



ASSOCIAZIONE
ITALIANA ECONOMISTI
DELL'ENERGIA

the Italian Affiliate of



in cooperation with



1st AIEE Energy Symposium



Current and Future Challenges to Energy Security



Milan, November 30 - December 2, 2016
University Bicocca

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Editorial Note

Dear Energy Colleague,

The AIEE - Italian Association of Energy Economists (Italian affiliate of the IAEE - The International Association for Energy Economics) is organizing this international conference in cooperation with the **Bicocca University** of Milan to bring together energy experts engaged in academic, business, government, international organizations for an exchange of ideas and experiences on the present and future landscape of energy security.

As Europe strives to overcome the economic crisis, energy stands out both as a conditioning factor and as an opportunity.

The energy situation is evolving in Europe as well as in the rest of the world, where new actors, the emerging economies, are taking the leading role. Political developments in several areas of the globe (North Africa and Middle East, the Caspian region, ASEAN countries) are reshaping the geopolitical situation, generating some worries about the security of supply in the EU countries.

The concept of energy security is undergoing a rapid transformation. In the past, geopolitics and the supply of oil and gas were the dominant factors determining energy security. Today, a broader and more complex spectrum of elements are interacting to both stabilize and threaten energy security.

The availability of energy sources, when we consider both fossil fuels and renewables, is increasing. In particular, a major source of change is the strong growth in the production and integration of renewable and distributed energy, which offers opportunities to diversify the energy mix and thus improve energy security by re-

ducing physical reliance and price exposure to only a few sources and countries. At the same time, this paradigm of a new energy system has strong implications both on petroleum-producing countries and companies, with knock-on effects on geo-economic balance of powers and energy markets and on the security and reliability of the transmission and distribution networks. The new challenges of the digital revolution that on one hand offers opportunities to improve efficiency, to have lower costs but on the other hand raises a whole new set of challenges and creates vulnerabilities we have never seen before so that energy is being viewed as a key part of national security. While in the past the supply side was the dominant factor in energy security, with the critical element being the possibility of sourcing the products to produce electricity and provide mobility, now the energy security balance is changing. Supply is as important and as vulnerable as is the transmission and distribution of energy.

The purpose of this conference is to provide a fresh look at the forces driving this transformation and at some of their effects. Many of them are different from anything we have seen in the past.

This conference will try to explore new and existing energy trends, challenges and creative solutions for the energy security, the availability of new technologies, the emergence of new market conditions and of new market operators.

No better stage can be imagined for this debate than Milan, the crossroad of political, economic and cultural activities.

Carlo Andrea Bollino, General Conference Chair

Carlo Di Primio, Organization Committee Chair

Organization

AIEE - ITALIAN ASSOCIATION OF ENERGY ECONOMISTS

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President AIEE, Italy

CARLO DI PRIMIO (*PROGRAMME COMMITTEE CHAIR*)
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ANKA SERBU (*ORGANIZATION AND COORDINATION*)
External Relations & Communication, AIEE, Italy

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Professor, Bicocca University, Italy

SILVANA STEFANI, (*PROGRAMME COMMITTEE CHAIR*)
Professor, Bicocca University, Italy

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Conference Secretariat

Antonella Donia, **Daisy de Selliers** (*CONFERENCE PROGRAMME*)

Anna Paola Calapaj, **Adelaide Calapaj** (*SECRETARIAT*)

Conference agenda

Wednesday, November 30

16.00-18.30 **Registration**

16:00-17:00 **Opening Welcome Address** (*Building U6 - Aula Magna - ground floor*)

Gurkan Kumbaroglu, *IAEE President*
Carlo Andrea Bollino, *AIEE President*
Cristina Messa, *President of Bicocca University*
Lucia Visconti Parisio, *Head of the Department of Economics, University Bicocca*
Marco Granelli, *Councillor for Mobility and Environment of the Municipality of Milan*
Alberto Meomartini, *President of Innovhub-Sperimental Stations for Industry*

17.00-18.30 **Welcome Cocktail**

Thursday, December 1st

08.30 – 17.00 **Registration**

08.30 - 10.30 **Coffee Bar** (*Building U6 - floor -1*)

09.00-10.30 **Concurrent Sessions (1-4)**

- 01 The impact of oil price fluctuation** - *Building U6 - Room Rodolfi - 4th floor*
Chair: Alberto Pincherle, AIEE, Italy
- 02 Promoting or imposing energy efficiency** - *Building U7 - Room Pagani - 3rd floor*
Chair: Carlo Mari, University of Pescara, Italy
- 03 Energy roadmap to 2050** - *Building U6 - Room 1F - ground floor*
Chair: G.B. Zorzoli, AIEE, Italy
- 04 The challenges of electricity market design** - *Building U7 - Room 12 - ground floor*
Chair: Carlo Andrea Bollino, AIEE and University of Perugia, Italy

