

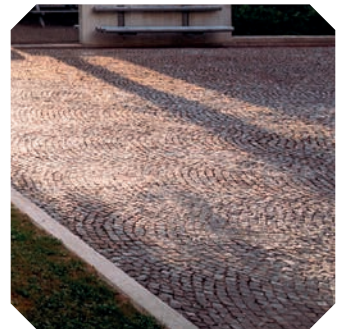


16th IAEE
European Conference
Ljubljana, Slovenia
25–28 August 2019

IAEE
INTERNATIONAL
ASSOCIATION for
ENERGY ECONOMICS
www.iaee.org

University of Ljubljana
SEB
SLOVENSKO
ZDRUŽENJE
ZA
EKONOMIKO
POSREDOVANJE

SAEE
SLOVENSKO
ZDRUŽENJE
ZA
ENERGETSKO EKONOMIKO



School of Economics and Business, University of Ljubljana (SEB LU)

Energy Challenges for the Next Decade





WELCOME TO LJUBLJANA

Energy markets are becoming increasingly complex. Over the past decades, we have witnessed tremendous changes in the industry's fundamentals induced by policy and technological advancements, which required redesigning of markets. Climate policies aimed at decarbonisation extensively contributed to the changed energy mix. Recent shifts in geopolitical relations with the EU partners additionally add to the industry's complexity and uncertainty. The EU energy policy in the next decade continues to be directed towards achieving competitive, secure and sustainable energy system, which calls for huge investments in infrastructure and low-carbon technologies with increased private sector and consumer engagement.

The central topic of this conference is to assess the impacts and identify the main challenges of these disruptive changes for all energy sectors through the entire value chain in order to design a sustainable energy policy for the following decade. The main question to be addressed is: Have we learned from the past experiences and mistakes how to design effective policies involving all stakeholders – consumers, companies, governments and society?

We welcome 300 participants from 40 countries to be a part of this debate. We hope you will enjoy the conference and the vibrant city of Ljubljana, the Green Capital of Europe in 2016 and the seat of ACER.

Nevenka Hrovatin
General Conference Chair

COMMITTEES



General Conference
Chair

Nevenka Hrovatin

Professor, School
of Economics and
Business, University
of Ljubljana; Vice-
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School of Economics
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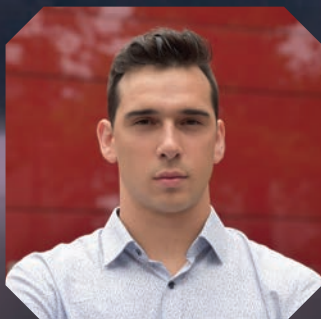
Associate Professor,
School of Economics
and Business, University
of Ljubljana; SAE



Secretary-General of the
Conference

Jana Pucelj

School of Economics
and Business, University
of Ljubljana



PhD Day

Janez Dolšek

Doctoral student, School
of Economics and
Business, University of
Ljubljana; SAE



PhD Day

Ivana Jovović

Doctoral student, School
of Economics and
Business, University of
Ljubljana; SAE

Welcome to Ljubljana and enjoy the conference

5



Your IAEE 2019 Ljubljana Conference Team

International Programme Committee

Chair of International Programme Committee

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Professor, School of Economics and Business, University of Ljubljana; Vice-President of SAE

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Kostas Andriosopoulos

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Vilayat Valiyev

Institute for Scientific Research on Economic Reforms, Vice-President for Regional Affairs of IAEE

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IAEE

Adonis Yatchew

University of Toronto

Mine Yücel

Federal Reserve Bank of Dallas

Jelena Zorić

School of Economics and Business, University of Ljubljana

PROGRAMME OVERVIEW

Sunday, 25th of August

TIME	EVENT	VENUE
10:00 am to 8:00 pm	Conference Registration	SEB LU, foyer between Large and Small Hall
11:00 am to 6:00 pm	PhD Day: Seminar 1, Seminar 2 & Special Seminar	SEB LU, Senate Conference Room ► See the programme on page 25
6:00 pm to 8:00 pm	Welcome Reception for all Participants	SEB LU, foyer between Large and Small Hall ► See information on page 28
8:30 pm to 10:00 pm	Student Happy Hour	Pivnica Lajbah, Grudnovno nabrežje 15, Ljubljana ► See information on page 28

Monday, 26th of August

TIME	EVENT	VENUE
7:30 am to 6:00 pm	Conference Registration	SEB LU, foyer between Large and Small Hall
8:00 am to 9:00 am	Student breakfast	SEB LU, Senate Conference Room
9:00 am to 9:30 am	Welcome and Introduction	SEB LU, Large Hall ► See the programme on page 10
9:30 am to 11:00 am	Opening Plenary Session	SEB LU, Large Hall ► See the programme on page 10
11:00 am to 11:30 am	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
11:30 am to 1:00 pm	Dual Plenary Session 1	SEB LU, Large Hall ► See the programme on page 10
11:30 am to 1:00 pm	Dual Plenary Session 2	SEB LU, Small Hall ► See the programme on page 10
1:00 pm to 2:30 pm	Lunch	SEB LU, foyer between Large and Small Hall, outside
2:30 pm to 4:00 pm	Concurrent Sessions 1	SEB LU, Various Rooms ► See full listing on pages 14-16
4:00 pm to 4:30 pm	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
4:30 pm to 6:00 pm	Concurrent Sessions 2	SEB LU, Various Rooms ► See full listing on pages 14-16
7:00 pm to 10:30 pm	Cultural/Social Event and Conference Cocktail Dinner	Ljubljana Castle, Courtyard in Estate hall and Palatium in the case of bad weather ► See information on page 28

Tuesday, 27th of August

TIME	EVENT	VENUE
8:00 am to 5:30 pm	Conference Registration	SEB LU, foyer between Large and Small Hall
8:00 am to 9:00 am	European Affiliate's Leaders Meeting	SEB LU, Senate Conference Room
8:00 am to 9:00 am	EEEP Board of Editors Meeting	SEB LU, Executive Conference Room
9:00 am to 10:30 am	Dual Plenary Session 3	SEB LU, Large Hall ▶ See the programme on page 11
9:00 am to 10:30 am	Dual Plenary Session 4	SEB LU, Small Hall ▶ See the programme on page 11
10:30 am to 11:00 am	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
11:00 am to 12:30 pm	Concurrent Sessions 3	SEB LU, Various Rooms ▶ See full listing on pages 17-19
12:30 pm to 2:00 pm	Lunch/Poster Session	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms ▶ See the programme on page 24
2:00 pm to 3:30 pm	Dual Plenary Session 5	SEB LU, Large Hall ▶ See the programme on page 11
2:00 pm to 3:30 pm	Dual Plenary Session 6	SEB LU, Small Hall ▶ See the programme on page 11
3:30 pm to 4:00 pm	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
4:00 pm to 5:30 pm	Concurrent Sessions 4	SEB LU, Various Rooms ▶ See full listing on pages 17-19
7:00 pm to 10:30 pm	Cultural/Social Event and Gala Dinner	Cankarjev dom, Grand Reception Hall ▶ See information on page 29



Wednesday, 28th of August

TIME	EVENT	VENUE
8:00 am to 12:00 pm	Conference Registration	SEB LU, foyer between Large and Small Hall
9:00 am to 10:30 am	Concurrent Sessions 5	SEB LU, Various Rooms ► See full listing on pages 20-23
10:30 am to 11:00 am	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
11:00 am to 12:30 pm	Concurrent Sessions 6	SEB LU, Various Rooms ► See full listing on pages 20-23
12:30 pm to 1:30 pm	Lunch	SEB LU, foyer between Large and Small Hall, outside
1:30 pm to 3:00 pm	Concurrent Sessions 7	SEB LU, Various Rooms ► See full listing on pages 20-23
3:00 pm to 3:30 pm	Coffee break	SEB LU, foyer between Large and Small Hall, outside and hall between lecture rooms
3:30 pm to 5:00 pm	Closing Plenary Session	SEB LU, Large Hall ► See the programme on page 12
5:00 pm	End of Conference	SEB LU, Large Hall

Thursday, 29th of August

TIME	EVENT	VENUE
9:00 am to 5:00 pm	Post-conference Seminar: Energy Transition & Power Markets	SEB LU, Executive Conference Room ► See the programme on page 27

Programme updates

The programme will be updated daily.

