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SDA Bocconi
SCHOOL OF MANAGEMENT
SUSTAINABILITY LAB

5th AIEE Energy Symposium

Current and Future Challenges to Energy Security

- energy perspectives beyond COVID19 -

VIRTUAL CONFERENCE 15-17 December, 2020

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Dear Energy Colleague,

The **Italian Association of Energy Economists - AIEE**, affiliate of the **International Association for Energy Economics - IAEE**, is organizing the **5th AIEE Energy Symposium on Energy Security - 2020**, in cooperation with the **SDA Bocconi School of Management**, of Milan, programmed also this year for **mid December**.

There is still uncertainty regarding travelling around the world, social distancing and possibility to attend the event physically, so, this edition of the AIEE Energy Symposium will be organized as a **virtual conference**, online.

The **AIEE Energy Symposium on Energy Security** has become an important yearly appointment and an opportunity to discuss energy security, to explore new and existing trends, creative solutions of new technologies, the emergence of new market conditions and of new market operators.

An appointment we do not want to miss!

In the turmoil of the COVID19 pandemic outbreak the "ordinary" practices of our daily work routines had to change considerably and this year we had to rethink the structure of our conference and make it virtual. In our uncertain world of travel budget cuts and possible pandemics return when health officials recommend against large gatherings of people, hosting a virtual event is an excellent alternative.

A recent survey conducted in the European Union has confirmed a general consensus of all countries to support the efforts to strengthen energy security. Nine out of 10 Europeans

agree the EU's energy policy priorities should be to ensure secure, clean, and affordable energy, to combat climate change, decreasing energy consumption across the EU and facilitating more competitive prices for consumers.

For the coming 10 years the main priority is investing and developing clean energy technologies, ensuring that costs are as low as possible and stepping up international efforts to reduce climate change.

After the crisis of COVID-19, energy security will remain an important issue of the world energy policy and the key for a more resilient society. The pandemic has set in motion the largest drop in global energy investment in history, with spending expected to plunge in every major sector this year – from electricity to renewables and energy efficiency.

The **AIEE Symposium** will be a forum to discuss all these problems, continuing the dialogue of the past editions analyzing the transformations of the concept of energy security in this new context.

A comprehensive program, with Plenary sessions and keynote presentations, and several concurrent sessions will give the attendees from all over the world the occasion to participate in an interactive, collaborative networking and information-sharing event, in the prestigious context of the **SDA Bocconi School of Management** (that was ranked 3rd in the 2019 Financial Times' European Business School Ranking and 8th in the world for business and management studies).

Carlo Di Primio, AIEE President

Organization

ORGANIZATION COMMITTEE CHAIR: **CARLO DI PRIMIO**, President, AIEE, Italy

GENERAL CONFERENCE CHAIR: **CARLO ANDREA BOLLINO**, Professor University of Perugia, Honorary President, AIEE, Italy

PROGRAMME COMMITTEE CHAIR: **MATTEO DI CASTELNUOVO**, Associate Professor, Director of the Master in Green Management, Energy and Corporate Social Responsibility (MaGER)

SCIENTIFIC COMMITTEE CHAIR: **AGIME GERBETI**, President AIEE Scientific Committee, Italy

Organization and Coordination: **ANKA SERBU**, External Relations & Communication, AIEE, Italy