10.30-11.30 **Dual Plenary Sessions**

Energy security of supply and market developments - (*Building U6 - Room 1F - ground floor*)
Chair: Giuseppe Gatti, President Energia Concorrente

Regulation of energy markets - (*Building U6 - Room Rodolfi - 4th floor*)
Chair: Alessandro Ortis, President Stati Generali dell'Efficienza Energetica

11.30-13.00 **Concurrent Sessions (5-8)**

- 05 The gas market: new perspectives? (Part I)** - *Building U6 - Room Rodolfi - 4th floor*
Chair: Georg Erdmann, Institute for Energy Technology, Berlin University of Technology, Germany
- 06 Energy Efficiency in buildings** - *Building U6 - Room 1F - ground floor*
Chair: Antonio Geracitano, EOS Consulting S.p.A
- 07 Energy supply & security** - *Building U7 - Room 12 - ground floor*
Chair: John Roberts, Natural Gas World, UK
- 08 Power markets regulation** - *Building U7 - Room Pagani - 3rd floor*
Chair: Fatma Çiğdem Çelik, Okan University, Department of Economics, Turkey

13.00-14.00 **Lunch buffet** (*Building U6 - floor -1*)

14.00-15.30 **Concurrent Sessions (9-12)**

- 09 The European gas market evolution** - *Building U6 - Room Rodolfi - 4th floor*
Chair: Vittorio D'Ermo, AIEE, Italy
- 10 Energy and Industrial Competitiveness** - *Building U6 - Room 1F - ground floor*
Chair: Agime Gerbeti, LUMSA University, Italy
- 11 Energy supply & security: some experiences** - *Building U7 - Room 12 - ground floor*
Chair: Angelica Gianfreda, University Bicocca, Italy
- 12 Regulation of energy markets: some experiences** - *Building U7 - Room Pagani - 3rd floor*
Chair: Ionut Purica, Advisory Center for Energy and Environment and Agency for Nuclear Energy and Radioactive Waste

15.30 – 17.00 **Concurrent Sessions (13-16)**

- 13 The gas market: new perspectives? (Part II) - Building U6 - Room Rodolfi - 4th floor**
Chair: Vittorio D'Ermo, AIEE, Italy
- 14 Sectoral approach to energy efficiency in industry - Building U6 - Room 1F - ground floor**
Chair: Paolo Gentili, PriceWaterhouseCoopers, Italy
- 15 The challenges of climate change - Building U7 - Room 12 - ground floor**
Chair: Agime Gerbeti, LUMSA University
- 16 The electricity market: an overview for the future - Building U7 - Room Pagani - 3rd floor**
Chair: Alberto Pincherle, AIEE, Italy

Friday, December 2

08.30 - 17.00 **Registration**

08.30 - 10.30 **Coffee Bar** (*Building U6 - floor -1*)

09.00 - 10.30 **Concurrent Sessions (17-20)**

- 17 Strategic contribution of energy storage to energy security - Building U6 - Room 1F - ground floor**
Chair: Arturo Lorenzoni, University of Padua, Italy
- 18 Behavioural energy economics - Building U6 - Room 1B - ground floor**
Chair: Sonnenschein Jonas, IIIIEE, Lund University
- 19 Environmental policy and security: an overview - Building U6 - Room Rodolfi - 4th floor**
Chair: Federico Boffa University of Macerata
- 20 Innovation in power markets - Building U7 - Room Pagani - 3rd floor**
Chair: Silvana Stefani, University Bicocca, Italy

10.30 - 11.30 **Dual Plenary Sessions**

Energy challenges in the industrial sectors: the transition to a low-carbon economy

(Building U6 - Room 1F - ground floor)

Chair: Pippo Ranci, Professor of Economic Policy at the Università Cattolica, Italy

Europe Roadmap to 2050 and the future strategies of the energy industry

(Building U6 - Room 1B - ground floor)

Chair: Felice Egidi, Head of European Public Affairs, Enel

11.30 - 13.00 **Concurrent Sessions (21-24)**

- 21 Technology development - grid management - Building U6 - Room 1F - ground floor**
Chair: Francesco Marghella, AIEE, Italy
- 22 KAPSARC Special Session - Building U6 - Room Rodolfi - 4th floor**
Discussion of the Special Issue of the Energy Journal:
"Renewables and Diversification in Heavily Energy Subsidized Economies"
- 23 Climate policy and emission trading - Building U6 - Room 1B - ground floor**
Chair: Antonio Geracitano, EOS Consulting S.p.A.
- 24 Policies for Res technologies - Building U7 - Room Pagani - 3rd floor**
Chair: Lucia Visconti Parisio, University of Milano Bicocca, Faculty of Economics, Italy

