Financial Dimension of Climate and Energy Transitions

Technology Deployment and Private Investment

Raymond J. KOPP - *Resources for the Future, USA*

Environment and Finance: lessons to be learnt

Domenico SINISCALCO - *Morgan Stanley, Italy*

The Limits of (International) Cap and Trade

Thomas C. HELLER - *Stanford University, USA*

Discussion

11.00 - 11.30: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

11.30 - 13.00: PARALLEL SESSION 4

Salone Arazzi

Climate Policy 3

Chair: *Silvana MIMA*

Policy Challenges in Setting 2050 GHG Targets

Francisco DE LA CHESNAYE - *Electric Power Research Institute, USA*

Global Energy Policy: Transforming Governance for the Transition to a Sustainable Energy Future

Sylvia KARLSSON - *Turku School of Economics, Finland*

Assessment of the Impacts of Climate Change on the Energy Systems with POLES Model

Silvana MIMA - *LEPIL, CNRS, Université Grenoble 2, France*

Sala Cipressi

Adaptation

Chair: *Wouter WETZELS*

The Role of Ambiguity in the Evaluation of the Net Benefits of the MOSE System in the Venice Lagoon

Fulvio FONTINI - *Università degli Studi di Padova, Italy*

A Model Interface to Analyse Climate Change Impacts and Adaptation for a NUTS III Region in Austria

Andreas TÜRK - *University of Graz, Austria*

Investment Behavior for the Adaptation of Energy Efficient Technology: Looking for Key Barriers

Wouter WETZELS - *Energy research Centre of the Netherlands, The Netherlands*

Energy Demand 2

Chair: Leila DAGHER

The Causality Between Energy Consumption and Economic Growth: a Multi-Sectoral Analysis Using non-Stationary Cointegrated Panel Data

Chiara MARTINI - Ente per le Nuove Tecnologie, l'Energia e l'Ambiente, Italy

Pooled Time Series Cross-Section Estimation of Demand for Gasoline and Diesel in G7 Countries

Mehdi ASALI - Research Division of OPEC Secretariat, Austria

An ADL Model for Electricity and Natural Gas Demand in Colorado

Leila DAGHER - American University of Beirut, Lebanon

European Climate Policy 1

Chair: Simone BORGHESI

Climate Change Mitigation: Challenges for the European Electricity Sector *(Job Market Paper)*

Ulrich REITER - Paul Scherrer Institut, Switzerland

Energy Cost Pass-Through and Strategic Pricing: Sectoral Evidence for the EU ETS

Victoria ALEXEEVA-TALEBI - Centre for European Economic Research, Germany

Climate Change and Energy Policy: a European Perspective

Simone BORGHESI - Università degli Studi di Siena, Italy

Policy Instruments 2

Chair: Jon STRAND

The EU ETS and Firm Profits: an Ex-Post Analysis in the Swedish Context

Haishan YU - Örebro University, Sweden

How Much Greener is Really Green? Carbon Taxation Design and Resource Extraction

Markus ZIMMER - Ifo Institute for Economic Research, Germany

Who Gains and Who Loses by Fossil-Fuel Taxes and Caps: Importers Versus Exporters

Jon STRAND - World Bank, USA and University of Oslo, Norway

13.00 - 14.30: LUNCH

Buffet lunch served in the Cipressi's Cloister

14.30 - 16.30: PARALLEL SESSION 5

PLANETS Project Special Session

Chair: Richard LOULOU

A Preliminary Explanation of Multi-Model Results for PLANETS Climate Scenarios

Richard LOULOU - McGill University, Canada and KANLO Consultants, France

Policy Scenarios and Stochastic Analysis with the GEMINI-E3 Model

Marc VIELLE - Ecole Polytechnique Fédérale de Lausanne, Switzerland

Implication of the EU Climate Policy for the EU27 and the Member States till 2020 and beyond

Markus BLESZ - University of Stuttgart, Germany

Sharing the Burden to 2050: What Role for an International Carbon Market?

Enrica DE CIAN - Fondazione Eni Enrico Mattei, Italy

Massimo TAVONI - Fondazione Eni Enrico Mattei, Italy and Princeton University, USA

Compatibility of a Severe Climate Target with ad hoc Intermediate Emission Quotas. A PLANETS study via ETSAP-TIAM

Richard LOULOU - McGill University, Canada and KANLO Consultants, France

Sustainable Energy

Chair: Nicolas BOCCARD

Exploring the Cost-Effective Strategy for Introducing Hydrogen by Considering Hydrogen Supply Infrastructure in Detail

Takayuki TAKESHITA - Ritsumeikan University, Japan

Fuelwood Consumption and Public policies: which Impacts on the French Forestry Sector?

Sylvain CAURLA - Laboratory of Forest Economics, France

Economic Properties of Wind Power. A European Assessment

Nicolas BOCCARD - Universitat de Girona, Spain

Regional Climate Policies 2

Chair: Basil SHARP

Interactions and Implications of Renewable and Climate Change Policy on UK Energy Scenarios

Gabrial ANANDARAJAH - King's College London, UK

Co-Benefits of CO2 Reduction in a Developing Country: Case of Thailand

Ram M. SHRESTHA - Asian Institute of Technology, Thailand

Optimisation of the Danish Energy System in the Light of Externality Cost

Kenneth KARLSSON - Risø, DTU, Denmark

New Zealand's ETS: All Gases, All Sectors

Basil SHARP - The University of Auckland, Australia

Empirical Studies

Chair: Ken G. WILLIS

Modelling of Heating Sector in Denmark with Focus on Local Externalities

Erika ZVINGILAITE - Risø, DTU, Denmark

The Role of Electricity from Biomass Based Cogeneration: Case of an Italian Province