Scientific and Programme Committees

SCIENTIFIC COMMITTEE CHAIR: **AGIME GERBETI**, AIEE, Italy

Amela Ajanovic, TU WIEN, Energy Economics Group (EEG), Austria; **Francesco Asdrubali**, Department of Engineering, University Roma Tre, Italy; **Federico Boffa**, Free University of Bolzano, Italy; **Carlo Andrea Bollino**, University of Perugia, Italy; **Christophe Bonnerly**, F-AEE, France; **Carlo Cambini**, Polytechnic University of Torino, Italy; **Pantelis Capros**, E3MLab – Energy Economy Environment Modelling Lab, Greece; **Anna Creti**, Université Paris Dauphine, France; **Çiğdem Çelik**, Istanbul Okan University; **Vittorio D'Ermo**, AIEE, Italy; **Maria Chiara D'Errico**, University of Perugia, Italy; **Eric Delarue**, KU Leuven Department of Mechanical Engineering, Belgium; **Matteo Di Castelnuovo**, SDA Bocconi School of Management, Italy; **Paul Ekins**, UCL Institute for Sustainable Resources, UK; **Ivan Faiella**, Directorate General for Economics, Statistics and Research, Banca d'Italia, Italy; **Marco Falcone**, Esso Italiana, ExxonMobil Group, Italy; **Fulvio Fontini**, University of Padova, Italy; **Elena Fumagalli**, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands; **Antonio Geracitano**, University Tor Vergata, Italy; **Monica Giulietti**, Loughborough University, UK; **Jean Michel Glachant**, European University Institute-EUI, Florence School of Regulation; **Nevenka Hrovatin**, University of Ljubljana, Slovenia; **Mario Iannotti**, Ministry of Environment, Italy; **Xavier Labandeira**, University of Vigo, Spain; **Carlo Mari**, University of Chieti-Pescara, Italy; **David Newbery**, University of Cambridge, UK; **Spiros Papaefthimiou**, Technical University of Crete and HAEE, Greece; **Silvia Pariente-David**, Center for Mediterranean Integration, France; **Aaron Praktiknjo**, RWTH Aachen University, Council Member of IAEE, Germany; **Lucia Visconti Parisio**, Bicocca University, Italy; **Alberto Ponti**, F2i Sgr, Italy; **Ionut Purica**, Romanian Academy, Romania; **Pippo Ranci**, Florence School of Regulation European University Institute, Italy; **Nicoletta Rangone**, LUMSA University, Italy; **Alessandro Rubino**, University of Bari, Italy; **Federico Santi**, University of Rome La Sapienza, Italy; **Alessandro Sapio**, Parthenope University of Naples, Italy; **Francesco Scalia**, University of Cassino and Southern Lazio, Italy; **Mine Yücel**, Federal Reserve Bank of Dallas, USA; **G.B. Zorzoli**, FREE (Coordination of the Development of Renewable Energy Sources), Italy

PROGRAMME COMMITTEE CHAIR: **MATTEO DI CASTELNUOVO**, Sustainability Lab, SDA Bocconi School of Management, Italy

Fabio Catino, Treccani, and Rocket Capital Investment, Italy; **Gianluca Carrino**, AIEE, Italy; **Vittorio D'Ermo**, AIEE, Italy; **Marco Falcone**, Esso Italiana, ExxonMobil Group, Italy; **Mario Iannotti**, Advisor on Sustainable Development (IMELS), Italy; **Stefano Pogutz**, Sustainability Lab, SDA Bocconi School of Management, Italy; **Maximilian Rinck**, Independent energy consultant, Germany; **Gianluca Salviootti**, Devo Lab, SDA Bocconi School of Management, Italy; **Francesco Scalia**, University of Cassino and Southern Lazio, Italy; **Elisa Scarpa**, Edison, Italy

Conference Secretariat

Adelaide Calapaj, Martina Cruciani - AIEE - Italian Association of Energy Economists
Phone: +39 06 3227367 - Email: assaiee@aiee.it; aiee@aieesympoium.eu

Conference agenda

Tuesday, December 15, 2020

15:30-17:00 Opening Session – Welcome Address

15.20-15.30 test of the technical settings with the speakers

15.30-17.00 session

Carlo Di Primio, AIEE President

Beppe Soda, Dean of the SDA Bocconi School of Management

Matteo Di Castelnuovo, Associate Professor of Practice, Just Energy Transition Coordinator, Sustainability Lab, SDA Bocconi School of Management, President of the Program Committee

Agime Gerbeti, President of the AIEE Scientific Committee and of the Conference Scientific Committee

Carlo Andrea Bollino, Honorary President AIEE and Conference General Chair.