13.00 - 14.00 **Lunch and "Student Best Paper Award Ceremony"** (*Building U6 - floor -1*)

14.00 - 15.00 **Plenary Session**

European perspectives in the global energy context - (*Building U6 - Room 1B - ground floor*)

Chair: Carlo Andrea Bollino, President AIEE

15.00 - 16.30 **Concurrent Sessions (25-26)**

- 25 The future of transport - Building U6 - Room 1F - ground floor**
Chair: Simone Casadei, INNOVHUB Stazioni Sperimentali per l'Industria
- 26 Student Session (Student Best Paper Award) - Building U6 - Room 1B - ground floor**
Chair: Alessandro Sapio, University of Naples Parthenope

Conference programme

Thursday, December 1st

09.00-10.30 Concurrent Sessions (1-4)

1 The impact of oil price fluctuation

Chair: Alberto Pincherle, AIEE, Italy

Macroeconomic and Financial Effects of Oil Price Shocks: Evidence for the Euro Area

Presenter: Claudio Morana, University of Milano Bicocca, Italy
Author: Claudio Morana

Reserves at Risk: Planning with Deep Uncertainty and High Complexity

Presenter: Umberto Perna, Eni S.p.A. & CNR-ISC, Italy
Authors: Umberto Perna, Vanessa Olivieri

A Model Proposal to Estimate The Effect Of Oil Price On Renewable Energy Consumption, Case Study: Europe

Presenter: Mazzarano Matteo, University of Bologna, Italy
Authors: Mazzarano Matteo, Amirhossein Fattahi

The effects of structural breaks on the long run level of oil and oil products. Evidence from the last two oil price crashes

Presenter: Rodríguez-Monroy Carlos, Universidad Politécnica de Madrid, Spain

Authors: Rodríguez-Monroy Carlos, Pablo A. Cansado-Bravo

The effects of exogenous oil supply shocks on the economic growth of selected Mediterranean countries

Presenter: Matteo Manera, University of Milan - Bicocca, Italy
Authors: Marzio Galeotti, Matteo Manera, Andrea Bastianin

3 Energy roadmap to 2050

Chair: G.B. Zorzoli, AIEE, Italy

Economic Feasibility of Wind Energy Participation in Secondary Reserves Markets

Presenter: Thompson Andrew, Vedecom/Université Paris-Saclay, France
Authors: Thompson Andrew

Allocation of renewable generation from an energy portfolio

Presenter: Scala Antonio, CNR-ISC -Istituto Sistemi Complessi, Italy
Authors: Scala Antonio, Angelo Facchini, Umberto Perna

The Phase out of Coal in Britain and Germany: A Comparative Analysis of Drivers and Barriers

Presenter: Ball Christopher, Forschungszentrum Jülich IEK-STE, Germany
Author: Paul Kunz, Christopher Ball

2 Promoting or imposing energy efficiency

Chair: Carlo Mari, University of Pescara, Italy

Boundedly rational consumers, energy and investment literacy, and the display of information on household appliances

Presenter: Nilkanth Kumar, ETH Zurich, Switzerland
Authors: Blasch Julia E., Massimo Filippini, Nilkanth Kumar

Examining the energy rebound effect in South Africa within a BRICS countries context

Presenter: Inglesi-Lotz Roula, Department of Economics, University of Pretoria, South Africa

Author: Inglesi-Lotz Roula

Economic and sectoral impacts of energy efficiency targets: a general equilibrium approach for Portugal

Presenter: Carla Teotónio, Universidade de Aveiro, Portugal

Authors: Teotónio Carla, Miguel Rodriguez-Mendez, Peter Roebeling, Patrícia Fortes da Silva

4 The challenges of electricity market design

Chair: Carlo Andrea Bollino, AIEE /University of Perugia, Italy

The Significance of Calendar Effects in the Electricity Market

Presenter: Kun Li, Business School, Beijing Normal University, China
Authors: Kun Li, Joseph D. Cursio

Renewable energy and its impact on thermal generation

Presenter: Graf Christoph, Vienna University of Economics and Business, Austria

Authors: Graf Christoph, Claudio Marcantonini

Studying the impact of the changing energy landscape on alternative market design

Presenter: Frayer Julia, London Economics International LLC, United Kingdom

Authors: Frayer Julia, Azraa Zoomerwalla, Mugwe Kiragu

Economic and Operational Assessment of Established and New Reserve Methods and Metrics for Electric Grids with High Shares of Renewables

