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## 2<sup>nd</sup> AIEE Energy Symposium



# Current and Future Challenges to Energy Security



**Rome, 2-4 November, 2017**  
**LUMSA University**

[www.aieeconference2017rome.eu](http://www.aieeconference2017rome.eu)

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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 LUMSA University of Rome 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.

The 1st AIEE Symposium on Energy Security - Milan 2016, was an opportunity 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.

Following up on the success of the last year's event we are delighted to announce this second edition to provide a fresh look on the major forthcoming issues offering an excellent occasion to continue the dialogue and to share best practice and experience with delegates from all over the world.

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 reducing 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.

No better stage can be imagined for this debate than Rome "caput mundi", with its powerful evocations of a long and spectacular past, the crossroad of political, economic and cultural activity, one of the most beautiful cities in the world.

Carlo Andrea Bollino, General Conference Chair

Carlo Di Primio, Organization Committee Chair

## Organization

### AIEE - ITALIAN ASSOCIATION OF ENERGY ECONOMISTS

CARLO ANDREA BOLLINO (*GENERAL CONFERENCE CHAIR*)  
President AIEE, Italy

CARLO DI PRIMIO (*PROGRAMME COMMITTEE CHAIR*)  
Vice President, AIEE, Italy

ANKA SERBU (*ORGANIZATION AND COORDINATION*)  
External Relations & Communication, AIEE, Italy

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NICOLETTA RANGONE, (*SCIENTIFIC COMMITTEE CHAIR*)  
Professor, LUMSA University, Italy

AGIME GERBETI (*PROGRAMME COMMITTEE CHAIR*)  
Adjunct Professor, LUMSA University, Italy

## Programme Committee

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## Scientific Committee

*SCIENTIFIC COMMITTEE CHAIR*: Nicoletta Rangone, LUMSA University, Italy

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## Conference Secretariat

Antonietta Donia, Anna Paola Calapaj, Adelaide Calapaj, AIEE, Italy

# Conference agenda

## Thursday, November 2, 2017

- 16.00 - 17.30 **Registration**  
16:30 - 17.30 **Opening Welcome Address** (*Aula Magna - ground floor*)

**Giovanni Ferri**, Deputy Rector at LUMSA University  
**Nicoletta Rangone**, Chair of the Scientific Committee, LUMSA University  
**Agime Gerbeti**, Chair of the Programme Committee, LUMSA University  
**Carlo Andrea Bollino**, AIEE President  
**Gürkan Kumbaroğlu**, IAEE Past President  
**Gabriele Checchia**, President of AWOS, former Italian Ambassador at OCSE  
Permanent Representative of Italy to NATO  
**Tommaso di Fazio**, President C.I.U. Italy

- 17.30 - 19.00 **Welcome Cocktail** (*Aula Pia - Via delle Fosse di Castello, 11*)

## Friday, November 3, 2017

- 08.30 - 17.00 **Registration**

- 08.30 - 09.30 **Welcome coffee** (*Venue Hall*)

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

- 01 The union of national energy markets** (*Aula Magna*)  
*Chair:* Sergio Ascari, Florence School of Regulation, European University Institute, Italy
- 02 Promoting or imposing energy efficiency?** (*Room Traglia*)  
*Chair:* Manfred Weissenbacher, University of Malta, Malta
- 03 Special session on Cognitive-based regulation for consumers empowerment** (*Room Dell'Olio*)  
*Chair:* Nicoletta Rangone, LUMSA University, Italy
- 04 Global assessment of energy security, efficiency and sustainability** (*Room 2*)  
*Chair:* Vittorio De Martino, AIEE, Italy

- 10.30 - 11.30 **Dual Plenary Sessions**

**EU towards 2030** (*Aula Magna*)  
*Chair:* Agime Gerbeti, Adjunct Professor, LUMSA University, Italy

**Regulation of energy markets** (*Room Traglia*)  
*Chair:* Alessandro Ortis, President Stati Generali dell'Efficienza Energetica