Giuseppe MULIERE - Università degli Studi di Pavia, Italy

Econometric Analysis of Key Factors Contributing to Energy Intensity Improvement

Azusa OKAGAWA - Japan Society for the Promotion of Science and National Institute for Environmental Studies, Japan

Renewable Energy: Willingness-To-Pay by Households for Micro-Generation Technologies

Ken G. WILLIS - Newcastle University, UK

Innovation and Technology Transfer

Chair: Antoine DECHEZLEPRÊTRE

At Home and Abroad: An Empirical Analysis of Innovation in Energy-Efficient Technologies

Elena VERDOLINI - Università Cattolica del Sacro Cuore and Fondazione Eni Enrico Mattei, Italy

Induced Innovation and International Technological Opportunity in the Field of Energy: Evidence from World Patent Citations (Job Market Paper)

Hugo PILLU - Laboratoire ERASME, Ecole Centrale Paris, France

Invention and Transfer of Climate Change Mitigation Technologies on a Global Scale: A Study Drawing on Patent Data

Antoine DECHEZLEPRÊTRE - CERNA-Mines ParisTech, France

16.30 - 17.00: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

17.00 - 18.30: PARALLEL SESSION 6

Salone Arazzi

Climate Policy 4

Chair: Socrates KYPREOS

Potentials of CO2 Emissions Reduction in Russia: Analysis on Reference Energy System RU-TIMES Model

Oleg LUGOVOY - Environmental Defense Fund, USA

Optimal R&D Investments and the Cost of GHG Stabilization When Knowledge Spills Across Sectors

Lea NICITA - Fondazione Eni Enrico Mattei, Italy

Climate Change Scenarios Evaluated with MERGE-ETL and Technology Transfer Protocols

Socrates KYPREOS - Paul Scherrer Institute, Switzerland

Sala Cipressi

Renewable Energy 2

Chair: Bob VAN DER ZWAAN

Sustainable Bioenergy in the Triangle of Climate Change, Energy Systems and Land Use - Main Results of a Global Bioenergy Analysis

Michael STERNER - University of Kassel, Germany

Climate Change Energy Technology R&D Portfolio

Erin BAKER - University of Massachusetts, USA

Nuclear versus Coal plus CCS: A Comparison of Two Competitive Base-Load Climate Control Options

Bob VAN DER ZWAAN - Energy research Centre of the Netherlands, The Netherlands

Sala Barbantini

Energy Markets and Prices 2

Chair: Patrick CRIQUI

Filtering and Analysis of Oil Prices

Athanasios ZERIS - Aristotle University of Thessaloniki, Greece

The Impact of High Oil Prices on Transport and Energy Systems in Europe

Davide FIORELLO - TRT Trasporti e Territorio, Italy

Exploring the Energy Security - Climate Policy Nexus with the POLES Model

Patrick CRIQUI - LEPII, CNRS-Université de Grenoble, France

Sala Consiglio

Sustainable Development 2

Chair: Alessandro VERCELLI

Integrated Assessment for CDM Activities in Asian Countries Using Interlinkages of Energy System Models and Life-cycle Assessment Models

Eiichi ENDO - National Institute of Advanced Industrial Science and Technology, Japan

The Impact of Technological and Socio-Demographic Change on the Energy Demand of Households

Kurt KRATENA - Austrian Institute of Economic Research, Austria

Greenhouse Gas Emissions and the Energy System: Are Current Trends Sustainable?

Alessandro VERCELLI - Università degli Studi di Siena, Italy

Energy Scenarios

Chair: Ramachandran KANNAN

Evaluation of Crude Oil Production Forecast Studies Using Statistical Analysis

Shinichirou MORIMOTO - National Institute of Advanced Industrial Science and Technology, Japan

Development of Supply Curves for Abatement of Green House Gas Emissions from Coal-fired Utility Boilers

Samudra VIJAY - ORISE and Environmental Protection Agency, USA

Approaches in Modelling of a Resilient Energy Scenario in UK MARKAL Elastic Demand (MED) Version

Ramachandran KANNAN - King's College London, UK

18.30: BOAT TOUR in the Venetian Lagoon, VISIT OF THE CATHEDRAL and SOCIAL DINNER in the Torcello Island

Two boats will leave with all the participants and accompanying persons at 18.30 from the Fondazione Giorgio Cini, on the Island of San Giorgio Maggiore.

After a short trip in the Venetian Lagoon the participants will arrive at Torcello, an island with only a few dozens of inhabitants. Here participants can visit the Cathedral of *Santa Maria Assunta*, which dates from the 7th century and contains beautiful Byzantine mosaics from the 11th and 12th century.

Then, the dinner will take place in the Locanda Ciprani, one of the oldest Venetian restaurant, immersed in a beautiful garden and in an atmosphere of old days. At the end the two boats will bring all the participants back to St. Mark's Square.

Dress code: Business Casual.



FRIDAY, 19 JUNE 2009

9.00 - 11.00: PLENARY SESSION

Salone Arazzi

The Future of Oil Prices

The Economics of an Integrated World Oil Market

William D. NORDHAUS - *Yale University, USA*

Oil Price Behaviour and the Future of Energy

Leonardo MAUGERI - *Eni Spa, Italy*

Understanding the Oil Future by Examining the Past

Adam E. SIEMINSKI - *Deutsche Bank, USA*

Discussion

11.00 - 11.30: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

11.30 - 13.00: PARALLEL SESSION 7

Salone Arazzi

Climate Policy 5

Chair: Roman PODOLETS

National Climate Policy within an International Emission Trading System

Lars BOHLIN - *University of Örebro, Sweden*

A Scenario Analysis of the Italian Electricity Market: Emissions and Compliance with the EU Targets