Ivetta Gerasimchuk, Lead, Sustainable Energy Supplies, International Institute for Sustainable Development

The presentation of the Energy Policy Tracker Project

keynote speakers:

Enrico Gibellieri, Consultative Commission on Industrial Change (CCMI) of the European Economic and social Committee (EESC)

Resources and Energy intensive Industries REIIs

Fereidoon Sioshansi, President Menlo Economics, USA

Energy & environmental policy under new US Administration

Wednesday, December 16, 2020

09.00 -10.30 Virtual concurrent session (cycle 1-4) - 1h.30'

08.50-09.00 test of the technical settings with the speakers

09.00-10.30 session

01 Energy efficiency and carbon emissions reduction in buildings

Chair: Federico Santi University of Rome La Sapienza, Italy

02 Integrating renewables in the energy market

Chair: Lucia Visconti Parisio Bicocca University, Italy

03 The energy-economy nexus

Chair: Luigi Samuele, Managing Partner Horus Green energy Investment, Italy

04 Current Gas Market Dynamics

Chair: Vittorio D'Ermo, AIEE, Italy

10.40 -11.40 Dual Plenary Sessions - 1h.00'

10.30-10.40 test of the technical settings with the speakers

10.40-11.40 session

EU beyond 2030 and the energy security concerns

Chair: Agime Gerbeti, President of the Scientific Committee AIEE, Italy

Regulatory challenges and market developments

Chair: Alessandro Ortis, Honorary President of MEDREG (Mediterranean Energy Regulators), Past President of the Italian Authority - ARERA, Italy

11.50-13.20 Virtual concurrent session (cycle 5-8) - 1h.30'

11.40-11.50 test of the technical settings with the speakers

11.50-13.20 session

05 The renewable energy reality: case studies

Chair: Davide Tabarelli, NE-Nomisma Energia, Italy

06 cancelled

07 Rethinking the energy security strategies

Chair: Matteo Di Castelnuovo, SDA Bocconi School of Management, Italy

08 The price and forecasting in power system

Chair: Fatma Çiğdem Çelik, Okan University, Turkey

13.20 -14.20 Break

14.30-16.00 Dual Plenary Sessions - 1h.30'

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Energy industry challenges to a low-carbon economy, the RES and gas role in the transition

Chair: Carlo Di Primio, AIEE President, Italy

Sustainable mobility challenges for the transition targets

Chair: G.B. Zorzoli, Honorary President FREE, Italy

16.10 -17.40 Virtual concurrent session (cycle 9-12) - 1h.30'

16.00-16.10 test of the technical settings with the speakers

16.10-17.40 session

09 The Electricity market: risks and opportunities

Chair: **Arturo Lorenzoni**, University of Padova, Italy

10 Global assessment of energy efficiency and sustainability

Chair: **Ionut Purica**, RAEE Romania

11 Synergies between Climate Change, energy access and energy poverty

Chair: **Fulvio Fontini**, University of Padua, Italy

12 Green revolution: green economies and other technologies

Chair: **Antonio Geracitano**, University Tor Vergata, Italy

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13 Smart Energy Services to Improve the Energy Efficiency of the European Building Stock (SENSEI) - H2020 project – Grant agreement n° 847066

Chair: **Nicola Sorrentino**, University of Calabria, Italy

14 The European energy roadmap to 2050 and the fiscal policies apply

Chair: **Agime Gerbeti**, AIEE Italy

15 The geopolitics of the global energy transition

Chair: **Alessandro Rubino**, University of Bari, Italy

16 Energy transition and grid transformation

Chair: **Prof. Elena Fumagalli**, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands

10.40 -11.40 Dual Plenary Sessions - 1h.00'

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Grid security and new technologies

Chair: **Carlo Andrea Bollino**, AIEE Honorary President, Professor University of Perugia, Italy *

Energy Efficiency and the future strategies of the energy industry

Chair: **Gurkan Kumbaroglu** - Professor University of Boğaziçi, President of TRAEE- The Turkish Association of Energy Economics

11.50-13.20 Virtual concurrent session (cycle 17-20) - 1h.30'

11.40-11.50 test of the technical settings with the speakers

11.50-13.20 session

17 Energy consumption and power demand

Chair: **Elisa Scarpa**, Edison S.p.A., Italy

18 The impact of oil price fluctuation

Chair: **Franco Del Manso**, UNEM, Italy

19 Strategic contribution of innovation and energy storage to energy security

Chair: **Spiros Papaefthimiou**, University of Crete, Greece

20 The hydrogen economy opportunities and challenges

Chair: **Emanuele Piccinno**, energy consultant, Eni, Italy

Conference Program

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1. Energy efficiency and carbon emissions reduction in buildings