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

- 05 The gas market: new perspectives?** (*Aula Magna*)  
*Chair:* Arnaldo Orlandini, ICEI, University Complutense of Madrid, Spain
- 06 Energy efficiency in buildings and industry** (*Room 2*)  
*Chair:* Spiros Papaefthimiou, Technical University of Crete, Grece
- 07 Special Session: Day-ahead, Intra-day and Balancing Markets** (*Room Dell'Olio*)  
*Chair:* Angelica Gianfreda, Free University of Bozen-Bolzano, Italy
- 08 Modeling the new environment** (*Room Traglia*)  
*Chair:* Cecilia Camporeale, Italian Ministry of Environment – A.T. Sogesid, Italy

- 13.00 - 14.00 **Lunch buffet** (*Aula Pia - Via delle Fosse di Castello, 11*)

- 14.00 - 15.30 **Dual Plenary Sessions**

**Economic instruments and transition pathways to a low-carbon economy in the industrial sectors** (*Aula Magna*)  
*Chair:* Gürkan Kumbaroğlu, Professor Boğaziçi University - Past President IAEE, Turkey

**Europe Roadmap and the future strategies of the energy industry** (*Room Traglia*)  
*Chair:* Giovanni Ferri, Professor and Deputy Rector at LUMSA University

15.30 – 17.00 **Concurrent Sessions (9-11)**

**09 Commodity Pricing** (Room Traglia)

*Chair:* Vittorio D'Ermo, AIEE, Italy

**10 Energy and Industrial Competitiveness** (Aula Magna)

*Chair:* Agime Gerbeti, LUMSA University, Italy

**11 Strategic contribution of energy storage to energy security** (Room Dell'Olio)

*Chair:* Alberto Pincherle, AIEE, Italy

18.00 - 20.00 **Gala Cocktail** (*Roof garden of Atlante Star Hotel - room Michelangelo, Via Giovanni Vitelleschi, 34*)

## Saturday, November 4, 2017

08.30 - 17.00 **Registration**

08.30 - 09.30 **Welcome coffee** (*Venue Hall*)

09.00 - 10.30 **Concurrent Sessions (12-13)**

**12 Bioenergies** (*Room Traglia*)

*Chair:* Carlo Di Primio, AIEE, Italy

**13 The Electricity market: risks and opportunities** (*Aula Magna*)

*Chair:* Lucia Visconti Parisio, University Bicocca, Italy

**Special Students Session** (*Room Tincani*)

*Chair:* Vittorio D'Ermo, AIEE, Italy

10.30 - 11.30 **Plenary Session**

***Sustainable mobility challenges for the transition targets***

(*Aula Magna*)

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

11.30 - 13.00 **Concurrent Sessions (14-17)**

**14 Technology development - Grid management** (Room Traglia)

*Chair:* Giuseppe Dell'Olio, GSE, Italy

**15 Scenarios and forecasting methodologies** (Room Tincani)

*Chair:* Giancarlo Scorsoni, Energy Advisor, Italy

**16 Climate policy and emission trading** (Aula Magna)

*Chair:* Ionut Purica, Advisory Center for Energy and Environment, Romania

**17 The multiple paths of electricity demand** (Room Dell'Olio)

*Chair:* G.B. Zorzoli, AIEE, Italy

13.00 - 14.00 **Lunch buffet** (*Aula Pia - Via delle Fosse di Castello, 11*)

14.00 - 15.30 **Concurrent Sessions (18-21)**

**18 The energy-environment nexus** (Room Traglia)

*Chair:* Jose Maria Labeaga Azcona, Open University Madrid, Spain

**19 Energy supply and security** (Aula Magna)

*Chair:* Fatma Çiğdem Çelik, Istanbul Okan University, Turkey

**20 Integrating renewables in energy markets** (Room Dell'Olio)

*Chair:* Francesco Asdrubali, Roma Tre University, Italy

**21 A new shape for electricity systems** (Room Tincani)

*Chair:* Carlo Mari, University of Chieti-Pescara, Italy

# Conference programme

Friday, November 3, 2017

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

### 1 The union of national energy markets

*Chair:* Sergio Ascari, Florence School of Regulation, European University Institute, Italy