Check https://iaee2019ljubljana.oyco.eu/programme_text for the most up-to date programme.

PLENARY SESSIONS

Monday, 26th of August

OFFICIAL OPENING WELCOME AND INTRODUCTION:

Welcome Address and
Opening Statements

9:00 a.m. – 9:30 a.m.
Large Hall

OPENING PLENARY SESSION:

Energy Challenges and
Opportunities

9:30 a.m. – 11:00 a.m.
Large Hall

DUAL PLENARY SESSION 1 AND 2:

1

Prospects for Future
Electricity Markets

2

Prospects for Future Natural
Gas and Oil Markets

11:30 a.m. – 1:00 p.m.
1 - Large Hall, 2 - Small Hall

Nevenka Hrovatin, General Conference Chair, School of Economics and Business, University of Ljubljana (SEB LU)

Marjan Eberlinc, President of the Energy Industry Chamber of Slovenia, CEO of Plinovodi d.o.o.

Metka Tekavčič, Dean of School of Economics and Business, University of Ljubljana (SEB LU)

Alenka Bratušek, Minister of Infrastructure, Republic of Slovenia

Christophe Bonnery, IAEE President, 2019

Chair: Christophe Bonnery, IAEE President, 2019

- **ENERGY TRANSITION - THREE DS: DECARBONISATION, DECENTRALISATION AND DIGITALIZATION** - **Laurent Schmitt**, ENTSO-E
- **EUROPEAN ENERGY STATE-OF-THE-ART: AN OUTSIDE VIEW** - **Edward C. Chow**, CSIS
- **CLEAN ENERGY PACKAGE AND THE FUTURE CHALLENGES FOR THE ENERGY SECTOR** - **Alberto Pototschnig**, ACER

Chair: Hans Auer, Vienna University of Technology

- **A TALE OF TWO MARKETS: CONTRACTS FOR RENEWABLE AND CONVENTIONAL GENERATORS** - **Richard Green**, Imperial College Business School
- **HEADING TOWARDS SUSTAINABLE AND DEMOCRATIC ELECTRICITY MARKETS** - **Reinhard Haas**, Vienna University of Technology
- **SECTOR COUPLING, FLEXIBILITY, AND OUTLOOK ON THE 2ND PHASE OF ENERGY TRANSITION - EXPERIENCES FROM THE WINDNODE PROJECT** - **Markus Graebig**, WindNODE consortium

Chair: Kostas Andriosopoulos, ESCP Europe Business School

- **GAS MARKETS AND INFRASTRUCTURE** - **Karolina Čegir**, Energy Community Secretariat
- **THE GROWING ROLE OF LNG IN EUROPE** - **Lucie Roux**, ESCP Europe Business School Alumna
- **GEOPOLITICS IN THE EUROPEAN GAS** - **Tatiana Mitrova**, SKOLKOVO Business School

Tuesday, 27th of August

DUAL PLENARY SESSION 3 AND 4:

3

Energy in the Digital World:
The Shifting Fundamentals of
the Energy Business

4

Challenges in the Final Energy
Use: Innovation, Technology,
Efficiency, Conservation

9:00 a.m. – 10:30 a.m.

3 - Large Hall, 4 - Small Hall

DUAL PLENARY SESSION 5 AND 6:

5

Energy and Climate:
International Governance of
Energy Transition

6

Future Role of Consumers,
Prosumers and Prosumagers

2:00 p.m. – 3:30 p.m.

5 - Large Hall, 6 - Small Hall

Chair: Christian von Hirschhausen, Berlin University of Technology

- **MAKING THE ENERGY TRANSITION HAPPEN – SMART TECHNOLOGIES AND NEW BUSINESS MODELS** - Gašper Artač, Petrol
- **DIGITALIZATION IN THE ENERGY WORLD: THE ROLE OF BIG DATA, ARTIFICIAL INTELLIGENCE, BLOCKCHAIN AND CYBER SECURITY** - Christoph Burger, ESMT Berlin
- **COMPETITIVENESS OF DIFFERENT RENEWABLE ENERGY COMMUNITY CONCEPTS IN A SMART ENERGY FUTURE** - Hans Auer, Vienna University of Technology

Chair: Reinhard Haas, Vienna University of Technology

- **ELECTRIFICATION IN TRANSPORT: ECONOMICS AND ENVIRONMENTAL ASPECTS** - Amela Ajanović, Vienna University of Technology
- **MARKETS FOR NEW ENERGY STORAGE TECHNOLOGIES** - Georg Erdmann, Berlin University of Technology
- **ENERGY EFFICIENCY POLICY IN (CENTRAL) EUROPE - TARGETS, INSTRUMENTS, AND INVESTMENT** - Michaela Valentová, Czech Technical University in Prague

Chair: Andreas Löschel, University of Münster

- **WHAT DOES THE PARIS AGREEMENT IMPLY FOR THE GOVERNANCE OF LONG TERM LOW EMISSIONS DEVELOPMENT STRATEGIES?** - Frank Jotzo, Australian National University's Crawford School of Public Policy
- **CURRENT DISCUSSIONS ON ENERGY AND CLIMATE TARGETS** - Georg Zachmann, Bruegel
- **WHAT IS THE INVESTMENT FRAMEWORK NEEDED TO PERFORM THE ENERGY TRANSITION?** - Maria Sicilia, ENAGAS

Chair: Jelena Zorić, School of Economics and Business, University of Ljubljana (SEB LU)

- **UNDERSTANDING CONSUMER BEHAVIOUR: ENERGY EFFICIENCY GAP, BOUNDED RATIONALITY AND THE ROLE OF ENERGY RELATED FINANCIAL LITERATURE** - Massimo Filippini, ETH Zurich, Università della Svizzera Italiana
- **ENERGY PROSUMAGE, ENERGY POVERTY, AND ENERGY JUSTICE** - Reinhard Madlener, RWTH Aachen University
- **HOW SHOULD BUSINESS MODELS CHANGE IN CONSUMER DRIVEN ENERGY MARKETS?** - Dejan Paravan, GEN-I

PLENARY SESSIONS

Wednesday, 28th of August

CLOSING PLENARY SESSION:

Europe's Energy Sector in the Global Energy Industry: State-Of-Affairs and the Future

3:30 p.m. – 5:00 p.m.
Large Hall

Chair: Yukari Niwa Yamashita, IAEE President-elect 2019

- **ENERGY SCENARIOS, PROJECTIONS AND MODELLING (ACADEMIC APPROACH)** - Pantelis Capros, National Technical University of Athens
- **WHAT NEXT FOR EUROPEAN ENERGY POLICY? SUGGESTIONS FOR THE NEW EUROPEAN COMMISSION** - Michael Pollitt, Cambridge Judge Business School, University of Cambridge
- **SOUTH EAST EUROPEAN ENERGY CHALLENGES AND OPPORTUNITIES** - Atanas Georgiev, Sofia University St. Kliment Ohridski



