

AIEE

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ITALIANA ECONOMISTI
DELL'ENERGIA

IAEE

International Association for
ENERGY ECONOMICS

8th AIEE Energy Symposium



Padua

**AIEE
2024**



Conference Program

Current and Future Challenges to Energy Security

Padua, 28-30 November 2024



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Editorial Note

Dear Energy Colleague,

Dear Energy Colleague,

The Italian Association of Energy Economists - AIEE, affiliate of the International Association for Energy Economics - IAEE, is organizing the **8th AIEE Energy Symposium on Energy Security** on November 28-30, 2024, in cooperation with the Interdepartmental Centre "Giorgio Levi Cases" for Energy Economy and Technology at the University of Padua, in its traditional format as an in person event.

Events in the last few years have demonstrated that the energy transition depends on a wide range of issues, mainly energy security, to proceed at a steady pace and at scale. Climate policy is a priority around the world but current experience also demonstrates that mitigation actions are not enough to combat climate change, so investing in adaptation is crucial. That requires continuing investment to assure reliable and affordable energy.

The flare of the Russian-Ukrainian conflict in February 2022 has focused global attention on the need for a reliable and stable energy sector, making energy security a priority again on the agendas of governments around the world. An agenda that cannot fail to consider

among its priorities the protection of the population both as consumers and citizens, taking into account their health with respect to emissions and pollutants, as well as the identification of actions that each government can put in place for adaptation to climate change.

The **AIEE Energy Symposium on Energy Security** has become an important yearly appointment a forum to continuing the dialogue of the past editions analysing the transformations of the concept of energy security in the new geopolitical context, exploring new and existing trends, creative solutions of new technologies, the emergence of new market conditions and of new market operators.

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 **University of Padua** one of the oldest universities in Europe and in the world, established in 1222, and the modern **Interdepartmental Centre "Giorgio Levi Cases" for Energy Economy and Technology**, only 30 km far from Venice.

Organization

GENERAL CONFERENCE CHAIR: **MATTEO DI CASTELNUOVO**, AIEE President, Professor SDA Bocconi University

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LUCIA VISCONTI PARISIO, Professor Bicocca University and AIEE Council Member, Italy

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

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SCIENTIFIC COMMITTEE CHAIRS: **ARTURO LORENZONI**, Professor University of Padua, Italy

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PROGRAMME COMMITTEE CHAIR: **CECILIA CAMPOREALE**, Research scientist, Technical and Strategic Support Unit of Department for Sustainability (SSPT-STs), ENEA, Italy

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Conference agenda

Thursday, November 28, 2024

venue: *Palazzo Bo - University of Padova*

14.00 **Registration**
14.30-15.30 **Opening Welcome Address** (*Aula Magna*)

Matteo Di Castelnuovo, Conference General Chair and AIEE President
Arturo Lorenzoni, Scientific Committee Chair, Professor of the University of Padua
Fabrizio Dughiero, Director of the Industrial Engineering Department, University of Padua

Keynote speakers

Alessandro Blasi, Special Advisor to the Executive Director, International Energy Agency – IEA
Francesco La Camera, Director General IRENA

15:45-16:45 **Dual Plenary Sessions**

Grid security and energy storage

(*Ancient Archive Hall*)

Chair: **Luca Magnanelli**, President Axpo Storage 3 e Head of Management Service Axpo Servizi Produzione Italy

Giuseppe Cicerani, Head of BD Energy Storage, Enel, Italy

Daniele Castiglia, Head of Front Office – Energy Management & Sales DPT, ERG, Italy

Federico Gallo, Senior Consultant, En-creative, Italy

Renewable energy, clean energy technologies and critical raw materials

(*Aula Magna*)

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

Alberto Pasanisi, Director Research Development & Technological Innovation, Edison, Italy

Ionut Purica, Professor Hyperion University, Member Academy of Romanian Scientists, Romania

Fereidoon Sioshansi, President Menlo Energies, USA

17.00 - 18.30 **Welcome Cocktail**

Caffè Pedrocchi - (*Via VIII Febbraio, 15, 35122 Padova PD*)