Chair: **Federico Santi** University of Rome La Sapienza, Italy

Are green value preferences for Energy Quality Stationary ? A Spatio-Temporal Analysis of the Green Energy Value Evolution at Metropolitan Lyon

Presenter: Nathaly Cruz, Climate Economics Chair, University Paris Nanterre, France

Authors: Nathaly Cruz, Marc Baudry

Assessment of domestic hot water demand: various criteria checked against real life data

Presenter: Giuseppe Dell'Olio, Gestore dei Servizi Energetici, Italy

Author: Giuseppe Dell'Olio

Price responsiveness and carbon emissions reductions in the residential sector: evidence from a natural experiment in Russia

Presenter: Salim Turdaliev, Institute of Economic Studies, Faculty of Social Sciences, Charles University, Czech Republic

Authors: Salim Turdaliev, Anna Alberini, and Milan Scasny

Energy efficiency in public historical buildings: an integrated approach. The case of the National Gallery of Modern and Contemporary Art in Rome

Presenter: Francesco Castellani, Studio Santi, Italy

Authors: Francesco Castellani, Federico Santi, Romano Alberto Acri

3 The energy-economy nexus

Chair: **Luigi Samuele**, Managing Partner Horus Green Energy Investment, Italy

Assessing stakeholder acceptance of energy transformation pathways: the case of Germany's net zero strategy

Presenter: Christopher Ball, Forschungszentrum, Jülich, Germany

Authors: Sri Vishnu Teja Josyabhatla, Christopher Ball, Stefan Vögele

How far we are from price convergence in the EU energy markets? A two-step procedure to define a composite index of electricity and natural gas prices

Presenter: Consuelo R. Nava, University Turin, Italy

Authors: Ernesto Cassetta, Consuelo R. Nava, Maria Grazia Zoia

Emergency measures to protect energy consumers during the covid-19 pandemic: a focus on the Italian interventions

Presenter: Paolo Mastropietro, Universidad Pontificia Comillas

Authors: Paolo Mastropietro, Pablo Rodilla, Carlos Batlle

The relationships between tourism energy consumption and emissions

Presenter: Inmaculada Crespo Morán, University of Seville, Spain

Authors: Inmaculada Crespo Morán, María del P. Pablo-Romero, Javier Sánchez-Rivas, Antonio Sánchez-Braza

2. Integrating renewables in the energy market

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

The Participation of Small-Scale Variable Distributed Renewable Energy Sources to the Balancing Services Market

Presenter: Marina Bertolini, University of Padova, Italy

Authors: Marco Agostini, Marina Bertolini, Massimiliano Coppo, Fulvio Fontini

Feed-in tariffs and investment in renewable energy technologies under uncertain production volumes

Presenter: Matthias Ondra, Vienna University of Technology, Austria

Authors: Matthias Ondra, Thomas Dangl

A Data-driven approach to renewable energy source planning at regional level

Presenter: Angelo Facchini, Assistant Professor, IMT School for Advanced Studies, Lucca

Authors: Francesco Surmonte; Umberto Perna; Antonio Scala, Alessandro Rubino

4 Current Gas Market Dynamics

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

Drivers of merger and acquisition transactions in the U.S upstream oil and gas industry

Presenter: Sevkat Ozgur, Faculty of Business, Economics and Statistics, University of Vienna, Austria

Authors: Sevkat Ozgur

Exploring Russian Gas Prices to Europe: Empirical Evidence of Price Convergence from Time Series Analysis

Presenter: Amina Talipova, Higher School of Economics

Authors: Amina Talipova, Sergei Parsegov

10.40 -11.40 Dual Plenary Sessions - 1h.00'

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EU beyond 2030 and the energy security concerns

Chair: **Agime Gerbeti**, President of the Scientific Committee AIEE, Italy

Stéphanie Bouckaert, Senior Energy Analyst IEA-International Energy Agency

Marco Falcone, Government Relations and Issues Manager, Esso Italiana, Exxon Mobil Group, Italy

Silvia Pariente-David, Consultant on energy and climate change and Senior advisor – Center for Mediterranean Integration, World Bank, France

Elena Donnari, High-level Administrator for CRM and MIT, CEER

Regulatory challenges and market developments

Chair: **Alessandro Ortis**, Honorary President of MEDREG (Mediterranean Energy Regulators), Past President of ARERA,