Alessandro ZANI - *Università degli Studi di Bergamo, Italy*

Practical Validity of Input Parameters in the Case of TIMES-Ukraine Model

Roman PODOLETS - *Ukrainian National Academy of Sciences, Ukraine*

Sala Cipressi

Transport

Chair: Shoibal CHAKRAVARTY

The Impact of a Rising Oil Prices on Transport

Davide FIORELLO - *TRT Trasporti e Territorio, Italy*

Sustainable Transport for Developing Countries: Scenarios for India

Subash DHAR - *UNEP Risø Centre, DTU, Denmark*

Air Travel Demand and Income: Empirical Investigation and Future Scenarios

Shoibal CHAKRAVARTY - *Princeton University, USA*

Energy Demand 3

Chair: Christoph KONRAD

Structural Analysis of Electricity Consumption by Manufacturing Sectors. The Spanish CasePablo DEL RIO GONZALES - *Institute for Public Goods and Policies, CSIC, Spain***The Impact of Temperature Changes on Residential Energy Consumption**Sebastian PETRICK - *Kiel Institute for the World Economy, Germany***Projections of Energy Demand: Different Approaches and their Synthesis**Christoph KONRAD - *European Institute for Energy Research, Germany***European Climate Policy 2**

Chair: Stefan SCHLEICHER

The Impact of the European Union Emission Trading Scheme on Electricity Generation SectorsDjamel KIRAT - *University Paris1 Pantheon-Sorbonne, France***Abatement and Allocation in the Pilot Phase of the EU ETS**Barry ANDERSON - *University College Dublin, Ireland***Analysing the EU 2020 Package with an Extended Technology Wedges Approach**Stefan SCHLEICHER - *University of Graz, Austria***Policy Instruments 3**

Chair: Francesco GULLI

An Analysis of Energy Price Reform: A CGE Approach *(Job Market Paper)*Davood MANZOOR - *Imam Sadiq University and Ministry of Energy, Iran***Retail Energy Prices in Germany: Price Dispersion, Adjustment Rates and Demand Side Characteristics**Nikolas WOELFING - *Centre for European Economic Research, Germany***Environmental Taxation within Electricity Auctions with Dominant Firm**Francesco GULLI - *Università Commerciale Luigi Bocconi, Italy*Liliya CHERNYAVS'KA - *Institute for Transport Studies, University of Leeds, UK***13.00 - 14.30: LUNCH**

Buffet lunch served in the Cipressi's Cloister

14.30 - 16.30: PARALLEL SESSION 8**Regional Analysis of the Power Sector**

Chair: Audun FIDJE

A Power Sector Analysis for Cuba Using the MARKAL/TIMES ModelEvelyn WRIGHT - *International Resources Group, USA***Barriers to the Adoption of Cleaner and Energy Efficient Technologies in Vietnam**Nhan T. NGUYEN - *CIREN, France***Measuring Energy Linkages with the Hypothetical Extraction Method: an application to Spain** *(Job Market Paper)*Ana-Isabel GUERRA - *Universitat Autònoma de Barcelona, Spain***Regional TIMES Model for Norway with High Time Resolution**Audun FIDJE - *Institute for Energy Technology, Norway*

Energy Efficiency

Chair: Carol SHAY

Energy Efficiency in Europe: Trends, Convergence and Policy Effectiveness

Andrea BIGANO - *Fondazione Eni Enrico Mattei, Italy*

Energy and CO2 Efficiency in the European Manufacturing Sector: A Decomposition Analysis

Dirk C. BÖHM - *Robert Bosch GmbH and University of Hohenheim, Germany*

Revisiting World Energy Intensity Convergence: Regional Differences and Institutional Influences

Brant LIDDLE - *Victoria University, Australia*

Energy Efficiency and the Benefits for Carbon Dioxide Reduction in the United States (An Analysis Using the MARKAL Model)

Carol SHAY - *Environmental Protection Agency, USA*

Renewable Energy 3

Chair: Johan ALBRECHT

Feasibility Study for Low-Carbon Grid with Renewables in Japan

Shuichi ASHINA - *National Institute for Environmental Studies, Japan*

The Enhanced Use of Wood-Biomass Macroeconomic, Sectoral and Environmental Impacts

Todor BALABANOV - *Institut für Höhere Studien, Austria*

Renewable Energy Technologies and Industrial Success; Do Economics Incentives Matter? (Job Market Paper)

Johan ALBRECHT - *Ghent University, Belgium*

Carbon Markets

Chair: Barbara BUCHNER

Measuring the Contribution of a Carbon Price to Greenhouse Gas Abatement in the Context of Strong Complementary Policies and Low Oil Prices

Paul W. GRAHAM - *CSIRO Energy Transformed Flagship, Australia*

Out of Thin Air: Inventing and Managing a Viable Market for Carbon

Bryan K. MIGNONE - *The Brookings Institution, USA*

On the Realized Volatility of the ECX CO2 Emissions 2008 Futures Contract: Distribution, Dynamics and Forecasting

Benoit SEVI - *University of Angers, France*

Sectoral Approaches and the Carbon Market

Barbara BUCHNER - *International Energy Agency, France*

Technology Learning and Diffusion

Chair: Koen SCHOOTS

Learning by Doing for Renewable Energy Technologies: Empirical Evidence from Iran

Alimorad SHARIFI - *University of Isfahan, Iran*

Mehdi SADEGHI - *Imam Sadiq University, Iran*

The Role of Hydrogen in Long-Term Energy System: an Updated Quantitative Analysis with the POLES Model

Elie BELLEVRAT - *Enerdata, France*

Learning in Times of Change. A Dynamic Explanation for Technological Progress

Francesco FERIOLI - *European Commission, Belgium*

Technology Learning for Fuel Cells: an Assessment of Past and Potential Cost Reductions