#### **Influence of interconnections on market prices - Spanish case of study**

*Presenter:* Cristina González Ventosa, Red Eléctrica de España, Spain  
*Authors:* Cristina González Ventosa, María Sonsoles Madejon Concejal; Luis Villafruela Arranz, Ana Isabel Abril Pérez

#### **Investigation of Advantages from Future Integration of Wind Electricity in EU**

*Presenter:* Ondrisek Thomas, University of Vienna, Austria  
*Authors:* Christian Spindler, Yuri Yegorov, Franz Wirl, Ondrisek Thomas

#### **Critical analysis of the “new” Italian capacity remuneration mechanism**

*Presenter:* Paolo Mastropietro, Institute for Research in Technology, Comillas Pontifical University, Spain  
*Author:* Paolo Mastropietro, Fulvio Fontini, Pablo Rodilla, Carlos Batlle

#### **Increasing interconnections in a small, open economy: a quantitative evaluation of its effects**

*Presenter:* Danielle Devogelaer, Federal Planning Bureau, Benelux Association for Energy Economics, Belgium  
*Author:* Danielle Devogelaer

### 3 Special session on Cognitive-based regulation for consumers empowerment

*Chair:* Nicoletta Rangone, LUMSA University, Italy

#### **Algorithmic regulation: the case of information disclosure**

*Presenter:* Fabiana Di Porto, University of Salento, Italy

#### **Feedback and efficient behavior**

*Presenter:* Luigi Mittone, University of Trento, Italy

#### **How to improve the functioning of electricity retail markets: push or pull?**

*Presenter:* Clara Poletti, AEEGSI - Italian Energy Authority for Electricity, Gas and Water System

#### **European Issues and trends of regulation**

*Presenter:* Valeria Scorsoni, Energy expert, Italy

#### **Energy consumer empowerment in Italy**

*Presenter:* Francesco Vetrò, University of Salento, Italy

### 2 Promoting or imposing energy efficiency?

*Chair:* Manfred Weissenbacher, University of Malta, Malta

#### **Is energy efficiency efficient for the European market?**

*Presenter:* Carlo Scarpa, Università di Brescia, Italy  
*Author:* Carlo Scarpa, Giovanna Landi

#### **Using sticks or carrots to promote energy efficiency – how do individuals react? Results of an experimental investigation**

*Presenter:* Roland Menges, Clausthal University of Technology, Germany  
*Author:* Roland Menges

#### **Contracting the Gap: Empirical evidence on the role of energy performance contracting to promote investment in energy efficiency**

*Presenter:* Ulrich Reiter, TEP Energy GmbH, Switzerland  
*Authors:* Mehdi Farsi, Martin Jakob, Ulrich Reiter

### 4 Global assessment of energy security, efficiency and sustainability

*Chair:* Antonio Geracitano, EOS Consulting, Italy

#### **Evaluating the Implication of COP21 for Energy Security at Member State and EU Level**

*Presenter:* Elena Stolyarova, Grenoble Applied Economics Lab, CNRS, France  
*Authors:* Elena Stolyarova, Sandrine Mathy, Silavana Mima

#### **The financial performance of firms under the EU Emissions Trading Scheme (EU ETS)**

*Presenter:* Georgia Makridou, ESCP Europe Business School  
*Authors:* Georgia Makridou, Michael Doumpos, Kostas Andriosopoulos, Emiliios Galariotis