Friday, November 29, 2024

venue: "Levi Cases" Center for Energy Economy and Technology – Porta Portello

08.30 - 17.00 **Registration**

08.30 - 10.30 **Welcome coffee** (Venue Hall - Geoscience Building)

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

01 Hydrogen: a "new" partner in a consolidated energy system - (DEI- Room "Merigliani" - 1st floor)
Chair: Alain Kfoury, IUSS – Istituto Universitario di Studi Superiori di Pavia, Italy

02 Innovations in RES - (GEO - Room 1E)

Chair: Antonio Geracitano, Professor, University of Rome Tor Vergata, Italy

03 Energy access: sharing experiences - (DEI - "Sala riunioni" - 3rd floor)

04 Reflection on the gas market (GEO - Room 1F - 1st floor)

Chair: Reinhard Haas, Professor, Technical University of Vienna, Austria

10.30 - 11.30 **Dual Plenary Sessions**

The energy security concerns in an ever-changing geopolitical context: The EU strategy

(GEO - Room 1F - 1st floor)

Chair: Patrizia Marin, Chairman, Marco Polo Experience. Professor International Relations IULM University, UAE

Regulatory challenges for the electricity markets in a renewable-based energy system: the EU new market design (GEO - Room 1E - 1st floor)

Chair: Jean Michel Glachant, Professor EUI Florence School of Regulation, IAEE Past President

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

05 Methods and instruments to support knowledge in energy field (DEI- Room "Merigliani" - 1st floor)
Chair: Linda Cerana, University of Padova, Italy

06 cancelled

07 Energy poverty (GEO - Room 1E - 1st floor)

Chair: Cecilia Camporeale, Technical and Strategic Support Unit of the Department for Sustainability, ENEA

08 Rethinking the contribution of nuclear and fossil fuels (GEO - Room 1F - 1st floor)

Chair: Fulvio Fontini, University of Salento, Italy

13.00 -14.30 **Lunch buffet** (Restaurant "Al Porteo")

14.30 -16.00 **Dual Plenary Sessions**

The gas role in the transition: natural gas, hydrogen and other renewable gases

(GEO - Room 1E - 1st floor)

Chair: Carlo Di Primio, AIEE, Italy

Sustainable mobility challenges for the transition targets (GEO - Room 1F - 1st floor)

Chair: Gabriele Grea, Lecturer in Urban Mobility, Bocconi University, Italy

16.00-17.30 **Concurrent Sessions (9-12)**

09 The issue of energy security (DEI- Room "Merigliani" - 1st floor)

Chair: Claudio Agostini, Universidad Adolfo Ibañez, Chile

10 Grid and RES development: some evidences (GEO - Room 1E - 1st floor)

Chair: Valeria Di Cosmo, University of Torino, Italy

11 Energy communities: some cases (GEO - Room 1F - 1st floor)

Chair: Angelo Facchini, IMT Lucca, Italy

12 Electricity market: some fundamental elements (I) (DEI -Sala riunioni" - 3rd floor)

Chair: Matteo Di Castelnuovo, AIEE, SDA Bocconi University, Italy

18.00 - 20.00 **Gala Cocktail**

Caffè Pedrocchi

(Via VIII Febbraio, 15, 35122 Padova PD)

Saturday, November 30, 2024

venue: "Levi Cases" Center for Energy Economy and Technology – Porta Portello

08.30 - 11.00 **Registration**

08.30 - 10.30 **Welcome coffee** (Venue Hall - Geoscience Building)

09.00 - 10.30 **Concurrent Sessions (13-16)**

- 13 Innovation in energy storage** (DEI- Room "Merigliani" - 1st floor)
Chair: Carlo Andrea Bollino, Professor, University of Perugia, Italy
- 14 Electricity market: some fundamental elements (II)** (DEI -Sala riunioni" - 3rd floor)
Chair: Riccardo Camboni, Department of Economics, University of Padua, Italy
- 15 Decarbonization in EU** (GEO - Room 1F - 1st floor)
Chair: Arturo Lorenzoni, University of Padua, Italy
- 16 Energy efficiency and DSM** (GEO - Room 1E - 1st floor)
Chair: Francesco Castellani, Sapienza University of Rome, Italy