Concurrent Sessions Overview

Concurrent Sessions/Room	P-019	P-021	P-217	P-128	P-216	P-127	P-126
Concurrent Sessions 1A to 1G , Monday 26.8.2019, 2:30 pm to 4:00 pm	1A Energy Markets I: CO2 Emissions	1B Energy Modelling I	1C Climate I	1D Energy Efficiency I	1E Renewables I: Wind	1F Natural Gas	1G Best Student Paper Award
Concurrent Sessions 2A to 2G , Monday 26.8.2019, 4:30 pm to 6:00 pm	2A Electricity I: Capacities	2B Flexibility & Storage I: Demand Response	2C Energy Policy I: Renewable Support Policies	2D Household Behaviour I	2E Country Studies I	2F Oil	2G Transportation I: Low Carbon Future
Concurrent Sessions 3A to 3G , Tuesday 27.08.2019, 11:00 am to 12:30 pm	3A Energy Markets II: Market Integration	3B Flexibility & Storage II	3C Energy Policy II: Carbon Markets	3D Household Behaviour II	3E Renewables II: Solar	3F Nuclear Power	3G Transportation II: Electric Vehicles
Concurrent Sessions 4A to 4G , Tuesday 27.08.2019, 04:00 pm to 05:30 pm	4A Energy Markets III: Energy & Capacity Markets	4B Energy Modelling II	4C Climate II	4D Energy Efficiency II	4E Country Studies II	4F Coal and Nuclear Phase- Out	4G Special Session: Revealing Trajectories Towards a Sustainable Energy Future
Concurrent Sessions 5A to 5G , Wednesday 28.08.2019, 9:00 am to 10:30 am	5A Electricity II	5B Energy Modelling III	5C Energy Policy III: Carbon Tax & Decarbonization	5D Household Behaviour III	5E Renewables III: Spatial Capacity Allocation	5F Energy Investment & Finance I	5G Energy Markets, Innovation & New Technologies
Concurrent Sessions 6A to 6G , Wednesday 28.08.2019, 11:00 am to 12:30 pm	6A Energy Markets IV	6B Flexibility & Storage III	6C Energy Access & Energy Poverty	6D Household Behaviour IV	6E Renewables IV	6F Energy Investment & Finance II	6G Transportation III: Policies & Household Choices
Concurrent Sessions 7A to 7G , Wednesday 28.08.2019, 01:30 pm to 03:00 pm	7A Energy Markets V: Market Design & Trading Arrangements	7B Energy Modelling IV	7C Energy Policy IV: Low Carbon Policies	7D Firm Performance	7E The Role of Energy Communities	7F Energy & the Economy	7G Transportation IV: E-mobility

CONCURRENT SESSIONS

Monday, 26th of August

1A - 1G 2:30 pm to 4:00 pm

Session 1A: Energy Markets I - CO2 Emissions (P-019)

Chair: **Einar Hope**
(Norwegian School of Economics)

The Impact of a Carbon Tax on Cross Border Energy Trading Abstract

Authors: Bowei Guo (University of Cambridge), David Newbery, Giorgio Castagneto Gissey
Presenter: Bowei Guo (University of Cambridge)

Scenarios for Decarbonizing an Integrated European Energy System - First Results From a Top-down-bottom-up Modelling Approach

Authors: Leonard Göke (TU Berlin, Workgroup for Infrastructure Policy), Claudia Kemfert, Konstantin Löffler, Pao-Yu Oei, Christian von Hirschhausen
Presenter: Leonard Göke (TU Berlin, Workgroup for Infrastructure Policy)

Equilibrium Forward Premium and Optimal Hedging in Electricity Markets With Green and Brown Producers

Authors: Shanshan Yuan (Carlos III University in Madrid), Juan Ignacio Peña
Presenter: Shanshan Yuan (Carlos III University in Madrid)

Pass-through of CO2 Emission Costs to the Italian Electricity Price in the Third Phase of EU-ETS: A VECM Analysis

Authors: Fulvio Fontini (University of Padova), Massimiliano Caporin, Samuele Segato
Presenter: Fulvio Fontini (University of Padova)

Session 1B: Energy Modelling I (P-021)

Chair: **Lisa Ryan** (UCD)

Reliability Based Design Approach to Stochastic Supply Planning Including Renewable Energy Sources

Authors: Matthias Ondra (Vienna University of Technology)
Presenter: Matthias Ondra (Vienna University of Technology)

Application of Benders Decomposition to CVaR-constrained Unit Commitment Decisions in Large Energy System Models Considering Feed-in Uncertainties

Authors: Moritz Nobis (RWTH Aachen University), Alexander Lindner, Carlo Schmitt
Presenter: Moritz Nobis (RWTH Aachen University)

Model-based Analysis of the Contribution of the Gas Supply System to the Integration of Fluctuating Renewable Electricity Generation

Authors: Hedda Gardian (German Aerospace Center (DLR)), Hans Christian Gils
Presenter: Hedda Gardian (German Aerospace Center (DLR))

The Pricing of Univariate European Crack Spread Option with Jumps

Authors: Lenny Suardi (UNSW), David Colwell
Presenter: Lenny Suardi (UNSW)

Session 1C: Climate I (P-217)

Chair: **Eirik Schroeder Amundsen**
(University of Bergen)

Navigating Various Flexibility Mechanisms Under European Burden-sharing

Authors: Marc Vielle (EPFL - LEURE)
Presenter: Marc Vielle (EPFL - LEURE)

Fossil Fuel Subsidies and the Paris Agreement

Authors: Sebastian Rausch (ETH Zurich), Jan Schneider
Presenter: Jan Schneider (ETH Zurich)

Analysing Transfer Flows of the Swiss Emission Trading Registry: What Can We Learn About the Carbon Market Under the Kyoto Protocol?

Authors: Regina Betz (Center for Energy and the Environment, ZHAW)
Presenter: Regina Betz (Center for Energy and the Environment, ZHAW)

Climate Change - a Challenge for the Grid? - Results from an Economic Model for Germany

Authors: Ulrike Lehr (Institute for Economic Structures research (GWS)), Markus Flaute, Lara Ahmann
Presenter: Ulrike Lehr (Institute for Economic Structures research (GWS))

Session 1D: Energy Efficiency I (P-128)

Chair: **Joachim Schleich**
(Grenoble Ecole de Management)

Quantifying and Comparing Economy-wide Rebound Effects in Europe

Authors: Anne Berner (University of Göttingen), Stephan Bruns, Alessio Moneta, David Stern
Presenter: Anne Berner (University of Göttingen)

Energy Subsidies, Energy Intensity and Management Practices

Authors: Helena Schweiger (EBRD), Alexander Stepanov
Presenter: Alexander Stepanov (European Bank for Reconstruction and Development)

Long-term and Step-by-step Deep Renovation Approach: Including Building Owners' Ability to Invest in a Retrofitting Optimisation Model

Authors: Iná Maia (TU Wien), Andreas Müller, Lukas Kranzl
Presenter: Iná Maia (TU Wien)

Endogenous Energy Efficiency Improvement of Large-Scale Refurbishment in the Swiss Residential Building Stock

Authors: Sergey Arzoyan (EPFL), Marc VIELLE, Quirin Oberpiller, Michel Zimmermann
Presenter: Sergey Arzoyan (EPFL)

Session 1E: Renewables I - Wind (P-216)

Chair: **Jaroslav Knápek**
(Czech Technical University in Prague, Faculty of Electrical Engineering)

Benefits of Spatial Integration: Optimal Allocation of Wind Capacity in Europe According To Modern Portfolio Theory