#### **A dynamic analysis approach to evaluating energy security of 30 countries**

*Presenter:* Huibin Du, Tianjin University, China  
*Author:* Huibin Du

#### **Carbon tax, EU ETS versus charge on emissions**

*Presenter:* Gianluca Carrino, LUMSA University  
*Author:* Gianluca Carrino



Eu Approach to Better Regulation

## 10.30 - 11.30 Dual Plenary Sessions

### **EU towards 2030**

*Chair:* Agime Gerbeti, Adjunct Professor, LUMSA University, Italy

**Luca Bragoli**, Head of International & Institutional Affairs, ERG, Italy

**Marco Falcone**, Government Relations and Issues Manager, Esso Italiana, Italy

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

**Paolo Vigevano**, General Director Eviva, Italy

### **Regulation of energy markets**

*Chair:* Alessandro Ortis, President Stati Generali dell'Efficienza Energetica

**Jean-Michel Glachant**, Director of the Florence School of Regulation, Italy

**Giuseppe Gatti**, President Energia Concorrente, Italy

**Pippo Ranci**, Università Cattolica, Italy

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

- 5 The gas market: new perspectives?** (Aula Magna)  
*Chair:* Arnaldo Orlandini, ICEI, University Complutense of Madrid, Spain

**The current and future role of natural gas in China**

*Presenter:* Alec Waterworth, Warwick Business School, UK  
*Authors:* Alec Waterworth, Michael J. Bradshaw

**The Economics of Gazprom's gas export strategies to Europe**

*Presenter:* Chi-Kong Chyong, EPRG, University of Cambridge, UK  
*Author:* Chi-Kong Chyong

**Pricing characteristics in the German diesel fuel market after the introduction of the market transparency scheme**

*Presenter:* Sebastian Kreuz, Brandenburg Technical University Cottbus-Senftenberg, Germany  
*Author:* Sebastian Kreuz

**Forecasting models for short and long term gas price**

*Presenter:* Raffaele Troise, Enel, Italy  
*Authors:* Claudio Pregagnoli, Raffaele Troise, Claudio Dicembrino, Michele Frate

- 6 Energy efficiency in buildings and industry**

*Chair:* Spiros Papaefthimiou, Technical University of Crete, Grece

**The longer term effects of home energy efficiency investments**

*Presenter:* Daire McCoy, Grantham Research Institute, London School of Economics  
*Author:* Daire McCoy, Antoine Dechezlepretre, Francois Cohen

**Energy Efficiency in buildings: a simple but accurate way to perform calculations**

*Presenter:* Giuseppe Dell'Olio, GSE, Italy  
*Author:* Giuseppe Dell'Olio

**Environmental and energy efficiency analysis of EU electricity industry: An almost spatial two stages DEA approach**

*Presenter:* Maria Chiara D'Errico, University of Perugia, Italy  
*Author:* Simona Bigerna, Carlo Andrea Bollino, Maria Chiara D'Errico e Paolo Polinori

- 7 Special Session: Day-ahead, Intra-day and Balancing Markets**

*Chair:* Angelica Gianfreda, Free University of Bozen-Bolzano, Italy

**Imbalances and market rules in Italian wholesale electricity market**

*Presenter:* Stefano Clo', University of Milano,  
*Author:* Stefano Clo', Angelica Gianfreda

**Demand participation in electricity balancing markets**

*Presenter:* Elena Fumagalli, Polytechnic University of Milan, Italy  
*Author:* Bastian Westbrock, Elena Fumagalli

**What drives balancing prices: the Italian case**

*Presenter:* Lucia Parisio, DEMS -University Milano-Bicocca, Italy  
*Authors:* Angelica Gianfreda, Lucia Parisio e Matteo Pelagatti

**Quantile merit order effects and network upgrades**

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

**Imbalances costs of small scale renewable not dispatchable power plants in the Italian electricity market**

*Presenter:* Nicola Sorrentino, University of Calabria, Italy  
*Authors:* Nicola Sorrentino, Daniele Menniti, Anna Pinnarelli

- 8 Modeling the new environment**

*Chair:* Cecilia Camporeale, Italian Ministry of Environment – A.T. Sogesid, Italy