10.30 -12.00 **Concurrent Sessions (17-20)**

- 17 The future of sustainable transport** (DEI- Room "Merigliani" - 1st floor)
Chair: Silvia Orchi, ENEA, Italy
- 18 The challenge for industrial sector: reducing emissions** (GEO - Room 1E - 1st floor)
Chair: Carlo Di Primio, AIEE and Horus Energy Investment, Italy
- 19 Pathway for zero emission in Africa regions** (DEI -Sala riunioni" - 3rd floor)
Chair: Federico Santi, Professor, University of Rome "La Sapienza", Italy
- 20 Elements for the future: bioeconomy and CRM** (GEO - Room 1E - 1st floor)
Chair: Marzia Sesini, Florence School of Regulation – EUI , Italy

12.00-13.00 **Lunch buffet** (Restaurant "Al Porteo")

13.30 - Venice Boat Tour



The tour starts at 13.30 from Porta Portello. The busses will accompany the participants to Venice where a boat will be waiting for them and take them in a guided tour on the Giudecca canal, to the San Marco square where they will have a 35 minutes free time to walk around and visit it. Back on the boat the trip will continue to San Servolo and Lido of Venice and then we will take you back to Tronchetto square where the bus is waiting for you and will take you back to Padua.

13:30: The bus is waiting for you at Porta Portello square and leaves for Venice
14:15: Arrival in Venice, at *Tronchetto* Parking Terminal and get on board to start the tour
15:00: Get off the boat at San Marco square and visit the place
15:45: Get back on boat at San Marco to continue the tour on the canal
16:15: End of tour and land at Tronchetto Parking Terminal
16:20: Bus leaves for Padua - Portello
17:00: Arrival in Padua

This unique two hours boat-based tour will let you discover Venice's artistic treasures from a fascinating new perspective. Your expert guide will share the story of the city's top masterpieces, as you cruise along and take in the scenic sights of Venice and of Venice fabulous sunset.

More information: <https://www.aieesymposium.eu/venice-tour/>

Conference programme

09.00 - 10.30 Concurrent Sessions (1-4)

1 Hydrogen: a “new” partner in a consolidated energy system (DEI- Room “Merigliani” - 1st floor)

Chair: Alain Kfoury, IUSS – Istituto Universitario di Studi Superiori di Pavia, Italy

Hydrogen-based technologies: limits and potentials of life-cycle cost approaches

Presenter: Agatino Nicita, CNR ITAE, Italy
Authors: Agatino Nicita, Gaetano Squadrito, Gaetano Maggio

Techno-economics and process engineering analysis of introducing hydrogen in natural gas pipeline infrastructure: a case study for New Delhi, India

Presenter: Sukriti Sharma, Indian Institute of Technology-Ropar, India
Author: Sukriti Sharma

Economic and environmental sustainability of a photoelectrolysis cell for hydrogen production

Presenter: Mauro Giorgianni, CNR ITAE, Italy
Authors: Mauro Giorgianni, Agatino Nicita, Gaetano Maggio, Stefano Trocino

Blue and green hydrogen in the European energy transition – a techno-economic analysis of competitive capacity investments

Presenter: Niels Nagel, Norwegian University of Life Sciences (NMBU), Norway
Authors: Niels Nagel, Eirik Ogner Jåstad

3 Energy access: sharing experiences

(DEI -Sala riunioni” - 3rd floor)
Chair: Paola Valbonesi Director, Department of Economics, University of Padua

Energy access in developing country: the role of electricity generation

Presenter: José Venal, University of Beira Interior, Portugal
Authors: José Venal, António Marques e Tiago Afonso

Latin America energy trilemma: perspectives on the energy transition

Presenter: Vitor Benfica, University of Beira Interior, Portugal
Authors: Vitor Benfica, António Marques

2 Innovations in RES - (GEO - Room 1E)

Chair: Antonio Geracitano, Professor, University of Rome Tor Vergata, Italy

The relationship between energy accessibility and income inequality in Latin America and Caribbean Countries