Presenter: Gürses Gonca, RWTH Aachen University, Germany

Authors: Gürses Gonca, Reinhard Madlener

10.30-11.30 Dual Plenary Sessions

Regulation of energy markets

Chair: **Alessandro Ortis**, President Stati Generali dell'Efficienza Energetica (The States General of Energy Efficiency)

Clara Poletti, Director of the Regulatory Department of the Italian Regulatory Authority for Electricity, Gas and Water Services

Jean-Michel Glachant, Director of the Florence School of Regulation and Holder of the Loyola de Palacio Chair at the European University Institute

Georg Erdmann, Professor for Energy Systems at the Institute for Energy Technology, Berlin University of Technology

Energy security of supply and market developments

Chair: **Giuseppe Gatti**, President Energia Concorrente

Kostas Andriosopoulos, Executive Director, Research Centre for Energy Management (RCEM)

Giorgio Crugnola, RnD Manager, FZSONICK

Felice Egidi, Senior Advisor, Assoelettrica

Chicco Testa, President Sorgenia

11.30-13.00 Concurrent Sessions (5-8)

5 The gas market: new perspectives? (Part I)

Chair: Georg Erdmann, Institute for Energy Technology, Berlin University of Technology, Germany

Hub-Based Gas Sourcing for Market Liquidity and Continuity of Supply

Presenter: Cuijpers Chris, Commission for Electricity and Gas Regulation (CREG), Belgium

Authors: Cuijpers Chris, Andreas Tirez

Causes and consequences of boom-bust cycles in natural gas production assets investments

Presenter: Joël Enderlin, ENGIE, Strategy Division, Center of Expertise in Economic and Modeling Studies, France

Authors: Enderlin Joël, Benoît Dal Ferro

Investigating price determinant factors in European natural gas long-term contract

Presenter: Hanee Ryu, Seoul National University, Korea

Authors: Ryu Hanee, Hyoji Choi, Yeonbae Kim

6 Energy Efficiency in buildings

Chair: Antonio Geracitano, EOS Consulting S.p.A.

Some like it hot: An experiment on comfort expectations and energy retrofit decisions

Presenter: Reinhard Madlener, RWTH Aachen University, Germany
Authors: Reinhard Madlener, Veronica Galassi

Global economic potential from moderate and deep retrofit of building envelopes in residential and services sectors from an energy system perspective

Presenter: Cristian Hernán Cabrera Pérez, Technical University of Denmark,
Authors: Cabrera Cristian, Ksenia Petrichenko, Olexandr Balyk, Jay Gregg Sterling

A Structural Analysis of the Direct and Indirect Rebound Effects in Residential Heating

Presenter: Cécile Hediger, University of Neuchâtel, Switzerland
Authors: Hediger Cécile, Mehdi Farsi, Sylvain Weber

Evidence, drivers and sources of distortions in the distribution of building energy ratings prior to and after energy efficient retrofitting

Presenter: Matthew Collins, Economic and Social Research Institute, Ireland
Authors: Collins Matthew, John Curtis

Modular advanced monitoring and control system for increasing energy efficiency in existing buildings

Presenter: Bogdan Onose, ICPE SA – Energy Division, Romania
Author: Bogdan Onose

13.00-14.00 Lunch

14.00-15.30 Concurrent Sessions (9-12)

9 The European gas market evolution

Chair: Silvia Pariente-David, Center for Mediterranean Integration, France

A natural Gas Trading Platform for Japan

Presenter: Hashimoto Satoru, Teikyo University, Japan
Author: Hashimoto Satoru, Andrew Kleit

Russian LNG: competitiveness in the European natural gas market, the case of Italy

Presenter: Irina Mironova, NERPO Research Center, European University at Saint Petersburg, Russian Federation
Author: Mironova Irina

The Economics of Natural Gas Storages in North Western European Markets

Presenter: Chi-Kong Chyong, EPRG, University of Cambridge, U.K
Authors: Chi-Kong Chyong, David Reiner

10 Energy and Industrial Competitiveness

Chair: Agime Gerbeti, LUMSA University, Italy

Natural gas: Renewables supporter or opponent

Presenter: Valeria Palmisano, Edison, Italy
Author: Palmisano Valeria

Economic impact of environmental and energy policies in Italy

Presenter: Cristina Brandimarte, ISTAT, Italy
Author: Cristina Brandimarte

The fossil fuel subsidies to the energy sector in Italy

Presenter: Mario Iannotti, Italian Ministry of Environment, Land & Sea – Directorate-General Sustainable Development and Relations with the EU and International Organizations – A.T. Sogesid
Author: Mario Iannotti

The cost and value of energy storage systems

Presenter: Manfred Weissenbacher, University of Malta, Malta
Author: Weissenbacher Manfred