Derek Bunn, Professor of Decision Sciences at London Business School, UK

Giordano Colarullo, General Manager, Federation of the Italian Utilities - Utilitalia, Italy

Jean Michel Glachant, Director of the Florence School of Regulation and the Holder of the Loyola de Palacio Chair

Agostino Re Rebaudengo, President of Elettricità Futura (The Italian Association of the Electricity Industry) and of Asja

11.50-13.20 Virtual concurrent session (cycle 5-8) - 1h.30'

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5. The renewable energy reality: case studies

Chair: **Davide Tabarelli**, NE-Nomisma Energia, Italy

On the impact of wind and solar generation on Nuclear power. The case of France

Presenter: François Benhmad, Montpellier University, France

Authors: François Benhmad, Jacques Percebois

Photovoltaics and the Solar Rebound: Evidence for Germany

Presenter: Kathrin Kaestner, RWI – Leibniz Institute for Economic Research, Germany

Authors: Kathrin Kaestner, Manuel Frondel, Stephan Sommer, Colin Vance

Modelling transformation pathways for EU27+3 final energy demand using timely and spatially resolved sector models

Presenter: Claudia Fiedler, Forschungsstelle für Energiewirtschaft e.V, Germany

Authors: Andrej Guminski, Claudia Fiedler, Timo Limmer

7. Rethinking the energy security strategies

Chair: **Matteo Di Castelnuovo**, SDA Bocconi School of Management, Italy

Energy security – shift of paradigms

Presenter: Honorata Nyga-Lukaszewska, Warsaw School of Economics, Poland

Author: Honorata Nyga-Lukaszewska

Energy Security Implications of Small Modular Reactors and Microreactors Deployment in Off-Grid Areas in Northern Regions

Presenter: Denis Subbotnitskiy, International Atomic Energy Agency, Austria

Authors: Chirayu Batra, Denis Subbotnitskiy

Europe Energy road map to 2050: a coal phase-out in the context of international investment law

Presenter: Martin Švec, Masaryk University, Faculty of Law, Czech Republic

Author: Martin Švec

8 . The price and forecasting in power system

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

Multistep ahead forecasting of a power system residual load using a hybrid CEEMDAN-ConvLSTM model

Presenter: Coudray Théotime, University of Montpellier-ART-Dev laboratory and Climate Economics, France

Authors: Coudray Théotime

Study of factors that influence the price of electricity

Presenter: Daiva Dumciuvienė, Kaunas University of Technology, Lithuania

Authors: Daiva Dumciuvienė, Grazina Startienė

Energy Load and Price Forecasting: Methods and Variable Treatment

Presenter: Vanshika Fotedar, Alasdair Crawford, Pacific Northwest National Laboratory, USA

Authors: Vanshika Fotedar, Alasdair Crawford

The relationship between day-ahead and futures prices in electricity market: an empirical analysis on Italy, France, Germany and Switzerland

Presenter: Cinzia Bonaldo, University of Padua, Italy

Authors: Cinzia Bonaldo; Massimiliano Caporin; Fulvio Fontini

13.20 -14.20 – Break

14.30-16.00 Dual Plenary Sessions - 1h.30'

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Energy industry challenges to a low-carbon economy, the RES and gas role in the transition

Chair: Carlo Di Primio, AIEE President, Italy

Vilayat Valiyev, IAEE VP for Regional Development, Rector of Azerbaijan Technical University.

Massimiliano Mannino, Shell Energy, Italy Country manager
Luca Bragoli, Head of Public Affairs ERG, Italy

Lorenzo Mottura, Strategy & Corporate Development Director, Edison, Italy

Giacomo Rispoli, CEO MyRechemicals, Italy

Sustainable mobility challenges for the transition targets

Chair: G.B. Zorzoli, Honorary President FRE, Italy

Amela Ajanovic, Assistant Professor & Senior Research Scientist, Energy Economics Group, Vienna University of Technology, Austria

Vincent Schachter, Head of Global Energy Services Enel X e-Mobility, France

Franco Del Manso, International Environment Affairs manager of UNEM - Energy Union for Mobility, Italy

Mariarosa Baroni, President NGV Italy

Dino Marcozzi, General Secretay *MOTUS-E* member of the European Platform for Mobility, Italy