Koen SCHOOTS - *Energy Research Centre of the Netherlands, The Netherlands*

16.30 - 17.00: COFFEE BREAK

Refreshments served in the Cipressi's Cloister and in the Salone Arazzi's Garden

17.00 - 18.30: PARALLEL SESSION 9

Sala Cipressi

Power Generation

Chair: Marco BARONI

RETD Perspectives on the Role of Renewable Energy in Global Energy Scenarios

Ryan KATOFISKY - representing RETD Implementing Agreement

An Analysis of a U.S. Federal Low-Carbon Fuel Standard for Transportation

Carmen DIFIGLIO - U.S. Department of Energy, USA

World Energy Model: Focus on Power Generation Modelling

Marco BARONI - International Energy Agency, France

Sala Barbantini

Finance, Climate and Energy

Chair: Athanasios DAGOUMAS

Costing a 2020 Target of 15% Renewable Electricity for South Africa

Andrew MARQUARD - University of Cape Town, South Africa

Real Options Valuation of a Power Generation Project: A Monte Carlo Approach

Bruno MERVEN - IRG, USA and University of Cape Town, South Africa

Energy Investments under the Financial Crisis

Athanasios DAGOUMAS - 4CMR, University of Cambridge, UK

Sala Consiglio

Power Sector: Regional Studies

Chair: Pascal MÜHLICH

A New Approach for Estimating Tourism - Induced Electricity Consumption

Mohcine BAKHAT - Universitat de les Illes Balears, Spain

Energy Vulnerability in Electricity Market. Turkish Case Study

Şükrü NENEM - Boğaziçi University, Turkey

A TIMES Model as a Means of Local Network Planning

Pascal MÜHLICH - Max-Planck-Institut für Plasmaphysik, Germany

International Energy Job Market

For the first time in IEW's history, an International Energy Job Market is organised within the 2009 International Energy Workshop. The Job Market aims to offer the two sides of the market - institutions with open positions and candidates looking for a job - both a virtual and a physical place to meet and look for the best match.

Applications to the Job Market are available on the IEW 2009 web site (www.iccgov.org/iew2009). Hopefully the communication between the two parties has already started, and now that you have the opportunity to meet, we would like to wish you all good luck.

For more information and room reservation please ask at the Registration and Information Desk.

A list of Job Market Papers is provided below:

Parallel Session 1, 11.30-13.00, Sala Cipressi

Green Electricity and Access Charges

Chéma Abderrazak MSALLEM - *Université Paris-Sud 11, France*

Parallel Session 2, 14.30-16.30, Salone Arazzi

Transmission Network Unbundling and Grid Investments: Evidence from the UCTE Countries

Paolo NARDI - *Università Commerciale Luigi Bocconi, Italy*

Parallel Session 2, 14.30-16.30, Sala Barbantini

Cap-and-Trade or Renewable Portfolio Standard: An Analysis of President Obama's Energy and Environment Agenda

Thomas ALFSTAD - *Brookhaven National Laboratory, USA*

Parallel Session 2, 14.30-16.30, Sala Consiglio

Future IPCC Scenarios - Lessons Learned and Challenges to Scenario Building

Thomas FLÜELER - *ETH Zürich, Switzerland*

Bastien GIROD - *ETH Zürich, Switzerland*

Parallel Session 4, 11.30-13.00, Sala Consiglio

Climate Change Mitigation: Challenges for the European Electricity Sector

Ulrich REITER - *Paul Scherrer Institut, Switzerland*

Parallel Session 5, 14.30-16.30, Sala Soffitto

Induced Innovation and International Technological Opportunity in the Field of Energy: Evidence from World Patent Citations

Hugo PILLU - *Laboratoire ERASME, Ecole Centrale Paris, France*

Parallel Session 7, 11.30-13.00, Sala Soffitto

Electricity Price Reform Analysis in Iran: A CGE Approach

Davood MANZOOR - *Imam Sadiq University and Ministry of Energy, Iran*

Parallel Session 8, 14.30-16.30, Salone Arazzi

Measuring Energy Linkages with the Hypothetical Extraction Method: an application to Spain

Ana-Isabel GUERRA - *Universitat Autònoma de Barcelona, Spain*

Parallel Session 8, 14.30-16.30, Sala Barbantini

Renewable Energy Technologies and Industrial Success; Do Economics Incentives Matter?

Johan ALBRECHT - *Ghent University, Belgium*

Keynote Speakers' Profile



Thomas C. HELLER - *Stanford University, USA*

An expert in international law and legal institutions, Thomas C. Heller has focused his research on the rule of law, international climate control, global energy use, and the interaction of government and nongovernmental organizations in establishing legal structures in the developing world. He has created innovative courses on the role of law in transitional and developing economies, as well as the comparative study of law in developed economies. He directs the law school's Rule of Law Program, as well as the Stanford Program in International Law. Professor Heller has been a visiting professor at the European University Institute, Catholic University of Louvain, and Hong Kong University, and has served as the deputy director of the Freeman Spogli Institute for International Studies at Stanford University, where he is now a senior fellow. Before joining the Stanford Law School faculty in 1979, he was a professor of law at the University of Wisconsin Law School and an attorney-advisor to the governments of Chile and Colombia. Professor Heller is a Senior Fellow at the Stanford Freeman Spogli Institute for International Studies and a Senior Fellow (by courtesy) at the Woods Institute for the Environment.