**IT-DAMEE: a regional application to assess the macro-effect of RDP fund in Emilia Romagna**

*Presenter:* Cecilia Camporeale, Italian Ministry of Environment – A.T. Sogesid  
*Authors:* Roberto Del Ciello, Cecilia Camporeale

**Assessing the role of innovative farming techniques to reduce energy consumption and carbon emission**

*Presenter:* Nicola Colonna, ENEA, Italy  
*Co-author:* Nicola Colonna, Stefano Lo Presti

**A look at Energy Law: Legal challenges presented by new technologies**

*Presenter:* Daria Capotorto, Agnoli e Giuggiolo Law Firm, Italy  
*Author:* Daria Capotorto

## 13.00 - 14.00 Lunch



### Lunch buffet

LUMSA University  
(Via delle Fosse di Castello, 11 - Aula Pia)

offered by

nature  
energy

## 14.00 - 15.30 Dual Plenary Sessions

**Economic instruments and transition pathways to a low-carbon economy in the industrial sectors**

*Chair:* Gurkan Kumbaroglu, Past President IAEE, Bogazici University - Turkey

**Sandro Neri**, FEDERMANAGER Rome, Italy

**Simone Mori**, President Elettrocità Futura, Italy

**Corrado Papa**, Commercial Manager, Adriatic LNG, Italy

**Salvatore Pinto**, President of Axpo, Italy

**Claudio Spinaci**, President Unione Petrolifera, Italy

**Europe Roadmap and the future strategies of the energy industry**

*Chair:* Giovanni Ferri, Professor and Deputy Rector at LUMSA University

**Kostas Andriosopoulos**, Executive Director, Research Centre for Energy Management (RCM), Grece

**Leonardo D'Acquisto**, Head Manager Institutional Relations, Italgas, Italy

**Dario Di Santo**, Managing Director Italian Federation for Energy Efficiency – FIRE, Italy

**Luigi Michi**, Strategy and Development Manager Terna, Italy

## 15.30 - 17.00 Concurrent Sessions (9-11)

### 9 Commodity Pricing

*Chair:* Vittorio D'Ermo, AIEE, Italy

#### **Asymmetric risk spillovers between oil and agricultural commodities**

Presenter: Syed Jawad Hussain Shahzad, Montpellier Business School, France  
Author: Syed Jawad Hussain Shahzad

#### **Evaluation of oil & gas firms' financial performance: cash flows vs. accounting earnings**

Presenter: Bård Misund, University of Stavanger Business School, Norway  
Author: Bård Misund

#### **Financial instruments to mitigate the risk of climate change: rainfall and temperature**

Presenter: Silvana Stefani, University Bicocca, Italy  
Author: Silvana Stefani

#### **Natural Gas Market Prediction via Statistical and Neural Network Methods**

Presenter: Mona Shokripour, Gas Exporting Countries Forum (GECF), Qatar  
Author: Mona Shokripour

### 10 Energy and Industrial Competitiveness

*Chair:* Agime Gerbeti, LUMSA University, Italy

#### **The environmental impact of photovoltaic panels imported from China compared to Germany in a central Mediterranean setting**

Author Manfred Weissenbacher, Stefan Montebello  
Presenter: Manfred Weissenbacher

#### **Carbon pricing instruments for implementing the objectives of the Paris agreement**

Presenter: Mario Iannotti Ministry of Environment, Land&Sea  
Author: Mario Iannotti Ministry of Environment, Land&Sea

#### **The revision of EU climate energy policies in the context of the Paris Agreement**

Presenter: Fabrizio Fabbri, European Parliament, Italy  
Author: Fabrizio Fabbri

#### **Industrial competitiveness from the legal perspective**

Presenter: Daria Capotorto, Agnoli e Giuggiolo Law Firm, Italy  
Author: Daria Capotorto