Authors: Javier López Prol (Wegener Center for Climate and Global Change, University of Graz), Fernando De Llano Paz, Anxo Calvo Silvosa, Sungmin O
Presenter: Javier López Prol (Wegener Center for Climate and Global Change, University of Graz)

The Effect of Offshore Wind Capacity Expansion on Uncertainties in Germany's Day-Ahead Wind Energy Forecasts

Authors: David Schönheit (TU Dresden, Lehrstuhl für Energiewirtschaft), Dominik Möst

Presenter: David Schönheit (TU Dresden, Lehrstuhl für Energiewirtschaft)

Managing Spatial Sustainability Trade-offs: The Case of Wind Power

Authors: Paul Lehmann (University of Leipzig/UFZ), Erik Gawel, Charlotte Geiger, Jennifer Hauck, Jan-Niklas Meier, Philip Tafarte, Daniela Thrän, Elisabeth Wolfram
Presenter: Paul Lehmann (University of Leipzig/UFZ)

The Dynamics of Renewable Energy Investment Risk: a Comparative Assessment of Solar PV and Onshore Wind Investments in Germany, Italy, and the UK

Authors: Florian Egli (ETH Zürich)
Presenter: Florian Egli (ETH Zürich)

Session 1F: Natural Gas (P-127)

Chair: **Atanas Georgiev** (Sofia University "St. Kliment Ohridski")

Natural Gas Market Globalization Revisited

Authors: Evangelos Kyritsis (VATT), Anne Neumann

Presenter: Evangelos Kyritsis (VATT)

Oil and Gas Development on Private Land: Landowner Absenteeism and Willingness to Lease

Authors: Claudia Hitaj (USDA Economic Research Service), Daniel Bigelow, Rebecca Hernandez

Presenter: Claudia Hitaj (USDA Economic Research Service)

Natural Gas Involvement in China's Energy Transition

Authors: Silvana Mima (CNRS), Olga Garanina

Presenter: Olga Garanina (Graduate School of Management, St Petersburg University)

The Strategy Analysis of Liquefied Natural Gas Security in Taiwan

Authors: Kuei-Lan Chou (Industrial Technology Research Institute)

Presenter: Kuei-Lan Chou (Industrial Technology Research Institute)

Session 1G: Best Student Paper Award (P-126)

Chair: **Massimo Filippini** (ETH Zürich & Università della Svizzera Italiana)

Germany's Market Transparency Unit for Fuels: Fostering Collusion or Competition?

Authors: Marco Horvath (RWI - Leibniz Institute for Economic Research)

Presenter: Marco Horvath (RWI - Leibniz Institute for Economic Research)

Economically, Do Environmentally Regulated Firms Perform Worse? Evidence from the German Manufacturing Sector

Authors: Maja Zarkovic (University of Basel)
Presenter: Maja Zarkovic (University of Basel)

Electric Vehicles and Consumer Choices

Authors: Filip Mandys (University of Surrey)
Presenter: Filip Mandys (University of Surrey)

Model Based Dispatch Optimisation for Residential Districts - Analysing the Integration of Electricity Storage Systems and Their Environmental Impact

Authors: Steffen Lewerenz (Pforzheim University)
Presenter: Steffen Lewerenz (Pforzheim University)

2A - 2G 4:30 pm to 6:00 pm

Session 2A: Electricity I - Capacities (P-019)

Chair: **Jean-Michel Glachant** (Florence School of Regulation)

Evaluation of the Need for Capacity Remuneration Mechanisms: Impact of Design Parameters and Key Assumptions

Authors: Kris Poncelet (KU Leuven), Steffen Kaminski, Erik Delarue
Presenter: Steffen Kaminski (KU Leuven)

The Future of Capacity Remunerations Mechanisms in the EU

Authors: Giuseppe Franco Ferrari (studio legale), Íñigo del Guayo
Presenter: Íñigo del Guayo (University of Almería)

Strategic Reserve for Switzerland: Is it Needed and (how) Would it Work?

Authors: Moritz Schillinger (University of Basel), Jonas Savelsberg, Hannes Weigt, Ingmar Schlecht
Presenter: Moritz Schillinger (University of Basel)

Relevance and Potential for Industrial On-site Electricity Generation on a European Scale

Authors: Patrick Dossow (Forschungsgesellschaft für Energiewirtschaft mbH (FFe)), Serafin von Roon, Timo Kern, Andrej Guminski
Presenter: Patrick Dossow (Forschungsgesellschaft für Energiewirtschaft mbH (FFe))

Session 2B: Flexibility & Storage I - Demand Response (P-021)

Chair: **Fulvio Fontini** (University of Padova)

Adjusting or Shifting? - The Economic Differences Between Demand Response and Energy Storages in a Long-run Equilibrium Model

Authors: Amelie Sitzmann (Energiewirtschaftliches Institut an der Universität zu Köln gGmbH), Martin Hintermayer
Presenter: Amelie Sitzmann (Energiewirtschaftliches Institut an der Universität zu Köln gGmbH)

Simulation-supported Quantification of Demand Response Actions Applied in a Block of Residential Buildings

Authors: Xiubei Ge (EIFER - European Institute for Energy Research), Enrique Kremers, Malcolm Yadack
Presenter: Xiubei Ge (EIFER - European Institute for Energy Research)

Swarm Demand Response: Virtual Storage by Small Consumers

Authors: Joachim Geske (Imperial College London)
Presenter: Joachim Geske (Imperial College London)

Disruption and Collaboration: the Growth Strategies for Demand Response Business Models in Finland

Authors: Hanna-Liisa Kangas (Finnish Environment Institute SYKE), Salvatore Ruggiero, Tiina Ohrling, Salla Annala
Presenter: Hanna-Liisa Kangas (Finnish Environment Institute SYKE)

Session 2C: Energy Policy I - Renewable Support Policies (P-217)

Chair: **Ivan Diaz-Rainey** (University of Otago)

Economic Analysis of Energy vs. Capacity Focused Renewable Support Policies for the 2030 EU Power Market

Authors: Ozge Ozdemir (PBL Netherlands Environmental Assessment Agency), Benjamin F. Hobbs, Marit van Hout, Paul Koutstaal
Presenter: Ozge Ozdemir (PBL Netherlands Environmental Assessment Agency)

How not to Design Renewable Energy Auctions: Endogenous Rationing

Authors: Ann-Katrin Hanke (Karlsruhe Institute of Technology), Karl-Martin Ehrhart
Presenter: Ann-Katrin Hanke (Karlsruhe Institute of Technology)

Comparing Second-best Strategies to Manage a Spatially Heterogeneous and Interacting Externalities of RES Development

Authors: Charlotte Geiger (Leipzig University), Paul Lehmann
Presenter: Charlotte Geiger (Leipzig University)

CONCURRENT SESSIONS

Monday, 26th of August

The End of the Beginning: Evolution of the French Large-Scale Renewable Electricity Supply Support Scheme

Authors: Arash Farnoosh (IFPEN (IFP School))
Presenter: Arash Farnoosh (IFPEN (IFP School))

Session 2D: Household Behaviour I (P-128)

Chair: **Souvik Datta**
(Fachhochschule Nordwestschweiz)

Home Energy Audits: What Can We Learn from a Field Experiment?

Authors: Nina Boogen (ETH Zurich), Claudio Daminato, Massimo Filippini, Adrian Obrist
Presenter: Nina Boogen (ETH Zurich)

Behavioral Anomalies and Energy-related Individual Choices: the Role of Status-quo Bias

Authors: Julia Blasch (Vrije Universiteit Amsterdam), Claudio Daminato
Presenter: Julia Blasch (Vrije Universiteit Amsterdam)

Household Preferences for Load Restrictions – is there an Effect of Pro-Environmental Framing?