Legal issues on renewable incentives in Italy

Presenter: Daria Capotorto, Agnoli e Giuggioli Law firm
Author: Daria Capotorto

7 Energy supply & security - Building U7 - Room 12 - ground floor

Chair: John Roberts, Natural Gas World, UK

The Evolution of the Energy Security Concept: New Threats to Supply Security

Presenter: Irie Kazutomo, Asia Pacific Energy Research Centre, the Institute of Energy Economics, Japan
Author: Irie Kazutomo

Outsourcing Land in Search for Energy Security: Still a Controversial Matter

Presenter: Rachel Ravagnani, State University of Campinas, Brasil
Authors: Rachel Ravagnani, Carlos Augusto Matuguma, Luis Renato Vedovato

Impacts of Czech brown coal mines enlargement: assessment by energy model TIMES

Presenter: Rečka Lukáš, Charles University Environment Center, Czech Republic
Author: Rečka Lukáš, Milan Ščasný

8 Power markets regulation

Chair: Fatma Çiğdem Çelik, Okan University, Department of Economics, Turkey

Is larger always better? Economics of power market integration

Presenter: Philipp Dees, Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute of Economics, Germany
Authors: Philipp Dees

Demand participation in ancillary service markets

Presenter: Elena Fumagalli, Politecnico di Milano, Italy
Authors: Elena Fumagalli, Bastian Westbrook

The new Italian capacity remuneration mechanism. A deterministic modeling and simulation approach

Presenter: Giorgio Perico, REF-E Economics Engineering Energy Environment, Italy

Authors: Dalena Michele, Virginia Canazza, Giorgio Perico

Optimal operation of power distribution networks with renewable generation and storage devices

Presenter: Vespucci Maria Teresa, University of Bergamo
Authors: Vespucci M.T. Diana Moneta, Paolo Piscicella, Giacomo Viganò

11 Energy supply & security: some experiences

Chair: Angelica Gianfreda, University Bicocca, Italy

Energy export strategies of the central Asian Caspian region

Presenter: Bakdolotov Aidyn, National Laboratory Astana, Kazakhstan
Authors: Bakdolotov Aidyn, Rocco De Miglio, Yerbol Akhmetbekov, Kanat Baigarin

The evolving international gas market and energy security in Nigeria: regulatory and policy issues

Presenter: Tade Oyewunmi, Centre for Climate Change, Energy and Environmental Law, UEF Law School, Finland
Author: Oyewunmi Tade

Rebel attacks against energy infrastructure and electoral contestation: a case study of Colombia

Presenter: Rebecca Lordan-Perret, University of Chicago and The Paul Scherrer Institute, USA
Author: Lordan-Perret Rebecca, Austin Wright, Peter Burgherr, Matteo Spada, Robert Rosner

Japan's energy policy

Presenter: Zhuoxiang Yang, The University of Tokyo, Japan
Author: Yang Zhuoxiang

12 Regulation of energy markets: some experiences

Chair: Ionut Purica, Advisory Center for Energy and Environment and Agency for Nuclear Energy and Radioactive Waste

Strategies for Energy Investments: Is There a Case of Foreign Country Bias? Case of Switzerland

Presenter: Yuliya Karneyeva, University of St. Gallen, Switzerland
Author: Yuliya Karneyeva

The Nordic/Baltic Spot Electric Power System Price: Nonlinear Error-Shock Analysis

Presenter: Per Bjarte Solibakke, NTNU Faculty of Economics, Norway
Author: Solibakke Per Bjarte

Enabling Demand Response in Poland: Understanding the major factors that impact the uptake of demand response

Presenter: Katarzyna Ewa Rollert, Leuphana University Lüneburg, Germany
Author: Katarzyna Ewa Rollert

System Risk and Mark up in fossil production

Presenter: Silvana Stefani, University Bicocca, Italy
Authors: Paolo Falbo, Daniele Felletti, Silvana Stefani

15.30-17.00 Concurrent Sessions (13-16)

13 The gas market: new perspectives? (Part II)

Chair: Vittorio D'Ermo, AIEE, Italy

Export of Russian natural gas to Europe

Presenter: Golombek Rolf, Frisch Centre, Norway
Author: Rolf Golombek, Arild Moe, Knut Einar Rosendahl, Hilde Hallre Le Tissier

Natural gas: Renewables supporter or opponent

Presenter: Vlahakis Aryestis, Center for Economics Research ETH Zurich, Switzerland
Author: Vlahakis Aryestis

Availability of gas in the European Union in a dynamic geo-political and commercial context

Presenter: Alexandru Maxim, Alexandru Ioan Cuza University of Iași, CERNESIM Environmental Research Center, Romania
Author: Maxim Alexandru

14 Sectoral approach to energy efficiency in industry

Chair: Paolo Gentili, PriceWaterhouseCoopers, Italy

Measuring the efficiency of energy-intensive industries across 23 European countries