16.10 -17.40 Virtual concurrent session (cycle 9-12) - 1h.30'

16.00-16.10 test of the technical settings with the speakers

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9 . The Electricity market: risks and opportunities

Chair: Arturo Lorenzoni, University of Padova, Italy

An optimization approach for a local electricity market

Presenter: Markus Schindler, Forschung Burgenland, Austria

Authors: Markus Schindler, Lukas Gnam

The future of capacity remuneration mechanisms in the EU, revisited

Presenter: Íñigo del Guayo, University of Almería, Spain

Authors: Íñigo del Guayo, Giuseppe Ferrari and Wojciech Drozd

Electricity market capacity mechanism and strategic capacity withholding in Turkey

Presenter: Tunç Durmaz, Yildiz Technical University, Turkey

Authors: Tunç Durmaz, Secil Acar Aytekin, Simay Kizilkaya

Electricity demand, mobility, COVID-19 contagion nexus with heavy lockdown

Presenter: Carlo Andrea Bollino, University of Perugia, Perugia

Energy Environment Research Center, and KAPSARC,

Authors: Carlo Andrea Bollino, Simona Bigerna,

Maria Chiara D'Errico, Paolo Polinori,

10. Global assessment of energy efficiency and sustainability

Chair: Ionut Purica, RAEE, Romania

Firm productivity, energy efficiency and export in Asian emerging and developing countries

Presenter: Anam Shehzadi, University Of Kassel, Germany

Authors: Anam Shehzadi

Regional policies to boost firms' energy efficiency and disaster response: a comparative analysis

Presenter: Elisa Valeriani, Università degli Studi di Modena

e Reggio Emilia, Italy

Authors: Maria Giovanna Bosco, Elisa Valeriani

Quantitative analysis of energy security and environmental sustainability using dynamic multi-sector energy economic model

Presenter: Jubair Sieed, The University of Tokyo, Japan

Authors: Jubair Sieed, Ryoichi Komiyama, Yasumasa Fujii

How to unlock the human potential for promoting energy efficiency? A review on the barriers and levers

Presenter: Nives Della Valle, European Commission, Joint

Research Centre

Authors: Paolo Bertoldi and Nives Della Valle

11. Synergies between Climate Change, energy access and energy poverty

Chair: Fulvio Fontini, University of Padua, Italy

Determinants, Persistence and Dynamics of Energy Poverty: An Empirical Assessment Using German Household Survey Data

Presenter: Benedikt Janzen, University of Bern, Switzerland

Authors: Benedikt Janzen, Katharina Drescher

Synergies and Trade-offs between Energy Access, Climate Change and Water Use in Sub-Saharan Africa

Presenter: Isabella Alloisio, Florence School of Regulation Energy and Climate - European University Institute, Italy

Authors: Isabella Alloisio

Energy poverty: A multifaceted cornerstone for a sustainable and inclusive recovery. Some evidence from Italy

Presenter: Alessandro Fiorini, ENEA, Italy

Authors: Alessandro Federici, Corinna Viola

The dark side of energy transition: the case of cobalt and the Democratic Republic of Congo

Presenter: Paola Casati, SDA Bocconi School of Management, Italy

Authors: Paola Casati

12. Green revolution: green economies and other technologies

Chair: Antonio Geracitano, University Tor Vergata, Italy

Life Cycle Assessment and eco-design alternatives of Solar Thermal technologies for the promotion of circular economy

Presenter: Maria Milousi, Technical University of Crete, Greece

Authors: Maria Milousi, Manolis Souliotis, Spiros Papaefthimiou

Impact assessment for rate design of wheeling charge system on electricity transmission sector and household sector with a technology selection model

Presenter: Kentarou Kambe, University of Tokyo, Japan

Authors: Kentarou Kambe, Ryoichi Komiyama, Yasumasa Fujii

The BRIDGE study: "Belt and Road Initiative and the Development of Green Economies" - Challenges and opportunities for a Green BRI

Presenter: Rocco De Miglio, E4SMA S.r.l., Italy

Authors: Rocco De Miglio, Gabriele Cassetti, Xi Yang

Thursday, December 17, 2020

09.00 -10.30 Virtual concurrent session (cycle 13-16) - 1h.30'

08.50-09.00 test of the technical settings with the speakers

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13. Smart Energy Services to Improve the Energy Efficiency of the European Building Stock (SENSEI) - H2020 project – Grant agreement n° 847066

Chair: Nicola Sorrentino, University of Calabria, Italy

Towards a performance-based energy economy. The increasing value of Pay for Performance schemes.