Authors: Lars Persson (Umeå University), Thomas Broberg, Aemiro Daniel
Presenter: Lars Persson (Umeå University)

Developing a Consumer Model of Opportunity

Authors: Cordelia Frings (University of Cologne, Chair of Energy Economics), Broghan Helgeson
Presenter: Cordelia Frings (University of Cologne, Chair of Energy Economics)

Session 2E: Country Studies I (P-216)

Chair: **Georg Erdmann** (TU Berlin)

Environmental Impacts of Germany's Future Energy System

Authors: Christiane Reinert (RWTH Aachen University), Nils Baumgärtner, Sarah Deutz, André Bardow
Presenter: Christiane Reinert (RWTH Aachen University)

Meta-Analysis of Country-Specific Energy Scenario Studies for Neighbouring Countries of Germany

Authors: Soner Candas (Technical University of Munich), Andrej Guminski, Claudia Fiedler, Christoph Pellinger, Clara Luisa Orthofer
Presenter: Soner Candas (Technical University of Munich)

Phasing Out Nuclear- policies in Germany and Europe

Authors: Hermann-Josef Wagner (Ruhr-Universitaet Bochum, LEE)
Presenter: Hermann-Josef Wagner (Ruhr-Universitaet Bochum, LEE)

Revisiting the Oil Price-Macroeconomy Relationship in the US: The Role of Model Specification and Sample Period

Authors: Erkal Ersoy (Heriot-Watt University)
Presenter: Erkal Ersoy (Heriot-Watt University)

Session 2F: Oil (P-127)

Chair: **Kostas Andriosopoulos**
(ESCP Europe Business School)

Low Oil Investments and Emergence of Climate Risk: the End is Now or Just Business Cycle as Usual?

Authors: Sindre Lorentzen (University of Stavanger), Petter Osmundsen
Presenter: Sindre Lorentzen (University of Stavanger)

Oil and Gas Investments: Effect of Oil Price Fluctuations

Authors: Bård Misund (University of Stavanger), Petter Osmundsen
Presenter: Bård Misund (University of Stavanger)

Dynamic Relationship Between CDS Premia Volatility and Oil Shocks

Authors: Ibrahima Bah (University of Montpellier 1)
Presenter: Ibrahima Bah (University of Montpellier 1)

Oil Price Shocks and Cost of Debt - Evidence from U.S. Oil Firms

Authors: Johannes Lips (Justus-Liebig University), Christoph Funk, Karol Kempa
Presenter: Christoph Funk (Macquarie University)

Session 2G: Transportation I - Low Carbon Future (P-126)

Chair: **Gurkan Kumbaroglu**
(Bogazici University)

A Low Carbon Future of Transport in Ireland: an Approach with an Integrated Transport Model Coupling with Computer General Equilibrium Model

Authors: Shiyu Yan (Economics and Social Research Institute (ESRI) (Ireland)), Kelly de Bruin, Emer Dennehy
Presenter: Shiyu Yan (Economics and Social Research Institute (ESRI) (Ireland))

Estimating the Spatial Effects of CO2 Emission Control Policy in the Transportation Sector Among U.S. States

Authors: DooHwan Won (Pusan National University), Jaewon Lim, Sandy Dall'erna
Presenter: DooHwan Won (Pusan National University)

The Role of Gas in Cost-Effective Green Transport Transitions – a Whole Energy Systems Modelling Assessment Applied To Denmark

Authors: Erik Ahlgren (Chalmers Univ Technology), Dejene Hagos
Presenter: Erik Ahlgren (Chalmers Univ Technology)

Clean Sky-technology Diffusion Modeling for a Better Understanding of the Air Transportation Future

Authors: Xueying Liu (Institute for Future Energy Consumer Needs and Behavior, E.ON Energy Research Center, RWTH Aachen University), Reinhard Madlener
Presenter: Xueying Liu (Institute for Future Energy Consumer Needs and Behavior, E.ON Energy Research Center, RWTH Aachen University)

Tuesday, 27th of August

3A - 3G

11:00 am to 12:30 pm

Session 3A: Energy Markets II - Market Integration (P-019)

Chair: **Ingela Tietze** (Pforzheim University)

Integrating European Electricity Markets – What Impact for Consumers and Producers?

Authors: Lisa Ryan (UCD), Ewa Lazarczyk, Guneet Kaur
Presenter: Lisa Ryan (UCD)

Electricity Market Integration in North America: A Quantitative Analysis for Transmission and Generation Planning

Authors: Elmar Zozmann (Workgroup for Infrastructure Policy / TU Berlin), Citlali Lizbeth Rodriguez del Angel, Theo Schönfisch, Andrea Ruiz López
Presenter: Elmar Zozmann (Workgroup for Infrastructure Policy / TU Berlin)

Is the U.S. Natural Gas Market Integrated or Segmented? A Dynamic Study of Regional Natural Gas Prices

Authors: Hayette Gatfaoui (IÉSEG School of Management)
Presenter: Hayette Gatfaoui (IÉSEG School of Management)

Uncertainty in Integrated Electricity and Gas Markets – Analysing the Economic Impact

Authors: Thomas Möbius (BTU Cottbus-Senftenberg), Iegor Riepin, Felix Müsgens
Presenter: Thomas Möbius (BTU Cottbus-Senftenberg)

Session 3B: Flexibility & Storage II (P-021)

Chair: **Reinhard Haas** (TU Wien)

Local Flexibility Markets in Smart Cities: Interactions Between Positive Energy Blocks

Authors: Stian Backe (The Norwegian University of Science and Technology), Pedro Crespo del Granado, Güray Kara
Presenter: Stian Backe (The Norwegian University of Science and Technology)

Evaluation of Peer-to-Peer Electricity Sharing in Prosumer Communities

Authors: Mahdi Karami (RWTH Aachen University, EON ERC), Reinhard Madlener
Presenter: Mahdi Karami (RWTH Aachen University, EON ERC)

Is Sector Coupling a Well-Defined Strategy?

Authors: Jasmine Ramsebner (EEG TU Wien), Reinhard Haas
Presenter: Jasmine Ramsebner (EEG TU Wien)

The Influence of Energy Prosumers' Arbitrage Strategy on Power System Flexibility: A Game Theoretic Approach

Authors: Donghoon Ryu (Hanyang University), Jinsoo Kim
Presenter: Donghoon Ryu (Hanyang University)

Session 3C: Energy Policy II - Carbon Markets (P-217)

Chair: **Richard Green** (Imperial College Business School)

Assessing Shocks and Overlapping Policies in the EU ETS – Can the Reform Live up to its Promises?