### 11 Strategic contribution of energy storage to energy security

*Chair:* Alberto Pincherle, AIEE Italy

#### **Modelling the cost of gas supply outages and their substitution as a way of assessing Security of Supply Measures**

Presenter: Sergio Ascari, Florence School of Regulation, European University Institute, Italy  
Author: Sergio Ascari

#### **Spot trading profits of energy storage systems in the region covered by EPEX SPOT**

Presenter: Maria Kaninia, Electrical Engineer, MSc ETHZ, Switzerland  
Author: Maria Kaninia

#### **Energy storage in wind turbines: a strategic contribution to energy security**

Presenter: Giuseppe Dell'Olio, GSE SpA, Italy  
Author: Giuseppe Dell'Olio

## 18.00 - 20.00 Gala cocktail



### Roof garden terrace of Atlante Star Hotel

A luxuriant rooftop terrace with a panoramic view of the great city and the hills in the background.

We warmly invite you to experience this unforgettable sensation

participants will be accompanied from the Conference venue to the cocktail venue

room Michelangelo  
Via Giovanni Vitelleschi, 34



# Saturday, November 4, 2017

## 09.00 - 10.30 Concurrent Sessions (12-13)

### 12 Bioenergies

*Chair:* Carlo Di Primio, AIEE, Italy

#### **Arbitrations for bioenergy use in the 21st century energy context: the significance of gasification and methanisation**

Presenter: Gabin Mantulet, CNRS LPSC - CNRS GAEL, France  
Authors: Gabin Mantulet, Adrien Bidaud, Silvana Mima

#### **Lignocellulosic biorefineries as replacement of fossils**

Presenter: Himadri Roy Ghatak, Sant Longowal Institute of Engineering & Technology, India  
Author: Himadri Roy Ghatak

#### **Securing local energy supply through municipal energy autonomy: assessing the feasibility of increased district heating from German biogas plants**

Presenter: Russell McKenna, Karlsruhe Institute for Technology (KIT), Germany  
Authors: Russell McKenna, Jann Weinand, Lorenz Braun, Carsten Herbes

#### **Factors influencing prices for heat from biogas plants**

Presenter: Carsten Herbes and Lorenz Braun Nuertingen - Geislingen University, Germany  
Authors: Carsten Herbes, Verena Halbherr, Lorenz Braun

### 13 The Electricity market: risks and opportunities

*Chair:* Lucia Visconti Parisio, University Bicocca, Italy

#### **Managing the liberalization of Italy's retail electricity market:**

##### **A policy proposal**

Presenter: Carlo Stagnaro, Bruno Leoni Institute  
Author: Carlo Stagnaro, Carlo Amenta, Luciano Lavecchia

#### **Electricity grid evolution in Europe pre-access Countries: the Turkish case**

Presenter: Gaia Moretti, Ianus Consulting and Development Srl-LUMSA University, Italy  
Author: Gaia Moretti

#### **The Ideal Competitive Electricity Market. a simulation for Italy**

Presenter: Carlo Andrea Bollino, AIEE, Italy  
Author: Carlo Andrea. Bollino, Simona Bigerna, Paolo Polinori, Maria Chiara D'Errico

#### **The blockchain challenge for the electricity system**

Presenta: Alessio Pinzone, AREA Rided - Polytechnic University of Milan, Italy  
Autori: Alessio Pinzone, Fabrizio Armani.

### Students Session

*Chair:* Vittorio D'Ermo, AIEE, Italy

#### **The European Energy Policy on Renewable Sources and its Consequences on Member States**

Presenter: Lorenzo De Santis, LUISS Guido Carli University, Italy  
Author: Lorenzo De Santis

#### **The Italian Electric System in the light of European energy policies**

Presenter: Elisabetta Glorioso, LUISS Guido Carli University, Italy  
Author: Elisabetta Glorioso

#### **Cyber threats in the energy sector**

Presenter: Nicola Scarnera, LUISS Guido Carli University, Italy  
Author: Nicola Scarnera