Kejun JIANG - *Energy Research Institute, China*

Kejun Jiang, got his Ph.D in Tokyo Institute of Technology in 1999. From 1993, Kejun Jiang began the research on climate change relative to energy policy analysis, which focus on energy technology policy assessment, energy supply policy assessment, renewable energy development and energy conservation. At present He is mainly working on policy assessment for energy and environment policy assessment by leading Integrated Policy Assessment Model for China (IPAC) team. Major focus includes energy policy, energy system, energy market analysis, and climate change, local environment policies and international negotiation. Started from 1997, worked with IPCC for Special Report on Emission Scenario and Working Group III Third Assessment Report. He was leader author for IPCC WGIII AR4 Chapter 3, and leader author for GEO-4 Chapter 2.



Raymond J. KOPP - *Resources for the Future, USA*

Kopp holds Ph.D. and MA degrees in economics and an undergraduate degree in finance. He has been a member of the RFF research staff since 1977 and has held a variety of management positions within the institution. Kopp's interest in environmental policy began in the late 1970s, when he developed techniques to measure the effect of pollution control regulations on the economic efficiency of steam electric power generation. He then led the first examination of the cost of major U.S. environmental regulations in a full, general equilibrium, dynamic context by using an approach that is now widely accepted as state-of-the-art in cost-benefit analysis. During his career Kopp has specialized in the analysis of environmental and natural resource issues with a focus on Federal regulatory activity. He is an expert in techniques of assigning value to environmental and natural resources that do not have market prices, which is fundamental to cost-benefit analysis and the assessment of damages to natural resources. Kopp's current research interests focus on the design of domestic and international policies to combat climate change.



Leonardo MAUGERI - *Eni Spa, Italy*

Among the world's leading energy experts, Leonardo Maugeri is Head of Strategy and Development at Eni. He specialised in international energy economics in Great Britain (London School of Economics) and the United States (Georgetown University, Washington DC). He joined Eni in 1994 and has occupied a number of important positions. Maugeri is also a director of Polimeri Europa SpA (the Eni petrochemical subsidiary), Italgas and the Fondazione Mattei.

He is a member of the *Energy Advisory Board* and the *World Economic Laboratory* of the Massachusetts Institute of Technology (MIT), as well as the *International Councilor Board* of the Center for Strategic and International Studies (CSIS - Washington, D.C.), the *Energy Advisory Board* of Accenture, the Foreign Policy Association (New York) and the Rand Business Forum (*Los Angeles*). Maugeri is the author of four books and numerous articles published by some of the world's most prestigious periodicals.



William D. NORDHAUS - *Yale University, USA*

William D. Nordhaus is Sterling Professor of Economics at Yale University, New Haven, Connecticut, USA . He completed his undergraduate work at Yale University and received his Ph.D. in Economics from the Massachusetts Institute of Technology, Cambridge, USA . He has been on the faculty of Yale University since 1967 and has been Full Professor of Economics since 1973 and also is Professor in Yale's School of Forestry and Environmental Studies. He is a member of the National Academy of Sciences and a Fellow of the American Academy of Arts and Sciences. He is on the research staff of the National Bureau of Economic Research and has been a member and senior advisor of the Brookings Panel on Economic Activity, Washington, D.C. since 1972. Professor Nordhaus is current or past editor of several scientific journals and has served on the Executive Committees of the American Economic Association and the Eastern Economic Association. He serves on the Congressional Budget Office Panel of Economic Experts. From 1977 to 1979, he was a Member of the President's Council of Economic Advisers. From 1986 to 1988, he served as the Provost of Yale University. He is the author of many books and his research has focused on economic growth and natural resources, the economics of climate change, as well as the resource constraints on economic growth.



Richard G. RICHEL - *Electric Power Research Institute, USA*

Dr. Richard Richels directs Global Climate Change Research at Electric Power Research Institute (EPRI). In previous assignments, he directed EPRI's energy analysis, environmental risk, and utility planning research activities. He has served on a number of national and international advisory panels, including committees of the Department of Energy, the Environmental Protection Agency, and the National Research Council. He served as an expert witness at the Department of Energy's hearings on the National Energy Strategy and testified at Congressional hearings on priorities in global climate change research. Dr. Richels was a lead author for the Intergovernmental Panel on Climate Change's (IPCC) Second and Third Scientific Assessments and served on the Synthesis Team for the US National Assessment of Climate Change Impacts on the United States. He currently serves on the Scientific Steering Committee for the US Carbon Cycle Program and the Advisory Committee for Princeton University Carbon Mitigation Initiative. Dr. Richels received a BS degree in physics from the College of William and Mary. He was awarded MS and PhD degrees in decision science from Harvard University's Division of Applied Sciences. While at Harvard he was a member of the Energy and Environmental Policy Center.



Adam E. SIEMINSKI - *Deutsche Bank, USA*

Adam Sieminski is the Chief Energy Economist for Deutsche Bank, working with the Bank's global commodities research and trading units. Drawing on extensive industry, government and academic sources, Mr. Sieminski forecasts energy market trends and writes on a variety of topics involving energy economics, climate change, politics and commodity prices. From 1998 to 2005 he served as the energy strategist for Deutsche Bank's global oil & gas equity team. Mr. Sieminski was the senior energy analyst for NatWest Securities in the US during 1988-1997, covering the major US international integrated oil companies. He received both his undergraduate degree in Civil Engineering and a masters in Public Administration from Cornell University. He has been president of the US Association for Energy Economics and the National Association of Petroleum Investment Analysts. He is a member of the US National Petroleum Council, an advisory group to the US Secretary of Energy, and helped author the NPC's Global Oil and Gas Study: The Hard Truths. He also acts as a senior advisor for the Center for Strategic and International Studies in Washington and is an advisory board member of the Global Energy and Environment Initiative at Johns Hopkins / SAIS. He is a member of the London, New York and Washington investment professional societies, and holds the Chartered Financial Analyst (CFA) designation.