Presenter: Margarida Catalão-Lopes, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Authors: Karen Villarroel, Inês Carrilho-Nunes; Margarida Catalão-Lopes

Sustainable geothermal solution for the decarbonisation of the European islands: case of Vulcano island in Italy

Presenter: Dan Azimi Mohaman, University of Padova, Italy
Authors: Dan Azimi Mohaman, Monia Procesi, Eloisa Disipio, Giorgia Dalla Santa, Antonio Galgaro

Floating Offshore Wind: opportunities and challenges of the Italian energy framework

Presenter: Marco Cappellari, University of Padova, Italy
Authors: Marco Cappellari, Arturo Lorenzoni

4 Reflection on the gas market

(GEO - Room 1F - 1st floor)
Chair: Reinhard Haas, Professor, Technical University of Vienna, Austria

Gas at the sunset? Persistent and transient impacts of the crisis on the Italian gas demand

Presenter: Barbara Antonioli Mantegazzini, Università della Svizzera italiana, Institute for Economic Research, Switzerland
Authors: Alessandra Motz, Andrea Tenconi, Leonardo Gottardi, Roberto Bianchini, Barbara Antonioli Mantegazzini

Liberalization and the volatility of gas prices: exploring their relation in times of abundance and scarcity

Presenter: Roberto Cardinale; University College London, UK
Authors: Roberto Cardinale

10.30 - 11.30 Dual Plenary Sessions

The energy security concerns in an ever changing geopolitical context:

The EU strategy (GEO - Room 1F - 1st floor)

Chair: **Patrizia Marin**, Chairman, Marco Polo Experience. Professor of International Relations IULM University, UAE

Adnan Shihab-Eldin, Research Associate at the Oxford Institute for Energy Studies

Maël Gouret, Energy Analyst CleanTech of Enerdata, France

Gabriele Marchionna, Cyber Strategy & Technology Advisor and Tech Geopolitics & Security Researcher, Italy

Regulatory challenges for the electricity

markets in a renewable-based energy system: the EU new market design (GEO - Room 1E - 1st floor)

Chair: **Jean Michel Glachant**, Professor EUI Florence School of Regulation, IAEE Past President

Derek Bunn, Professor of Decision Sciences, Management Science and Operations London Business School, UK

Silvia Piana, Head of Regulatory Synergies and Strategies, Enel, Italy

Giordano Colarullo, Director General, Utilitalia, Italy

Fulvio Fontini, University of Salento, Italy

11.30 - 13.00 Concurrent Sessions (5-8)

5 Methods and instruments to support knowledge in energy field (DEI- Room "Merigliani" - 1st floor)

Chair: Linda Cerana, University of Padua, Italy

Exploring decarbonization strategies for Italy through machine learning and socio-economic analysis

Presenter: Linda Cerana, University of Padua, Italy

Authors: Linda Cerana, Giovanni Cappena, Marco Agostini, Arturo Lorenzoni, Stefano Moret, Francesco Baldi

Dynamic knowledge graph construction for oil market risk management

Presenter: Daisong Wang, Beijing Institute of Technology, China

Authors: Daisong Wang, Lu-Tao Zhao

A soft-link TIMES Italia-Plexos approach to develop Italian transition pathway scenarios

Presenter: Marco Agostini, University of Padua, Italy

Authors: Marco Agostini, Umberto Giuliani, Francesco Gracceva, Chiara Bustreo, Bruno Baldissara, Vittoria Battaglia, Livio De Chicchis, Giuseppe Zollino

Socio-economic assessment of CCUS for the expansion of the circular bioeconomy, the CooCE project

Presenter: Diaz-Chavez Rocio, Centre for Environmental Policy, Imperial College London, UK

Authors: Diaz-Chavez Rocio, Yara Evans

8 Rethinking the contribution of nuclear and fossil fuels (GEO - Room 1F - 1st floor)

Chair: Fulvio Fontini, University of Salento, Italy

Costs and risks of decarbonization and nuclear power: a TEMA- scenario analysis

Presenter: Valeria Di Cosmo, Open Energy Transition – University of Torino, Italy