## 10.30 - 11.30 Plenary Session

### ***Sustainable mobility challenges for the transition targets***

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

**Emanuele Proia**, Executive Manager ASSTRA (Italian Association of Public Transport Operators), Italy

**Franco Del Manso**, Manager of the Technical and Environmental Office, Unione Petrolifera, Italy

**Linda Meleo**, Rome City Hall Mobility Councilor, Italy

## 11.30 - 13.00 Concurrent Sessions (14-17)

### 14 Technology development - Grid management

*Chair:* Giuseppe Dell'Olio, GSE, Italy

#### **Sustainability assessment of hybrid Photovoltaic/Thermal (PV/T) technologies**

Presenter: Spiros Papaefthimiou, Technical University of Crete, Greece  
Author: Manolis Souliotis, Spiros Papaefthimiou

#### **Big Data and Cloud Computing technologies applied to the energy sector: from buzzwords to market optimization through an SaaS solution**

Presenter: Alessandro Piacentini, Dogma Enterprise, Italy  
Author: Alessandro Piacentini

#### **Considering Hydrogen Fuel Cells Powertrain as Power Generation Plant - 2017 review**

Presenter: Mario Valentino Romeri, Energy consultant, Italy  
Author: Mario Valentino Romeri

### 15 Scenarios and forecasting methodologies

*Chair:* Giancarlo Scorsoni, Energy Advisor, Italy

#### **Energy World in 2040: a scenario approach**

Presenter: Manfred Hafner, Enerdata, France  
Author: Manfred Hafner

#### **Forecasting the distributions of hourly electricity spot prices**

Presenter: Arne Vogler, University of Duisburg-Essen, Germany  
Authors: Arne Vogler, Christian Pape, Oliver Woll, Christoph Weber

#### **2METE: An Ecological Macroeconomic Model for Energy Transition. Alternative Scenarios Towards Ecological Sustainability and Social Equity**

Presenter: Simone D'Alessandro, Department of Economics and Management, University of Pisa  
Author: Simone D'Alessandro

**16 Climate policy and emission trading**  
*Chair:* Ionut Purica, Advisory Center for Energy and Environment, Romania

**Curbin carbon emissions: is a carbon tax the most efficient levy?**  
Presenter: José María Martín-Moreno, University of Vigo, Spain  
Author: José María Martín-Moreno, Jorge Blázquez, Rafaela Pérez, Jesús Ruiz

**Mapping carbon emissions embodied in inter-regional trade of China: final goods, intermediate goods and value chain**  
Presenter: Huibin Du, Tianjin University, China  
Author: Huibin Du, Zengkai Zhang

**Economic growth, CO<sub>2</sub> emissions, fossil fuels consumption and renewable energy consumption in Australia**  
Presenter: Patrícia Hipólito Leal, University of Beira Interior, Portugal  
Authors: António Cardoso Marques, José Alberto Fuinhas, Patrícia Hipólito Leal

**Energy volatilities and the cost of security**  
Presenter: Ionut Purica, Advisory Center for Energy and Environment, Romania  
Author: Ionut Purica

**17 The multiple paths of electricity demand**  
*Chair:* G.B. Zorzoli, AIEE, Italy

**Incentivising households to reduce electricity consumption: a meta-analysis of the experimental evidence**  
Presenter: Penelope Buckley, Université Grenoble Alpes, France  
Author: Penelope Buckley

**Impacts of Prosumers on DSO Investments: Updating Tariff Structures**  
Presenter: Golnoush Soroush, Politecnico di Torino, Italy  
Authors: Golnoush Soroush, Carlo Cambini

**The evolution of price and income elasticities of electricity demand in Latin American countries: A time varying parameter approach**  
Presenter: David López Soto, London School of Economics, El Colegio de Mexico  
Authors: David López Soto, Rodrigo Nicolás Aragón Salinas