Authors: Lukas Schmidt (Institute of Energy Economics (EWI) at the University of Cologne), Martin Hintermayer
Presenter: Lukas Schmidt (Institute of Energy Economics (EWI) at the University of Cologne)

Welfare Distribution Effects of Introducing a Multicountry Carbon Price Floor in the 2030 EU Power System

Authors: Marit van Hout (PBL), Ozge Ozdemir, Paul Koutstaal
Presenter: Marit van Hout (PBL)

The Reformed EU ETS - Intertemporal Emission Trading with Restricted Banking

Authors: Martin Hintermayer (EWI, Institute of Energy Economics), Johanna Bocklet, Lukas Schmidt, Theresa Wildgrube
Presenter: Martin Hintermayer (EWI, Institute of Energy Economics)

Carbon Leakages: Towards Tailored Policies to Reduce Emissions Embodied in the EU Petrochemical Sector

Authors: Michel Zimmermann (École Polytechnique Fédérale de Lausanne), Vincent Moreau
Presenter: Michel Zimmermann (École Polytechnique Fédérale de Lausanne)

Session 3D: Household Behaviour II (P-128)

Chair: **Elena Fumagalli** (Copernicus Institute of Sustainable Development, Utrecht University)

Social Norms and the Residential Electricity Mix

Authors: Joëlle Velvart (University of Basel)
Presenter: Joëlle Velvart (University of Basel)

Individuals' Preferences, Displacement Effects of Pollution Costs and the EKC Curve: an Empirical Investigation

Authors: Marco Baudino (Université Côte d'Azur, CNRS-GREDEG)
Presenter: Marco Baudino (Université Côte d'Azur, CNRS-GREDEG)

Attitudes to Renewable Energy Technologies: A Survey of Irish Households

Authors: Sanghamitra C. Mukherjee (University College Dublin)
Presenter: Sanghamitra C. Mukherjee (University College Dublin)

Session 3E: Renewables II - Solar (P-216)

Chair: **Regina Betz** (Center for Energy and the Environment, ZHAW)

Model-based Assessment of Concentrated Solar Power in Spain: A Case Study Analysis

Authors: Franziska Schöninger (Energy Economics Group, TU Vienna)
Presenter: Franziska Schöninger (Energy Economics Group, TU Vienna)

An Economical Analysis on the Installation of Photovoltaic Cell (PV) and Battery in the Residential Sector

Authors: Yoshiki Ogawa (Toyo University)
Presenter: Yoshiki Ogawa (Toyo University)

Short-term Photovoltaic Power Forecasting: A Statistical Approach

Authors: Dragana Nikodinoska (BTU Cottbus-Senftenberg; FG Energiewirtschaft)
Presenter: Dragana Nikodinoska (BTU Cottbus-Senftenberg; FG Energiewirtschaft)

CONCURRENT SESSIONS

Tuesday, 27th of August

Integrating Solar Photovoltaics into Singapore's Long-Term Energy Technology Portfolio

Authors: Anthony Owen (Energy Studies Institute, National University of Singapore)
Presenter: Anthony Owen (Energy Studies Institute, National University of Singapore)

Session 3F: Nuclear Power (P-127)

Chair: **Christian von Hirschhausen**
(TU Berlin / DIW Berlin)

"Nuclear Diplomacy" - State of the Art of Nuclear Power Plants Exports and some Econometric Analysis

Authors: Christian von Hirschhausen (TU Berlin / DIW Berlin), Anne Neumann, Lars Sorge
Presenter: Christian von Hirschhausen (TU Berlin / DIW Berlin)

Cost Estimates and Economics of Nuclear Power Plant Newbuild: Literature Survey and Some Modelling Analysis

Authors: Simon Bauer (Technische Universität Berlin), Ben Wealer, Christian von Hirschhausen, Claudia Kemfert
Presenter: Simon Bauer (Technische Universität Berlin)

The Economics of Radioactive Waste Management - Status Quo, Lessons Learned and Policy Perspectives

Authors: Ben Wealer (TU Berlin and DIW Berlin), Christian von Hirschhausen
Presenter: Ben Wealer (TU Berlin and DIW Berlin)

The Relationship between Nuclear Power and Military Expenditures: A Panel Data Analysis

Authors: Lars Sorge (DIW Berlin and TU Berlin)
Presenter: Lars Sorge (DIW Berlin and TU Berlin)

Session 3G: Transportation II - Electric Vehicles (P-126)

Chair: **Erik Ahlgren**
(Chalmers Univ Technology)

Coping with Uncertainties Induced by Battery Electric Driven Vehicles in Distribution Grids

Authors: Roland Broll (Universität Duisburg-Essen), Paul Baginski, Christoph Weber
Presenter: Roland Broll (Universität Duisburg-Essen)

Good Chargers? The Impact of Electric Vehicle Density on Local Grid Costs

Authors: Paal Wangsness (Institute of Transport Economics), Askill Halse
Presenter: Paal Wangsness (Institute of Transport Economics)

Generation Z Ready to Embrace the Electric Vehicle Revolution? Predictors of Electric Vehicle Adoption by Young and Older Adults in Austria

Authors: Paula Brezovec (Alpen-Adria-University Klagenfurt), Nina Hampl, Robert Sposato
Presenter: Paula Brezovec (Alpen-Adria-University Klagenfurt)

Analysis of CO2 Emission Reduction and Energy Interactions in Turkey Via Genetic Algorithm and Buems-macro for Electric Vehicles

Authors: Cem Tiranlar (Bogazici University)
Presenter: Cem Tiranlar (Bogazici University)

4A - 4G 4:00 pm to 5:30 pm

Session 4A: Energy Markets III - Energy & Capacity Markets (P-019)

Chair: **Reinhard Madlener**
(RWTH Aachen University, FCN-E.ON ERC)

Analyzing the Effects of European Co-Optimized Day-Ahead Energy and Reserve Market Coupling

Authors: Emily Little (RTE), Marco Schudel
Presenter: Emily Little (RTE)

Energy and Reserve Markets: In(ter)dependent in a High-RES World

Authors: Kenneth Van den Bergh (KU Leuven), Erik Delarue
Presenter: Kenneth Van den Bergh (KU Leuven)

Impact of Renewable Auctions on Renewable Energy Promotion taking the Spatial Dimension into Account

Authors: Siamak Sheykha (E.ON ERC), Reinhard Madlener, Frieder Borggrefe
Presenter: Siamak Sheykha (E.ON ERC)

Offshore vs. Onshore Wind Energy: Effects of the Technological Capacity Mix on Regional Market Values in Germany

Authors: Manuel Eising (EIFER - European Institute for Energy Research), Hannes Hobbie, Dominik Möst
Presenter: Manuel Eising (EIFER - European Institute for Energy Research)

Session 4B: Energy Modelling II (P-021)

Chair: **David Broadstock**
(Hong Kong Polytechnic University)

Integrating Energy System Modelling and Life Cycle Assessment for both Cost and Environmental Optimisation of a Decentralised Regional Energy System

Authors: Lukas Lazar (Pforzheim University), Ingela Tietze
Presenter: Lukas Lazar (Pforzheim University)

Methodological Analysis of Investment Decision Making Algorithms in Long-term Agent-based Electricity Market Models

Authors: Zhenmin Tao (KU Leuven), Jorge Moncada, Kris Poncelet, Erik Delarue
Presenter: Zhenmin Tao (KU Leuven)

Economic Evaluation of Energy Resilience in a Virtual Power Plant

Authors: Felipe Sabadini (RWTH), Reinhard Madlener
Presenter: Felipe Sabadini (RWTH)

Shaping Social Acceptance of Energy Projects

Authors: Mathilde Tessier (MINES ParisTech), Sandrine Seloese
Presenter: Mathilde Tessier (MINES ParisTech)

Session 4C: Climate II (P-217)

Chair: **Yukari Niwa Yamashita**
(Institute of Energy Economics, Japan)

Evaluations on Consumption-Based CO₂ Emissions in Europe

Authors: Takashi Homma (Research Institute of Innovative Technology for the Earth (RITE)), Shuning Chen, Junichiro Oda, Keigo Akimoto

Presenter: Takashi Homma (Research Institute of Innovative Technology for the Earth (RITE))

Prediction the CO₂ Emissions of China and Identify its Drivers

Authors: Zhili Zuo (China University of Geosciences(Wuhan))

Presenter: Zhili Zuo (China University of Geosciences(Wuhan))