Authors: Daniele Lerede, Valeria Di Cosmo

Valuing the contribution of an LNG terminal to the national security of supply

Presenter: Keyvan Rucheton, FTI Consulting, France

Authors: Emmanuel Grand, Keyvan Rucheton, Luis Lopez, Mehdi Aïd, Grégoire Saison

7 Energy poverty

(GEO - Room 1E - 1st floor)

Chair: Cecilia Camporeale, Technical and Strategic Support Unit of the Department for Sustainability, ENEA

Unveiling energy poverty in Southern Europe: indicators, vulnerability factors, and policy implications

Presenter: Roberto Barrella, ICAI School of Engineering, Comillas Pontifical University, Chair of Energy and Poverty & Institute for Research in Technology (IIT), Spain

Author: Clément Baumann, Roberto Barrella, José Carlos Romero

Institutional Quality: A hurdle or a catalyst to eliminating energy poverty in sub-Saharan Africa?

Presenter: Wizelle Kritzing, University of Pretoria, South Africa

Authors: Roula Inglesi-Lotz, Jessika Bohlmann, Victoria Graham, Livingstone Senyonga, Wizelle Kritzing

The role of digitalization in reducing energy poverty

Presenter: Inês Carrilho-Nunes, CEGIST, Instituto Superior Técnico, Universidade Lisboa, Portugal

Authors: Teresa Magina, Inês Carrilho-Nunes, Margarida Catalão-Lopes

Energy poverty persistence: a cross-country analysis with a focus on gender

Presenter: Elisenda Jove, Universitat de Barcelona, Spain

Authors: Elisenda Jove, Carlotta Masciandaro and Machiel Mulder

13.00 - 14.30 Lunch buffet (Restaurant "Al Porteo" - Via del Portello, n. 93)

14.30 - 16.00 Dual Plenary Sessions

The gas role in the transition: natural gas, hydrogen and other renewable gases

(GEO - Room 1E - 1st floor)

Chair: Carlo Di Primio, AIEE, Italy

Carlo Andrea Bollino, Professor LUISS University, Italy

Guido Bortoni, President CESI, Italy

Umberto Berzero, Senior Manager Market Analysis and Energy Scenarios, SNAM, Italy

Reinhard Haas, Professor TU Wien, Austria

Andrea Qualiano, Head of Green Gas Origination & Gas Supply Portfolio Decarbonization, Edison, Italy

Davide Tabarelli, President NE Nomisma Energia, Italy

Sustainable mobility challenges for the transition targets (GEO - Room 1F - 1st floor)

Chair: Gabriele Grea, lecturer in Urban Mobility, Bocconi University, Italy

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

Franco Del Manso, International Environment Affairs manager of UNEM – Unione Energie per la Mobilità, Italy

Gabriele Grea, Expert Fellow at the Department of Institutional Analysis and Public Management, Bocconi University, lecturer in Urban Mobility

16.00-17.30 Concurrent Sessions (9-12)

9 The issue of energy security

(DEI- Room "Merigliani" - 1st floor)

Chair: Claudio Agostini, Universidad Adolfo Ibañez, Chile

Developers' perspective on barriers affecting distributed solar PV generations in Chile

Presenter: Claudio Agostini, Universidad Adolfo Ibañez, Chile

Author: Claudio Agostini, Shahriyar Nasirov, Carlos Silva, Jose Opazo, Paula Gonzalez

Cost of energy system security: the Romanian case

Presenter: Ionut Purica, Consultative Council for Sustainable Development of Romania (CCDD), Romania

Authors: Ionut Purica, Mircea Munteanu and Munizer Purica

What is the cost of energy autonomy? — Assessing import independence for a multi-modal, climate-neutral European energy system

Presenter: Jens Schmugge, German Aerospace Center (DLR), Institute of Networked Energy Systems, Germany

Authors: Jens Schmugge, Hans Christian Gils, Hedda Gardian

Emerging security and economic challenge within renewable energy communities: cost comparative analysis against cybersecurity issues in the evolving recs scenario

Presenter: Christian Mari, Dipartimento di Ingegneria Gestionale, Politecnico di Milano, Italy