Presenter: Georgia Makridou, ESCP Europe Business School, U.K.
Author: Makridou Georgia, Kostas Andriosopoulos, Michael Doumpos, Constantin Zopounidis

Industry level production functions and energy use in within a growth framework

Presenter: Maria del Pablo-Romero, University of Seville, Spain
Author: Antonio Sánchez-Braza, Maria del Pablo-Romero

Energy efficiency trends in EU industrial sectors

Presenter: Francesco Marghella, AIEE, Italy
Author: Marghella Francesco

Design and optimization the horizontal axis wind turbine blades (HAWTS) using blade element momentum theory BEM

Presenter: Younes El khchine, Engineering Sciences Laboratory, Polydisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, BP 1223, Taza, Morocco,
Author: Mohammed Sriti, Younes El khchine

15 The challenges of climate change

Chair: Agime Gerbeti, LUMSA University

Why do we prefer below 2 degree warming world and how do we act in the different conditions?

Presenter: Mori Shunsuke, Tokyo University of Science, Japan
Author: Mori Shunsuke

Pollutant Abatement Investment under Technological Uncertainty

Presenter: Motoh Tsujimura, Doshisha University, Japan
Authors: Motoh Tsujimura, Akira Maeda

Overlapping policies and clean technology adoption under endogenous uncertainty

Presenter: Boffa Federico, University of Bolzano, Italy
Authors: Boffa Federico, Stefano Clò, Alessio D'Amato

Coping with the collapse: a stock-flow consistent monetary macrodynamics of global warming

Presenter: Emmanuel Bovari, Agence Française de Développement - Université Paris 1 - Panthéon-Sorbonne, Centre d'Economie de la Sorbonne, France
Authors: Giraud Gaël, Florent Mclsaac, Emmanuel Bovari, Ekaterina Zatssepina

16 The electricity market: an overview for the future

Chair: Alberto Pincherle, AIEE, Italy

Technical due diligence analysis of the efficient system for users (SEU)

Presenter: Antonio Geracitano, EOS Consulting S.p.A., Italy
Authors: Geracitano Antonio, Emanuele Riccobene

Assessing public policy support to wind power generation in reunion island

Presenter: Vincent Deodat, Center of Economics and Management of the Indian Ocean (CEMOI), University of Reunion, France
Authors: Deodat Vincent, Fabrizio Carlevaro

Vertical integration and retail tariff design in electricity markets

Presenter: Andreas Knaut, Institute of Energy Economics, University of Cologne, Germany
Author: Knaut Andreas

Future of Electricity. How innovation & disruption will reshape the power sector

Presenter: Fereidoon P. Sioshansi, Menlo Energy Economics, USA
Author: Fereidoon P. Sioshansi

ACCOMPANYING PERSONS - "LAKE COMO TOUR" - December 1 st

We are organizing a "LAKE COMO TOUR", a One-day excursion on one of the most exclusive tourist locations. Lake Como, a beautiful and romantic tourist resort that every year attracts visitors from all over the world. Visit COMO and SHOPPING TOUR.



PROGRAM

- H 09:00 - Start from Milan with minivan/minibus private service (meeting point University Bicocca)
- H 10:30 - Arrive in BELLAGIO, visit of the town, time for shopping
- H 12:00 - Ferry boat to CADENABBIA. Lunch in TREMEZZINA area (not included in the cost)
- H 14:00 - Visit of VILLA BALBIANELLO (15' walking from LENNO)
- H 16:00 - Arrive in COMO, tour of city center and time for shopping

Cost: Euro 65 per person - Minimum participants required: 6-7

contact the conference secretariat: assaiee@aiee.it



Friday, December 2

09.00-10.30 Concurrent Sessions (17-20)

17 Strategic contribution of energy storage to energy security

Chair: Arturo Lorenzoni, University of Padua, Italy

Renewable Energy and Storage: A Diffusion Analysis

Presenter: Anjali Nursimulu, Energy Center, Ecole Polytechnique

Fédérale de Lausanne, Switzerland

Author: Nursimulu Anjali

A mathematical model for the optimization of small scale distributed energy conversion systems

Presenter: Anatone Michele, University of L'Aquila, Italy

Author: Anatone Michele

Stochastic system LCOE and optimal integration of intermitting renewable sources

Presenter: Carlo Mari, University of Pescara

Authors: Carlo Mari, Carlo Lucheroni

Energy storage in Solar Power Plants in the Italian Energy Markets

Presenter: Davide Carminati, Energy consultant, Italy

Author: Davide Carminati

19 Environmental policy and security: an overview

Chair: Federico Boffa University of Macerata

Environmental policies in the Big Three: EU, US, and China, In a Bayesian DSGE model