Low Carbon Strategic Analysis of Taiwan's Industrial Sector

Authors: Wei-Chen Liao (Institute of Nuclear Energy Research), Fu-Kuang Ko
Presenter: Fu-Kuang Ko (Institute of Nuclear Energy Research)

Blockchain in the Energy Industry – Comprehensive Analysis of Potential Use Cases

Authors: Michael Hinterstocker (FFe GmbH), Alexander Bogensperger, Andreas Zeiselmaier, Christa Duffer, Serafin von Roon
Presenter: Michael Hinterstocker (FFe GmbH)

Session 4D: Energy Efficiency II (P-128)

Chair: **Mona Chitnis** (University of Surrey)

Usage Disaggregation of Smart Meter Data of Japanese Commercial Customers Using Random Forest Regression

Authors: Minao Watanabe (The University of Aizu), Kenta Ofuji
Presenter: Minao Watanabe (The University of Aizu)

Conveyance, Envy, and Home-Owners Adoption of Energy-Efficient Appliances

Authors: Joachim Schleich (Grenoble Ecole de Management), Corinne Faure, Marie-Charlotte Guetlein, Gengyang Tu
Presenter: Joachim Schleich (Grenoble Ecole de Management)

Energy Efficiency and Institutional Quality: The Role of Energy Efficiency Governance

Authors: Josue Barrera Santana (University of La Laguna), Gustavo A. Marrero Díaz, Francisco J. Ramos Real
Presenter: Josue Barrera Santana (University of La Laguna)

Analyzing Heterogeneity among Residential Energy Consumers in Slovenia: is there Room for Energy Efficiency?

Authors: Janez Dolšak (University of Ljubljana, School of Economics and Business), Nevenka Hrovatin, Jelena Zorić
Presenter: Janez Dolšak (University of Ljubljana, School of Economics and Business)

4E: Country Studies II (P-216)

Chair: **Jacek Kamiński**
(Mineral and Energy Economy Research Institute of the Polish Academy of Sciences)

The Arctic and Siberia as Megaregions in the Period of Global Climate Warming: Economic and Geopolitical Perspectives

Authors: Vladimir Suprun (Foundation for socio-prognostics research "Trends")
Presenter: Vladimir Suprun (Foundation for socio-prognostics research "Trends")

Benefits and Costs of Conventional and Renewable Power Sector in Siberia

Authors: Natalya Gorbacheva (The Institute of Economics and Industrial Engineering within the Siberian Branch of the Russian Academy of Sciences)
Presenter: Natalya Gorbacheva (The Institute of Economics and Industrial Engineering within the Siberian Branch of the Russian Academy of Sciences)

Renewable Electricity Energy Policies: Case of Turkey

Authors: Kemal Sarica (Işık University), Esin Tetik Kollugil
Presenter: Kemal Sarica (Işık University)

Market Design of an Energy Exchange: The Case of Greece

Authors: Filippos Ioannidis (Aristotle University of Thessaloniki), Kostas Andriosopoulos, Kyriaki Kosmidou, Georgia Makridou
Presenter: Filippos Ioannidis (Aristotle University of Thessaloniki)

4F: Coal and Nuclear Phase-Out (P-127)

Chair: **Andreas Loeschel**
(University of Muenster)

Can We Phase-Out All of Them? How Market Interventions Impact Security of Electricity Supply in Germany

Authors: Lars Nolting (RWTH Aachen University), Aaron Praktijnjo
Presenter: Lars Nolting (RWTH Aachen University)

A Multi-criteria, Multi-actor Approach to Germany's Coal Phase Out: Contrasting Short With Long Term Phase Out Options

Authors: Christopher Ball (Forschungszentrum Jülich GmbH), Stefan Voegelé
Presenter: Christopher Ball (Forschungszentrum Jülich GmbH)

Coal Phase-out Implications for Steam Coal Producers: The Risk of Asset Stranding

Authors: Christian Hauenstein (TU Berlin), Roman Mendelevitch, Franziska Holz
Presenter: Christian Hauenstein (TU Berlin)

Assessing Coal Plant Exit Trajectories for Australia

Authors: Frank Jotzo (Australian National University), Salim Mazouz
Presenter: Frank Jotzo (Australian National University)

Session 4G (Special Session): Revealing Trajectories Towards a Sustainable Energy Future (P-126)

Chair: **Eyjolfur Ingi Asgeirsson**
(Reykjavik University)

Introduction: Methodological Overview and Past Development Trajectories of the Icelandic Energy System: Lessons for the Future

Authors: Brynhildur Davidsdottir (University of Iceland)
Presenter: Brynhildur Davidsdottir (University of Iceland)

Implications of Fiscal-induced Electromobility Transition on Iceland's Energy-economic System

Authors: Ehsan Shafiei (Finnish Environment Institute), Brynhildur Davidsdottir, Hlynur Stefansson, Eyjolfur Ingi Asgeirsson, Reza Fazeli, Jonathan Leaver
Presenter: Ehsan Shafiei (Finnish Environment Institute)

Modelling Geothermal Resource Utilization By Incorporating Resource Dynamics, Capacity Expansion, and Development Costs

Authors: Nathalie Spittler (University of Iceland/ University of Clermont Auvergne), Ehsan Shafiei, Brynhildur Davidsdottir
Presenter: Nathalie Spittler (University of Iceland/ University of Clermont Auvergne)

Stakeholder Engagement for the Development of Indicators for Sustainable Energy Development

Authors: Ingunn Gunnarsdottir (University of Iceland), Brynhildur Davidsdottir
Presenter: Ingunn Gunnarsdottir (University of Iceland)

Identifying Robust Development Trajectories for the Icelandic Energy Systems Towards Carbon Neutrality Using MCDA

Authors: Reza Fazeli (University of Iceland), Bjarnhéðinn Guðlaugsson, Ingunn Gunnarsdottir, Brynhildur Davidsdottir, Ehsan Shafiei
Presenter: Reza Fazeli (University of Iceland)

CONCURRENT SESSIONS

Wednesday, 28th of August

5A - 5G

9:00 am to 10:30 am

Session 5A: Electricity II (P-019)

Chair: **Moritz Nobis**
(RWTH Aachen University)

Optimizing Congestion Management by Integrating Redispatch into the Day-ahead Market

Authors: Ksenia Poplavskaya (AIT Austrian Institute of Technology / TU Delft), Gerhard Totschnig, Fabian Leimgruber, Laurens de Vries, Gerard Doorman
Presenter: Ksenia Poplavskaya (AIT Austrian Institute of Technology / TU Delft)

The Role of Frequency Regulation with High-Penetration of Renewable Energy Sources

Authors: Claudio Agostini (Universidad Adolfo Ibáñez), Shahriyar Nasirov, Carlos Silva, Franco Armijo
Presenter: Claudio Agostini (Universidad Adolfo Ibáñez)

The "Current" Battle of the Currents: AC vs. DC - An Applied Lock-in- and System-Good Economics Approach

Authors: Florian Weiß (TU Berlin), Christian von Hirschhausen, Raluca Dumitrescu, Daniel Phillip
Presenter: Florian Weiß (TU Berlin)

The Impact of Distribution Grid Injection Limits on the Investment Strategy of Prosumers

Authors: Chiara Gorrasi (Katholieke Universiteit Leuven), Kenneth Bruninx, Erik Delarue
Presenter: Chiara Gorrasi (Katholieke Universiteit Leuven)

Session 5B: Energy Modelling III (P-021)

Chair: **Hans Auer**
(Energy Economics Group (EEG))

The Impact of Sector Coupling Options on Electricity Systems - An Evaluation of Different Flexibility Options