Authors: Christian Mari, Silvia Ricciuti, Simona Stoklin, Massimiliano Zanichello, Francesca Giuliano

10 Grid and RES development: some evidences

(GEO - Room 1E - 1st floor)

Chair: Valeria Di Cosmo, University of Torino, Italy

Future electricity grids in energy islands – a scenario analysis with cyber security implications

Presenter: Johan Granberg, RISE – Research Institutes of Sweden, Sweden

Author: Johan Granberg

The impact of utility-scale RES power production on the Italian electricity prices

Presenter: Fulvio Fontini, University of Padova, Italy

Authors: Fulvio Fontini, Cinzia Bonaldo and Damiano Alessi

The impact of a Dunkelflaute event on a decarbonized energy system

Presenter: Léo Coppens, VITO – UMONS, Belgium

Authors: Andrea Moglianesi, Léo Coppens, Das Partha, Duchêne François, Marenne Yves

Impact of grid innovations on electricity price volatility in Italian island markets

Presenter: Marina Bertolini, University of Padua, Italy

Authors: Marina Bertolini, Pierdomenico Dutillo, Francesco Lisi

12 Electricity market: some fundamental elements (I)

(DEI - Sala riunioni" - 3rd floor)

Chair: Matteo Di Castelnuovo, AIEE, SDA Bocconi University, Italy

Why underlying market structure matters for the implementation of cross-border financial transmission rights in Europe

Presenter: Diyun Huang, University of Leuven, Belgium

Authors: Diyun Huang, Geert Deconinck

Sensitivity Analysis of Load Profiles: Implications for Resource Adequacy in Future Power System

Presenter: Valentin Satgé, CEA I-tésé, France

Author: Valentin Satgé

The Mean Reverting Behaviour of Italian zonal energy price: An analysis of the long-term merit order effect

Presenter: Marta Moretto, Bocconi University, Italy

Author: Marta Moretto, Matteo Di Castelnuovo

11 Energy communities: some cases

(GEO - Room 1F - 1st floor)

Chair: Angelo Facchini, IMT Lucca, Italy

Renewable energy sources planning at the regional level: a case study in Italy

Presenter: Angelo Facchini, IMT Lucca, Italy

Author: Angelo Facchini, Daniele D'Armentio; Rossana Mastrandrea, Diego Garlaschelli, Alessandro Rubino

Rural Electricity and Children's Educational Attainment: Evidence from Ethiopia

Presenter: Abreham Adera, University of Brescia and Italian Energy Poverty Observatory (OIPE), Italy

Authors: Abreham Adera, Raffaele Miniaci, Luciano Lavecchia

Investments in hybrid renewable energy systems in mountain communities

Presenter: Anna Carozzani, University of Padua, Italy

Authors: Anna Carozzani, Chiara D'Alpaos, Michele Moretto



18.00 - 20.00 Gala cocktail



Pedrocchi Café

Caffè Pedrocchi, one of the leading European Cafes and one survivor from the ancient Italian Café tradition. It is in the central square, near the Town Hall, and Bo Palace, home of the University.

In 1772 the Francesco Pedrocchi of Bergamo founded this successful "coffee shop" that was to be "*the most beautiful one on the Earth*", near the University.

The café has historical prominence because of its role in the 1848 riots against the Habsburg monarchy, as well as for being an attraction for artists over the last century from the French novelist Stendhal to Lord Byron.

The Pedrocchi Café is set up a triangular building, like a harpsichord. The main facade has a base of

November 29, 2024 - h 18.00-20.00

Gala cocktail

at the Pedrocchi Café

A very special moment in the romantic atmosphere of a historical place at 2 minutes walk from the venue.

smooth ashlar. Towards the east, along the Via VIII of February are the three main rooms on the ground floor: the White Room, the Red Room and the Green Room, named after the color of tapestries made after the unification of Italy in 1861.

The Gala Cocktail will take place in the **White Room**: The White Room, faces the Bo, kept in a wall hole of a bullet fired in 1848 by Austro-Hungarian soldiers against students in revolt against Habsburg rule. In addition, it is also known as the setting chosen by Stendhal for his novel "The Charterhouse of Parma". Its architecture, which blends the neoclassical style in the Venetian Gothic, with references exotic Egyptian and chinoiserie to reflect the romantic atmosphere of the time.