Domenico SINISCALCO - *Morgan Stanley, Italy*

Domenico Siniscalco developed a successful academic career at a number of universities including the University of Cambridge, the Catholic University of Louvain, The Johns Hopkins University and, most recently, Turin University, where he was a full professor of Economics. He has also served on the boards of several research foundations and non-profit organizations in Italy and abroad, including the Swedish Royal Academy of Sciences (Beijer Institute). In April 2006, Domenico Siniscalco was appointed chairman of Fondazione Collegio Carlo Alberto for economic research. He joined Morgan Stanley in April 2006 as a Managing Director and Vice Chairman of Morgan Stanley International Limited and from December 2007 he is also Country Head for Italy. From July 2001 to September 2005, he served in the Italian Government, first as Director General of the Treasury, then as Economy and Finance Minister. Prior to his appointment as Director General of the Treasury, he served as an independent director on the boards of several Italian listed companies, including Telecom Italia and ENI. Domenico Siniscalco is author of a number of academic books and more than 70 papers on industrial economics, privatisation, energy and environmental economics. Prof. Siniscalco has a Law Degree from Turin University and a PhD in Economics from the University of Cambridge.

List of Participants

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INTERNATIONAL CENTER FOR CLIMATE GOVERNANCE

The International Center for Climate Governance (ICCG - www.iccgov.org) is a joint initiative of the Fondazione Eni Enrico Mattei (FEEM) and the Fondazione Giorgio Cini (FGC), which focuses its research activities on the design of climate policy and related governing institutions.

Located on the Island of San Giorgio Maggiore, in front of Saint Mark's Square in Venice, the ICCG gathers researchers in economics and political sciences who explore the interdependencies between the economic, social, cultural, religious and political aspects of climate governance.

Fully interdisciplinary and open to the interaction and cooperation between different worlds and cultures, the ICCG favours dialogues and negotiations to achieve equitable and effective decisions on climate policy.

The ICCG promotes initiatives at the sectoral, regional, national, and international level designed to reduce greenhouse gas emissions in the atmosphere and to facilitate the adaptation of economic and environmental systems, particularly in developing countries, to the changing climate patterns.

Cooperation has already started with the Euro-Mediterranean Center for Climate Change, Princeton University, the Harvard Environmental Economic Programme and other major international organisations and research institutions.



FONDAZIONE ENI ENRICO MATTEI

The Fondazione Eni Enrico Mattei (FEEM - www.feem.it) is a no-profit, no-partisan research institution established to carry out research in the field of sustainable development.

Recognised by the President of the Italian Republic in July 1989, it has since become a leading international research centre.

One of its principal aims is to promote interaction between academic, industrial and public policy spheres in order to comprehensively address concerns about economic development and environmental degradation.

The FEEM's activities are guided by four fundamental criteria: i) to analyse relevant and innovative research areas; ii) to focus on "real" world issues; iii) to integrate multi-disciplinary approaches; iv) to create and foster international research networks.

FEEM also supplies technical support and advice to the public and private decision-making process in the economic and environmental field, at the national as well as international level (The Italian Ministry of Finance and Economics, the Italian Ministry of the Environment, expert groups under the umbrellas of the EU, the OECD, the United Nations, the UN Commission of Sustainable Development, the IPCC, the Abdus Salam International Centre for Theoretical Physics, etc.).

FEEM also co-operates with Institutions such as the World Bank, the NBER, Resources for the Future, the CEPR, the European Association of Environmental and Resource Economists, the Beijer Institute of Ecological Economics, and several European and US Universities.

EURO-MEDITERRANEAN CENTER FOR CLIMATE CHANGE



The Euro-Mediterranean Center for Climate Change (CMCC - www.cmcc.it) is a newly established research centre, funded by the Italian Ministries of the Environment and Land Protection, of Education, University and Research, and of Economy and Finance, that aims at furthering knowledge in the field of climatic variability, including causes and consequences, through the development of high-resolution simulations and impact models.

It represents the most ambitious initiative undertaken in Italy, within the framework of the National Research Plan, and specifically the National Research Plan on Climate.

The mission of the CMCC is to improve the understanding of the nature and mechanisms of climate variability, its causes and its impacts, with a special emphasis on the Mediterranean Area and its interactions with the global climate.

It targets several ambitious objectives. First of all, the CMCC produces numerical models, simulations, applications and assessments in the specific field of climate dynamics, climate modelling, climate impacts and policy. The CMCC also offers high level training on climate modelling. Second, it establishes a significant computational facility to support Italian climate numerical simulation research and contribute to capacity building in the Mediterranean region. Third, the CMCC disseminates the products of its activity to the national scientific community.

Given that the CMCC aims at providing a key contribution to climate research both at national and international level, its organisation is well connected in the international context, both within the European Union and with external partners of the European Union, in particular with the Mediterranean Countries, the United States and Japan.

FONDAZIONE GIORGIO CINI



The Fondazione Giorgio Cini (www.cini.it) is a non-profit cultural institution based in Venice, Italy. It was constituted by Count Vittorio Cini, in memory of his son Giorgio, with the aim of restoring the Island of San Giorgio Maggiore (devastated after 100 years of military occupation) and of creating an international cultural centre that would re-integrate the Island into the life of Venice.

"The Giorgio Cini Foundation's mission is to promote the redevelopment of the monumental complex on the Island of San Giorgio Maggiore and encourage the creation and development of educational, social, cultural and artistic institutions in its surrounding territory." The creation of the Foundation was one of the most considerable private initiatives of the 20th century. The importance of this undertaking was borne out by the initial investment committed to rehabilitate the Island and by the many events the Foundation has promoted or hosted since. It is further substantiated by the cultural patrimony conserved on the Island and, since 1984, at the Gallery of Palazzo Cini at San Vio.