Presenter: Sotiris Papadelis, HEBES Intelligence, Greece

Authors: Sotiris Papadelis

Pay for Performance (P4P) models to foster investment in Energy Efficiency in buildings

Presenter: Charles-Henri Bourgois, Geert Goorden, Factor4, Belgium

Authors: Charles-Henri Bourgois, Arturo Lapietra, Felice Pandolfo

Devising classes of energy efficiency measure for evaluating pay-4-performance (P4P) rate that energy provider will be willing to offer in pay-4-performance scheme

Presenter: Arturo Lapietra, Omnia Energia, Italy

Authors: Arturo Lapietra, Vincenzo D'Agostino, Luca Petrungraro

Adaptability of Pay-for-Performance schemes for promoting energy efficiency in the EU

Presenter: Filippos Anagnostopoulos, Institute for European Energy and Climate Policy, The Netherlands

Authors: Filippos Anagnostopoulos, Dimitra Tzani, Vassilis Stavrakas

14. The European energy roadmap to 2050 and the fiscal policies apply

Chair: Agime Gerbeti, AIEE Italy

The influence of a carbon tax on cost competitiveness

Presenter: Bastien Dufau, University of Bordeaux, France

Authors: Bastien Dufau

Economic impact of GHG costs on the EU industry

Presenter: Agime Gerbeti, AIEE - Italian Association of Energy Economists, Italy

Authors: Agime Gerbeti

EU Energy and Climate Policies to Reach Carbon Neutrality

Presenter: Paolo Bertoldi, European Commission, Joint Research Centre

Author: Paolo Bertoldi

The circular economy: an essential pillar to achieve the EU energy roadmap to 2050

Presenter: Gianluca Carrino, AIEE, Italy

Authors: Gianluca Carrino

15. The geopolitics of the global energy transition

Chair: **Alessandro Rubino**, University of Bari, Italy

Iran-China 25 year's agreement, Energy Implications

Presenter: Fazel M. Farimani, Shahid Beheshti University; Iran
Authors: Fazel M. Farimani, Seyed Reza Mirnezami

Energy transition in Russia: what implications for natural gas?

Presenter: Olga Garanina, Graduate School of Management, St.Petersburg University
Authors: Olga Garanina, Silvana Mima, GAEL-CNRS

Understanding variation in the governance of fracking

Presenter: John D. Graham, and John A. Rupp, School of Public and Environmental Affairs, Indiana University, USA
Authors: John D. Graham, John A. Rupp

Opportunities to ensure affordable prices and security of natural gas supply in Bulgaria following the commitments of Gazprom Export before the European Commission"

Presenter: Lyubomira Gancheva, Sofia University, 'St. Kliment Ohridski'
Author: Lyubomira Gancheva

16. Energy transition and grid transformation

Chair: **Prof. Elena Fumagalli**, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands

The Social – A Positive Driver of the Energy Transition? Six Case Studies from Germany

Presenter: Lisa Hanna Broska, IEK-STE at Research Centre Juelich - Freiberg University of Mining and Technology, Germany
Authors: Lisa Hanna Broska

Long term transmission rights, a game changer for cross-border electricity market and interconnection governance in Europe?

Presenter: Diyun Huang, ESAT-ELECTA, Univeristy of Leuven, Belgium
Authors: Diyun Huang, Geert Deconinck

What is the European electricity transmission companies approach to innovation? A novel analytical framework

Presenter: Andrea Biancardi, SDA Bocconi School of Management and Imperial College London, Italy
Authors: Andrea Biancardi

Assessing the implications of high vRES long-term scenarios by integrating energy system and dispatch models

Presenter: Francesco Gracceva, Enea Italy
Authors: Francesco Gracceva, Chiara Bustreo, Arturs Purvins, Marco Sangiorgi

10.40 -11.40 Dual Plenary Sessions - 1h.00'

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Grid security and new technologies