Saturday, November 30

09.00 - 10.30 Concurrent Sessions (13-16)

13 Innovation in energy storage

(DEI- Room "Merigliani" - 1st floor)

Chair: Carlo Andrea Bollino, Professor, University of Perugia, Italy

Optimal investment in storage in a distributed renewable energy system

Presenter: Chiara D'Alpaos, Department of Civil Environmental and Architectural Engineering – University of Padova, Italy
Authors: Marta Castellini, Chiara D'Alpaos, Fulvio Fontini, Michele Moretto

Storage valuation: investigating the link between benchmark pricing dynamics and economic fluctuations

Presenter: Carlo Andrea Bollino, KAPSARC, Saudi Arabia
Author: Jennifer Considine, Philipp Galkin, Carlo Andrea Bollino, Abdullah Al Dayel

Long-Duration Energy Storage for power system services and industrial heat decarbonization. Technology assessment of power-to-heat applications

Presenter: Federico Santi, University of Rome "La Sapienza"
Authors: Federico Santi

15 Decarbonization in EU

(GEO - Room 1F - 1st floor)

Chair: Arturo Lorenzoni, University of Padua, Italy

Evolution of consumption in the city of Milan

Presenter: Lorenzo Monga, A2A Spa, Italy
Authors: Lorenzo Monga, Davide Della Giustina, Antonio Di Giovanni, Gornati Stefano Angelo, Bartolomeo Greco

The role of structural changes for the reduction of energy intensity: does offshoring matter? Empirical evidence from OECD countries

Presenter: Claudia Amadei, Department of Economics and Management & Interuniversity Research Centre on Public Economics (CRIEP), University of Padova, Italy
Authors: Claudia Amadei, Cesare Dosi, Francesco Jacopo Pintus

14 Electricity market: some fundamental elements (II)

(DEI -Sala riunioni" - 3rd floor)

Chair: Riccardo Camboni, Department of Economics, University of Padua, Italy

Effects of a systematic variation of load profiles on a climate neutral electricity system in Germany

Presenter: Clara Fuhrer, University of Stuttgart, Germany
Author: Clara Fuhrer

Wholesale electricity price index formulas and volatility

Presenter: Alessandro Sapiro, Parthenope University of Naples, Italy
Authors: Alessandro Sapiro

16 Energy efficiency and DSM

(GEO - Room 1E - 1st floor)

Chair: Francesco Castellani, "La Sapienza " University of Rome, Italy

The energy system impacts of electric heating in Northern Europe under variable historic weather scenarios

Presenter: Seikh Hayatul Haque, Faculty of Environmental Sciences and Natural Resource Management, Norwegian University of Life Sciences,
Author: Seikh Hayatul Haque, Niels Oliver Nagel, Ian M. Trotter, Erik Trømborg, Eirik Ognér Jåstad

Assessing the Impact of Energy Efficiency on Real Estate Values: A Hedonic Analysis in Padua, Italy

Presenter: Carolina Bonardi Pellizzari, University of Padua, Italy
Authors: Carolina Bonardi Pellizzari, Cristiano Franceschinis, Tiziano Tempesta, Mara Thiene, Daniel Vecchiato

Decarbonization through electrification of public historic buildings: the case study of National Gallery of modern and contemporary art in Rome

Presenter: Francesco Castellani, Sapienza University of Rome, Italy
Author: Francesco Castellani

Integrating BMS and BIM to improve interoperability between simulation and energy management environments

Presenter: Federico Rossi, University of Padua, Italy
Author: Federico Rossi, Beatrice Maria Toldo, Carlo Zanchetta

10.30 - 12.00 Concurrent Sessions (17-20)

17 The future of sustainable transport

(DEI- Room "Merigliani" - 1st floor)

Chair: Silvia Orchi, ENEA, Italy

Research on the effect of policy implementation in test demonstration zones on the commercial operation of autonomous driving - Verification Based on DID Model

Presenter: Ruiyu Feng, Beijing Jiaotong University, China
Authors: Yingqi Liu, Ruiyu Feng

The role of electric railway in the transport decarbonization

Presenter: Silvia Orchi, ENEA, Italy
Authors: Silvia Orchi, Alessandro Ruvio

Unveiling Consumer Choices for Renewable Methane in Private Transportation: A Discrete-Choice Experiment Approach

Presenter: Benedikt Rilling, Nuertingen-Geislingen University, Germany
Authors: Benedikt Rilling, Carsten Herbes

Which type of vehicle mileage tax is the public most willing to accept?