Alongside the Foundation's commitment to its own research and the conferences and seminars growing out of this work, the Island welcomes events sponsored by distinguished cultural and scientific organisations. It has even been the site of major international summits (in primis the G7 in 1980 and 1987).

The role of the Fondazione Giorgio Cini is attested by the many highly esteemed intellectuals, artists, politicians and economists who have been involved in its programme, and by the recollections of scholars and guests who have spent time on the Island.

Logistical Information

HOW TO REACH THE WORKSHOP VENUE

The meeting venue, the monumental complex of the Fondazione Giorgio Cini, is located on the Island of San Giorgio Maggiore. Getting to the island is extremely easy taking the **waterbus line 2** from one of its stops.

If you are in **Ferrovia** (railway station) or **Piazzale Roma** (car and bus terminal) you can take the waterbus from “Ferrovia” stop and “Piazzale Roma” stop respectively every 10 minutes, with a journey time of about 40 minutes. The cost of the ticket is €6,50.

From **St. Mark's Square**, the nearest line 2 stop is “San Zaccaria” on the Riva degli Schiavoni - the promenade located to the left of St. Mark's Square facing the waterfront. From St. Mark's Square turn left and proceed along the promenade crossing over two bridges. After the second bridge you will see two landing stages (one before the statue of Vittorio Emanuele, and one after). The water bus, line 2 (red route) leaves for the Island of San Giorgio Maggiore at 10 minute intervals with a journey time of approximately 3 minutes. Boats leave “on the nine”... 8.09, 8.19, 8.29, etc.

Until 8.19 the boat leaves from the landing stage preceding the statue (S. Zaccaria Jolanda). From 8.29 the boat leaves from the second landing stage after the statue (S. Zaccaria M.V.E.).

One-stop ticket costs €2,00.

From the **Zattere** and the **Accademia Bridge** to the Island of San Giorgio Maggiore the waterbus line 2 stop is “Zattere”. The waterbus runs every 10 minutes, the journey time is approximately 11 minutes and the ticket costs €6,50.

From the **Island of San Giorgio Maggiore** the waterbus line 2 leaves every 10 minutes for San Zaccaria “on the one”... 18.31, 18.41, 18.51, etc. and for Zattere and Piazzale Roma “on the two” ... 18.32, 18.42, 18.52, etc.

For further information about the timetable please visit the ACTV website at www.actv.it or call +39.041.2424.

HOW TO REACH THE MAIN AIRPORTS

The **Venice Marco Polo Airport** can be reached directly by water or, once you are in Piazzale Roma, car and bus terminal, also by road.

The most direct way is taking the Alilaguna waterbus (www.alilaguna.it) from “San Zaccaria” stop or “Zattere” stop, going directly to the airport.

From “San Zaccaria” you can take the Alilaguna BLUE line or GOLD line. The BLUE line takes about 1 hour and 15 minutes and it runs from 3.44 to 22.29. The GOLD line takes 1 hour without any stops and it runs from 8.34 to 16.34. From “Zattere” you can take the Alilaguna RED line, which takes about 1 hour and 15 minutes and it runs from 7.45 to 17.45, stopping also at “San Marco Giardinetti”. A single ticket costs €13 for the BLU or RED line and €25 for the GOLD one.

The fastest way to get to the airport by water is taking a water taxi. The price is based on the number of people and can vary after 20, on Sundays and public holidays. From the city centre to the airport the fare is approximately €100.00 for up to 4 people and the journey time is about 30 minutes. You may pre-book the water taxi service by calling +39.041.5415084 or by on line reservation at www.venicewelcome.com/servizi/taxi/taxi-form-ing.htm.

In order to reach the Venice Airport from Piazzale Roma, car and bus terminal, you can take a road bus or a road taxi.

The number 5 ACTV bus (www.actv.it, +39.041.2424), the orange bus, travels between Piazzale Roma and the Marco Polo Airport with a journey time of approximately 25 minutes. On weekdays and Saturdays regular departures are between 5.40 and 23.40 every 15/30 minutes. On Sundays and public holidays regular departures are every 30 minutes. Ticket costs €3,00.

The ATVO Express Coach Service (www.atvo.it, +39.0422.315381), the blue bus, from Piazzale Roma to the Marco Polo Airport departs approximately every 30 minutes with a journey time of about 20 minutes. The service is guarantee every day from 5.00 to 20.50 and a single ticket costs €3,00, luggage included.

A private road taxi from Piazzale Roma to the Venice airport costs approximately €30.00. Road taxis are provided by the Cooperativa Radio Taxi and they are available 24 hours a day. For booking and tariffs please call the Cooperativa at +39.041.5952080.

The **Treviso Canova Airport** can be reached only by road bus or a road taxi from Piazzale Roma, car and bus terminal.

The ATVO buses (www.atvo.it, +39.0422.315381) travel between Piazzale Roma and the Treviso Canova Airport with a journey time of about 1 hour and 10 minutes. The service is guarantee every day from 5.40 to 19.30 and a single ticket costs € 6,00, luggage included.

A road taxi from Piazzale Roma to the Treviso Airport costs approximately €70.00.

USEFUL LINKS

www.actv.it is the web-site of the public transportation in Venice.

www.alilaguna.it is the web-site of the public water-bus service between the Marco Polo Venice Airport and Venice downtown.

www.atvo.it is the site of the bus company that connect Piazzale Roma to the Marco Polo Venice Airport.

www.veniceairport.it is the web-site of the Marco Polo Venice Airport.

www.trevisoairport.it is the web-site of the Canova Treviso Airport.

www.veneziasi.it is a useful web-site for accommodation booking and tourist information.