Chair: **Carlo Andrea Bollino**, AIEE Honorary President, Professor University of Perugia, Italy

Salvatore Pinto, President Axpo Italy

Matteo Codazzi, CEO, CESI, Italy

Giovanni Valtorta, Manager Enel Distribution, Italy

Massimo Derchi, Chief Industrial Assets Officer Snam, Italy

Energy Efficiency and the future strategies of the energy industry

Chair: **Gurkan Kumbargolu** - Professor University of Boğaziçi, President of the Turkish Association of Energy Economics

Sandro Neri, Federmanager - Federation of Italian Managers, Italy

Ferdinando Pozzani, CEO, TEON, Italy

Dario Di Santo, Head Manager, Italian Federation for energy efficiency – FIRE, Italy

11.50-13.20 Virtual concurrent session (cycle 17-20) - 1h.30'

11.40-11.50 test of the technical settings with the speakers

11.50-13.20 session

17. Energy consumption and power demand

Chair: **Elisa Scarpa**, Edison, Italy

Reclaiming spaces of energy consumption through rethinking approaches to rural electrification in India

Presenter: Manashvi Kumar, Government of Punjab, Chandigarh, India
Authors: Manashvi Kumar

2020 Energy Consumption Estimates

Presenter: Thierry Badouard, Enerdata, France
Authors: Thierry Badouard, Morgan Crenes

How did Italian's behavior toward energy-consumption change from late 1990s to 2012?

Presenter: Alessandro Sapio, University of Napoli "Parthenope", Italy
Authors: Khadija Merzougui, Damiano Fiorillo, Alessandro Sapio

Switching to full electric transport: future power demand requirements in the EU

Presenter: Ionut Purica, REEA-Romanian Energy & Economy Association
Author: Ionut Purica

18. The impact of oil price fluctuation

Chair: **Franco Del Manso**, UNEM, Italy

U.S. GDP, Oil Price Shocks and Domestic Oil Production: An ARDL Analysis

Presenter: Gbadebo Oladosu, Oak Ridge National Laboratory, USA
Authors: Gbadebo Oladosu, Paul Leiby, Rocio Uria-Martinez, David Bowman, Megan Johnson

Time-Varying Jump Intensities and the Interconnectedness of the North American Crude Oil Complex

Presenter: Neil A. Wilmot, University of Minnesota Duluth, USA
Authors: Neil A. Wilmot

An Exploration of the Role of Petrochemical Demand on World Oil Demand Elasticity

Presenter: Rocio Uria-Martínez, Oak Ridge National Laboratory, USA
Authors: Rocio Uria-Martínez, Paul N. Leiby, Gbadebo Oladosu, Megan M. Johnson, and David C. Bowman

19. Strategic contribution of innovation and energy storage to energy security

Chair: Spiros Papaefthimiou, University of Crete, Greece

Could the Fast Reserve drive the investments in storage in the Italian electricity market?

Presenter: Giorgio Perico, REF-E – Ricerca e consulenza per i mercati energetici, Italy

Authors: Giorgio Perico, Virginia Canazza, Antonio De Paola

Renewable energy deployment and energy storage: empirical evidence

Presenter: Dina Azhgaliyeva, Asian Development Bank Institute, Japan

Authors: Dina Azhgaliyeva

The dark side of energy transition: the case of cobalt and the Democratic Republic of Congo

Presenter: Paola Casati, SDA Bocconi School of Management, Italy

Authors: Paola Casati

20. The hydrogen economy opportunities and challenges

Chair: Emanuele Piccinno, Energy consultant, Eni, Italy

Hydrogen and fuel cell: looking back to 20 year of professional experience and looking forward beyond 'Covid-19' and toward '1.5° C Perspective'

Presenter: Valentino Romeri, Energy Consultant, Italy

Authors: Valentino Romeri

Hydrogen era: yes, but when and at what cost of delivered energy?

Presenter: Alessandro Clerici, Energy Consultant, Italy

Authors: Alessandro Clerici

Opening ancillary service markets: investigating emerging opportunities for P2G in Italy

Presenter: Jan Marc Schwidtal, University of Padua, Italy

Authors: Jan Marc Schwidtal, Valerio Passarella, Marco Agostino, Fabio Bignucolo, Arturo Lorenzoni