Presenter: Ofir Rubin, Ben-Gurion University of the Negev, Israel
Authors: Ofir Rubin, Aviv Steren, Stav Rosenzweig

18 The challenge for industrial sector: reducing emissions

(GEO - Room 1E - 1st floor)

Chair: Carlo Di Primio, AIEE and Horus Energy Investment, Italy

Enhancing off-grid energy security through reversible solid oxide cell systems economic analyses of case studies and business models

Presenter: Marco Kunz, Lucerne University of Applied Sciences and Arts (HSLU), Switzerland
Authors: Emre Avci, Oliver Woll, Marco Kunz

Carbon Giants: Exploring the Top 100 Industrial CO2 Emitters in the EU

Presenter: Simon Sturn, WU Vienna University of Economics and Business, Austria
Authors: Simon Sturn, Xenia Miklin, Thomas Neier, Klara Zwickl

European decarbonisation and refineries: analyzing the conditions for a profitable adoption of clean hydrogen

Presenter: Tommaso Bonini, Technical University of Munich, School of Management, Centre for Energy Markets, Germany
Authors: Tommaso Bonini, Svetlana Ikonnikova

A Model of U-Shaped Relationship of Corporate Performance and ESG Behavior

Presenter: Akira Maeda, The University of Tokyo, Japan
Authors: Akira Maeda, Hiroshi Ishijima

19 Pathway for zero emission in Africa regions

(DEI -Sala riunioni" - 3rd floor)

Chair: Federico Santi, Professor, University of Rome "La Sapienza", Italy

Interplay of fossil fuel usage, environmental concern, and economic growth

Presenter: Sabiu Bariki Sani, Department of Economics, Faculty of Social Sciences, University of Abuja, Nigeria

Author: Sabiu Bariki Sani

Evaluating the cost-competitiveness of decentralised green fertilizer production in Sub-Saharan Africa

Presenter: Marco Schamel, Technical University of Applied Sciences (OTH) Regensburg, Germany

Authors: Marco Schamel

Energy transition and barriers from dominant fossil players in SADC

Presenter: Querubim Capimolo Lucamba, University of Beira Interior, Portugal

Authors: António Cardoso Marques, Diogo Santos Pereira, Querubim Capimolo Lucamba

20 Elements for the future: bioeconomy and CRM

(GEO - Room 1E - 1st floor)

Chair: Marzia Sesini, Florence School of Regulation – EUI, Italy

Sectoral and economy-wide implications of reducing implicit subsidies to electricity sector in Ethiopia

Presenter: Amsalu Woldie Yalew, Ca' Foscari University of Venice, Italy

Author: Amsalu Woldie Yalew

Unlocking European biogas and biomethane: Policy insights from comparative analysis

Presenter: Marzia Sesini, Florence School of Regulation – EUI, Italy

Authors: Marzia Sesini, Anna Creti, Olivier Masso

Enhancing the CO2 potential as a bioeconomy enabler

Presenter: Sara Giarola, Imperial College London, UK

Author: Sara Giarola, Pablo Basterrechea-Roca, Nilay Shah, Yara Evans, Rocio Diaz-Chavez

Evaluating how the availability of critical raw materials may affect the security of future energy systems: a case study for Italy

Presenter: Matteo Nicoli, Politecnico di Torino, Italy

Author: Matteo Nicoli, Alessio Vai, Gianvito Colucci, Laura Savoldi

12.00 - 13.00 Lunch buffet (Restaurant "Al Porteo" - Via del Portello, n. 93)

13.30 Venice Boat Tour



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