Further tourist information may be obtained by visiting any of the following sites.

www.ombra.net is a very useful site with detailed maps of the city.

www.veniceword.com is an excellent, constantly up-dated guide to what's on in Venice, plus all the usual tourist information.

www.agemestinvenice.com has brief but up-to-date information on events in the city.

The official site of the Tourist Board of Venice is a useful source of practical information (<http://www.turismovenetia.it/eng/dynalay.asp?PAGINA=407>).

www.invenicetoday.com is a good pictorial guide to the treasures of Venice.

USEFUL NUMBERS

Emergency Numbers

Police emergency call	113
Police-(European Mobile Phone Users)	112
Fire Department	115
Car breakdown Service	116
First aid	118
Operator international calls	170

Lost and Found

Lost items on public water transport	+39.041.2722179
Lost items on public road transport	+39.041.2722723

Transportation

Marco Polo Venice Airport	
Flight Information Office	+39.041.2609260
Lost and Found	+39.041.2609222
Customs Office	+39.041.2699311
Airport Parking	+39.041.5415913

Bus and water bus

boat and bus information	+39.041.2424
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Railway

Railway information	from Italy	89.20.21
	from abroad	+39.06.68475475
Train Station		+39.041.524.2303
Lost Property		+39.041.785238

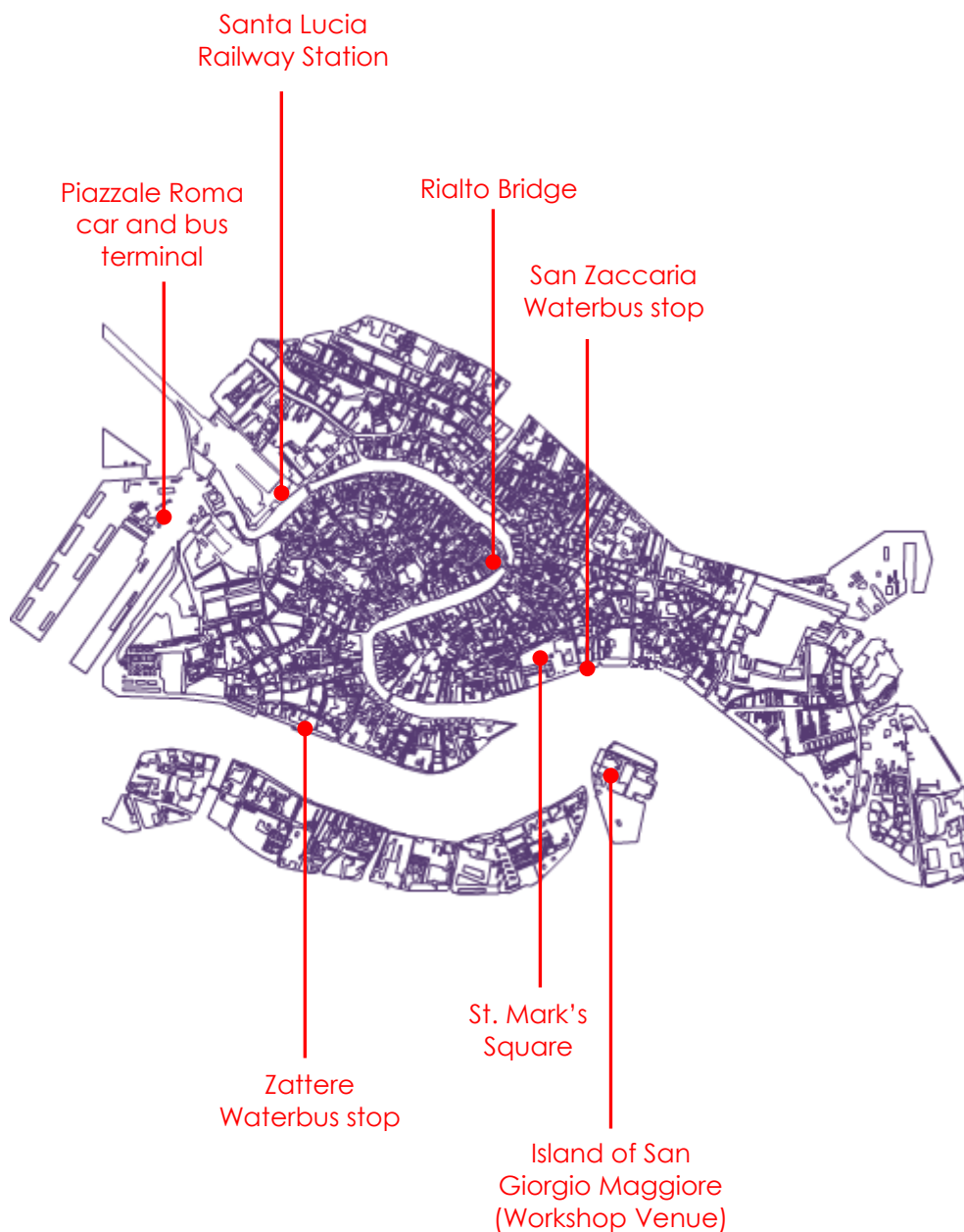
Water Taxis

Water taxi info and reservations 24h/24h	+39.041.5222303
Marco Polo Venice Airport	+39.041.5415084

Land Taxis

Radiotaxi 24h/24h	+39.041.5952080
Venice, P. Roma (car terminal)	+39.041.5237774
Venice, Lido (S.M. Elisabetta)	+39.041.5265974
Venice, info and reservations office in the airport	+39.041.5416363
Tourist information board	+39.041.5298730

Map of Venice



"How did this marvellous beast make its way up the Adriatic and fetch up here? [...] It could set off on its travels at any time, it could call in just about anywhere, following its fancy... Dalmatia this weekend, Istanbul the day after next, summer in Cyprus."

From "Venice Is a Fish", Tiziano Scarpa