Presenter: Carlo Andrea Bollino, University of Perugia & AIEE, Italy

Authors: Carlo Andrea Bollino, Amedeo Argentiero, Tarek Atalla, Simona Bigerna, Silvia Micheli, Paolo Polinori

Evaluation of energy consumption and air pollution externalities due to cruise ships in ports

Presenter: Manolis Souliotis, Department of Mechanical Engineering,

University of Western Macedonia, Kozani, Greece

Author: Papaefthimiou Spiros, George Nikoloudakis, Stelios

Tsafarakis, Manolis Souliotis, Kostas Andriosopoulos

Fossil fuels assets' exposure to carbon policy: will stranding risk increase in a post COP21 agreement world?

Presenter: Isabella Alloisio, Fondazione Eni Enrico Mattei, Italy

Authors: Alloisio Isabella, Francesco Pietro Colelli

18 Behavioural energy economics

Chair: Sonnenschein Jonas, IIIIEE, Lund University

An integrated and participatory sustainable urban-energy planning methodology for the city of Cesena

Presenter: Rocco De Miglio, E4SMA srl, Italy

Author: Rocco De Miglio, Maurizio Gargiulo, Alessandro Chioldi

Switch off the light, please! Energy consumption, aging population and consumption habits

Presenter: Rossella Bardazzi, University of Florence, Department of Economics and Management, Italy

Authors: Bardazzi Rossella, Maria Grazia Paziienza

Household customers choice of electricity retailer

Presenter: Kari-Anne Fange, Ostfold University College, Norway

Authors: Fange Kari-Anne, Olvar Bergland

20 Innovation in power markets

Chair: Silvana Stefani, University Bicocca, Italy

The Political Economy of Energy Innovation

Presenter: Elena Verdolini, Fondazione Eni Enrico Mattei &

Euro-Mediterranean Centre on Climate Change, Italy

Authors: Shouro Dasgupta, Enrica De Cian,

Consumer and value creation in the utility of the future: an experiment in the Italian solar PV market

Presenter: Veronica Galassi, Institute for Future Energy Consumer

Needs and Behavior (FCN), RWTH Aachen University, Germany

Authors: Veronica Galassi, Reinhard Madlener

The RES-induced Switching Effect Across Fuels: an Analysis of the Italian Balancing Prices with Their Connected Costs

Presenter: Angelica Gianfreda, University of Milano-Bicocca, Italy

Author: Angelica Gianfreda, Lucia Parisio, Matteo Pelagatti

Barriers and drivers in the approval process of siting permits: evidence from Italian power generation, 1999-2016

Presenter: Angelamaria Groppi, Polytechnic Institute of Milan, Italy

Author: Groppi Angelamaria

10.30-11.30 Dual Plenary Sessions

Energy challenges in the industrial sectors: the transition to a low-carbon economy

Chair: Pippo Ranci, Professor of Economic Policy at the Università Cattolica, Italy

Gianni Murano, President Esso Italiana

Pietro Tittoni, Managing Director of Business Unit Power, ERG

Salvatore Pinto, President of Axpo

Europe Roadmap to 2050 and the future strategies of the energy industry

Chair: Felice Egidi, Head of European Public Affairs Enel

Manfred Hafner, Partner and Vice-President Consulting of Enerdata

Claudio Spinaci, President Unione Petrolifera

Paolo Gallo, CEO Italgas

11.30-13.00 Concurrent Sessions (21-24)

21 Technology development - grid management

Chair: Francesco Marghella, AIEE, Italy

Distribution network vulnerability assessment

Presenter: Alfonso Santos, iX Estudos e Projetos Ltda, Brasil

Authors: Camilo Raimundo Silva Pereira, Afonso Santos, Rodolfo Lima, Ricardo Cruz

Economic optimization of electricity supply security in light of the interplay between transmission system and distribution system operator

Presenter: Jacob Tran, RWTH Aachen University, Germany

Author: Jacob Tran, Reinhard Madlener

Why smart metering in Italian water cycle : more than an opportunity

Presenter: Francesco Albasser, Studio Ingegneria, Italy

Author: Albasser Francesco

Barriers to entry in frequency-regulation services markets: review of the status quo and options for improvements

Presenter: Olivier Borne, Centrale Supélec, France

Authors: Borne Olivier, Yannick Perez, Klaas Korte

22 KAPSARC Special Session

Discussion of the Special Issue of the Energy Journal: "Renewables and Diversification in Heavily Energy Subsidized Economies"

Chair: Axel Pierru, KAPSARC, Saudi Arabia

Discussants:

Carlo Andrea Bollino, AIEE, Italy

Tarek Atalla, KAPSARC, Saudi Arabia

Kostas Andriosopoulos, Research Centre for Energy Management (RCM), UK

Marzio Galeotti, Department of Environmental and Energy Economics University of Milan, Italy

Tooraj Jamasb, Durham Energy Institute, U.K

Lucia Visconti Parisio, University Bicocca, Italy

23 Climate policy and emission trading

Chair: Antonio Geracitano, EOS Consulting

A multicriteria assessment approach to the energy trilemma

Presenter: Pliousis Athanasios, Technical University of Crete, Greece
Authors: Andriosopoulos Kostas, Michael Doumpos, Athanasios Pliousis

Climate Change, Hydropower Dam Capacity, and Flood-Overtopping

Presenter: Yuan Niu, Department of Agricultural and Resource Economics, University of Connecticut, USA
Author: Niu Yuan, Farhed Shah

Environmental taxation in a globalized economy

Presenter: Agime Gerbeti, LUMSA University, Italy
Author: Agime Gerbeti

Policy Adaptation for Scaling up Renewables

Presenter: Jaime Legerén Álvarez, Energy Center, École Polytechnique Fédérale de Lausanne, Switzerland
Author: Legerén Álvarez Jaime, Anjali Nursimulu

24 Policies for Res technologies

Chair: Lucia Visconti Parisio, University of Milano Bicocca, Italy

A bibliometric analysis based review on wind power price

Presenter: Sun Mei, Center For Energy Development and Environmental Protection - Jiangsu University, Cina
Author: Gao Cuixia, Mei Sun, Yong Geng, Ryi Wu, Wei Chen

The impact of electricity subsidy removal on renewable electricity generation. The case of Bangladesh

Presenter: Sakib Amin, North South University, Dhaka, Bangladesh
Author: Amin Sakib

Regional redistribution effects of support to renewables

Presenter: Alessandro Sapio, Parthenope University of Naples, Italy
Author: Sapio Alessandro

Optimization Strategies for Sustainable Energy Development in Angola – A Multi-Stage Approach

Presenter: Artur Barreiros, Departamento de Engenharia Mecânica, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Authors: Jone Heitor, Artur Barreiros, Barradas Cardoso

Impact of Emission Trading on the Energy-mix

Presenter: Paolo Falbo, University of Brescia
Authors: A. Bersani, Paolo Falbo, Loretta Mastroeni

13.00-14.00 Lunch and "Best Student Paper Award Ceremony"

14.00-15.00 Plenary Session

European perspectives in the global energy context

Chair: **Carlo Andrea Bollino**, *President AIEE*

Laura Cozzi, *Head Demand Division, World Energy Outlook*

Samuele Furfari, *Adviser to the Director General of DG Energy at the European Commission*

Marco Margheri, *President WEC Italy*

15.00-16.30 Concurrent Sessions (25-26)

25 The future of transport

Chair: Simone Casadei, INNOVHUB Stazioni Sperimentali per l'Industria

Energy literacy, environmental attitudes and efficient vehicle ownership

Presenter: Bettina Hirl, University of Lugano, Switzerland
Authors: Bettina Hirl, Massimo Filippini, Adan L. Martinez-Cruz

Modelling Modal Shift within TIMES Energy System Models

Presenter: Jacopo Tattini, DTU Management, Energy System Analysis Group, Denmark

Authors: Tattini Jacopo, Kenneth Karlsson, Maurizio Gargiulo

Toll Rate and Vehicle Carbon Monoxide Emission

Presenter: Qixing Jason Wang, University of Connecticut, USA
Author: Wang Jason Qixing, Yuan Niu

Potential for biogas generation of the operating landfills on Brazil

Presenter: Alfonso Santos, iX Estudos e Projetos, Brasil
Author: Lima Rodolfo, Afonso Santos, Ana Cristina Pereira, Barbara Flauzino, Camilo Pereira.

26 Student Session (Student Best Paper Award)

Chair: Alessandro Sapio, University of Naples Parthenope

Vertical integration and retail tariff design in electricity markets

Presenter: Andreas Knaut, Institute of Energy Economics, University of Cologne, Germany
Author: Knaut Andreas

Economic Feasibility of Wind Energy Participation in Secondary Reserves Markets

Presenter: Thompson Andrew, Vedecom/Université Paris-Saclay, France

Authors: Thompson Andrew

Forecasting Italian electricity market prices using Neural Network and Support Vector Regression techniques

Presenter: Federica Davò, University of Bergamo and RSE-Milan
Author: Federica Davò

Testing Persistence of the WTI and Brent Long-run Relationship after the Shale oil Supply Shock

Presenter: Elham Talebbeydokhti, University of Padova
Author: Elham Talebbeydokhti

The Student "Best Paper Award" Session
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