## 13.00 - 14.00 Lunch buffet

## 14.00 - 15.30 Concurrent Sessions (18-21)

**18 The energy-environment nexus**  
*Chair:* Jose Maria Labeaga Azcona, Open University Madrid, Spain

**The impact of economic growth on the CO<sub>2</sub> emissions in Australia: environmental Kuznets curve and decoupling index**  
Presenter: Patrícia Hipólito Leal, University of Beira Interior, Portugal  
Authors: António Cardoso Marques, Patrícia Hipólito Leal, José Alberto Fuinhas

**Air pollution externalities in Greek ports and airports**  
Presenter: George Nikoloudakis, Technical University of Crete, Greece  
Author: George Nikoloudakis, Spiros Papaefthimiou

**Assessing the economic impacts of climate change on competition for water resources in the framework of the water-energy nexus: a hybrid general equilibrium approach for Portugal**  
Presenter: Carla Teotónio, Universidade de Aveiro, Portugal  
Author: Carla Teotónio, Miguel Rodriguez-Mendez, Peter Roebeling, Patrícia Fortes da Silva

**19 Energy supply and security**  
*Chair:* Fatma Çiğdem Çelik, İstanbul Okan University, Turkey

**Capital rationing. A threat to energy security**  
Presenter: Petter Osmundsen, University of Stavanger, Norway  
Author: Petter Osmundsen, Magne Emhjellen

**Constructing a Taiwan's energy security analysis of liquefied nature gas by system dynamic model**  
Presenter: Kuei-Lan Chou, Industrial Technology Research Institute, Taiwan  
Author: Kuei-Lan Chou

**Similarities and Differences in Views on Energy Security. A Comparison of Public and Stakeholder Perceptions in Germany**  
Presenter: Diana Schumann, Forschungszentrum Juelich GmbH, Institute of Energy and Climate Research, IEK-STE, Germany  
Authors: Diana Schumann, Sophia Dieken

**Modernizing energy markets through cooperation mechanism**  
Presenter: Agime Gerbeti, LUMSA University, Italy  
Author: Agime Gerbeti

**20 Integrating renewables in energy markets**  
*Chair:* Francesco Asdrubali, Roma Tre University, Italy

**Estimation of Bidding Curves for Active Distribution Networks**  
Presenter: Maria Teresa Vespucci, University of Bergamo, Italy  
Authors: Maria Teresa Vespucci, Paolo Piscicella, Giacomo Viganò, Marco Rossi, Diana Moneta

**Feed-in-tariff, quota obligation and tenders for renewable support: Comparison with regard to innovation, investment incentives and strategic behavior**  
Presenter: Philip Dees, Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute of Economics, Germany  
Author: Philip Dees

**Technical due diligence analysis on onshore wind projects: case study**  
Presenter: Antonio Geracitano, EOS Consulting, Italy  
Author: Antonio Geracitano, Chiara Ruggiero, Emanuele Riccobene

**21 A new shape for electricity systems**  
*Chair:* Carlo Mari, University of Chieti-Pescara, Italy

**Evaluation of risks for power plant operators through reconfiguration of price zones in extended Central Western Europe**  
Presenter: Tim Jonathan Felling, House of Energy Markets and Finance, University Duisburg-Essen, Germany  
Author: Tim Jonathan Felling, Caroline Deilen, Robin Leisen, Christoph Weber

**The electricity market price: volatility, pattern and forecast analysis**  
Presenter: Kun Li, Beijing Normal University, China  
Author: Kun Li, Joseph D. Cursio

**Long-term transmission capacity planning in a scenario with high share of variable renewable energies**  
Presenter: Stéphane Allard, G2Elab, University Grenoble Alpes, France  
Authors: Stéphane Allard, Silvana Mima, Vincent Debusschere, Tuan Tran, Patrick Criqui, Nouredine Hadj-Saïd

**The electric system at the time of choices : an ecosystem that creates value for France**  
Presenter: Alex Menu, Sciences Po Paris - Energy, Environment and Regulation, France  
Author: Alex Menu