Authors: Mario Kendzioriski (Technische Universität Berlin), Wolf-Peter Schill
Presenter: Mario Kendzioriski (Technische Universität Berlin)

The Value of Intraday Electricity Trading - Evaluating Opportunity Costs of Units Distributing on Local Flexibility Markets

Authors: Timo Kern (Forschungsgesellschaft für Energiewirtschaft mbH), Serafin von Roon
Presenter: Timo Kern (Forschungsgesellschaft für Energiewirtschaft mbH)

Local Energy Sharing Considering Different Technologies, Individual Preferences, and Contributions

Authors: Theresia Perger (Vienna University of Technology), Hans Auer
Presenter: Theresia Perger (Vienna University of Technology)

On the Characterization and Evaluation of Flexibilities in Energy Management Systems

Authors: Carlo Corinaldesi (Technische Universität Wien), Daniel Schwabeneder, Andreas Fleischhacker, Georg Lettner
Presenter: Carlo Corinaldesi (Technische Universität Wien)

Session 5C: Energy Policy III - Carbon Tax & Decarbonization (P-217)

Chair: **Frank Jotzo**
(Australian National University)

Tax or Turn Off: That is the Question Some insights in Power Sector Emissions Reduction Measures' Effectiveness in a Small, Open Economy

Authors: Danielle Devogelaer (Federal Planning Bureau)
Presenter: Danielle Devogelaer (Federal Planning Bureau)

Dosis Facit Effectum Why the Scope of the Carbon Tax Matters - Evidence from the Swedish Residential Sector

Authors: Anita Thonipara (ifh Göttingen University of Göttingen)
Presenter: Anita Thonipara (ifh Göttingen University of Göttingen)

How Effective was the UK Carbon Tax?—A Machine Learning Approach to Policy Evaluation

Authors: Mirjam Kosch (ZHAW), Jan Abrell
Presenter: Mirjam Kosch (ZHAW)

Prices vs. Percentages: Use of Tradable Green Certificates as an Instrument of Greenhouse Gas Mitigation

Authors: Arild Heimvik (University of Bergen, department of Economics), Eirik S. Amundsen
Presenter: Arild Heimvik (University of Bergen, department of Economics)

Session 5D: Household Behaviour III (P-128)

Chair: **Nina Boogen** (ETH Zurich)

An Examination of Domestic Appliance Curtailment Contracts

Authors: William Brazil (Economic and Social Research Institute), Jason Harold, John Curtis
Presenter: William Brazil (Economic and Social Research Institute)

Preferences for Environmentally Friendly and Unfriendly Measures to Control the Climate at Home: a Stated Choice Analysis for Germany

Authors: Moritz König (University of Kassel), Andreas Ziegler, Victor von Loessl, Claudia Schwirplies
Presenter: Moritz König (University of Kassel)

Optimization of Behaviors by IoT for Energy Efficiency in Smart Buildings

Authors: Lucas Desport (Mines ParisTech), Sandrine Selosse, Gilles Guerassimoff
Presenter: Lucas Desport (Mines ParisTech)

Do Households in Developing Country Choose Energy Efficient Air Conditioner?: Evidence From the Philippines

Authors: Miwa Nakai (Waseda University), Minoru Morita, Majah-Leah Ravago, Toshi Arimura
Presenter: Miwa Nakai (Waseda University)

Session 5E: Renewables III - Spatial Capacity Allocation (P-216)

Chair: **Shahriyar Nasirov**
(Universidad Adolfo Ibañez)

Trade-offs Associated with the Spatial Allocation of Future Onshore Wind Generation Capacity – a Case Study for Germany

Authors: Philip Tafarte (University of Leipzig)
Presenter: Philip Tafarte (University of Leipzig)

Minimum Distances or Economic Siting Incentives? – An Ecological-Economic Analysis of Instruments for Governing Future Spatial Wind Power Deployment

Authors: Felix Reutter (Helmholtz Centre for Environmental Research - UFZ)
Presenter: Felix Reutter (Helmholtz Centre for Environmental Research - UFZ)

Trade-offs between Regionally Equitable and Cost-Efficient Allocation of Decentralized Renewable Electricity Generation

Authors: Jan-Philipp Sasse (University of Geneva, Renewable Energy Systems), Evelina Trutnevyte
Presenter: Jan-Philipp Sasse (University of Geneva, Renewable Energy Systems)

Potential of Offshore Power-to-gas to Compete With Onshore Blue Hydrogen

Authors: Machiel Mulder (University of Groningen)
Presenter: Machiel Mulder (University of Groningen)

Session 5F: Energy Investment & Finance I (P-127)

Chair: **Boyko Nitzov** (ACER)

Acquisitions in Markets with Frictions? The German Electricity Distribution Sector

Authors: Dominik Schober (ZEW)
Presenter: Dominik Schober (ZEW)

Cross-Border Oil and Gas Mergers and Acquisitions Transactions and its Geography-Based Comprehensive Overview

Authors: Sevkät Özgür (University of Vienna), Franz Wirl
Presenter: Sevkät Özgür (University of Vienna)

The Cost of Debt of Renewable versus Fossil Fuel Firms: Evidence from the U.S. Energy Sector

Authors: Karol Kempa (Frankfurt School of Finance & Management gGmbH), Ulf Moslener, Oliver Schenker
Presenter: Oliver Schenker (Frankfurt School of Finance and Management gGmbH)

Taxation and Extraction Rates

Authors: Petter Osmundsen (University of Stavanger), Aksel Hiorth
Presenter: Petter Osmundsen (University of Stavanger)

Session 5G: Energy Markets, Innovation & New Technologies (P-126)

Chair: **Michael Pollitt**
(University of Cambridge)

Pricing Mechanisms and Market Designs in Peer-to-Peer Electricity Trading

Authors: Jens Weibezahn (Technische Universität Berlin), Alexandra Lüth, Jan Martin Zepter, Pedro Crespo del Granado
Presenter: Jens Weibezahn (Technische Universität Berlin)

Potentials of the Sharing Economy for the Electricity Sector Regarding Private Capital Involvement and Decarbonisation

Authors: Ingela Tietze (Pforzheim University), Pia Szichta, Lukas Lazar
Presenter: Ingela Tietze (Pforzheim University)

Innovation in the UK Electricity Supply Industry: Whose – and What – Innovation?

Authors: Geoffroy Dolphin (University of Cambridge Judge Business School), Michael Pollitt
Presenter: Geoffroy Dolphin (University of Cambridge Judge Business School)

6A - 6G
11:00 am to 12:30 pm

Session 6A: Energy Markets IV (P-019)

Chair: **Lars Bergman**
(Stockholm School of Economics)

Real-Time Pricing and Imperfect Competition in Electricity Markets

Authors: Stephen Poletti (University of Auckland), Julian Wright
Presenter: Stephen Poletti (University of Auckland)

Non-Linear Demand Curves in Electricity Markets: Impact on Market Power Estimation

Authors: Yi Wan (Paul Scherrer Institute), Martin Densing
Presenter: Yi Wan (Paul Scherrer Institute)

Hedging Instruments in Electricity Markets for New Technologies – a Long-Term Perspective

Authors: Helene Linda Huber (University of Vienna - Faculty of Business, Economics and Statistics), Jörn Richstein, Karsten Neuhoﬀ
Presenter: Helene Linda Huber (University of Vienna - Faculty of Business, Economics and Statistics)

Electricity Futures and Stock Market Response to Electricity Sector Material Disclosures

Authors: Ivan Diaz-Rainey (University of Otago), Xing Han, Greg Sise
Presenter: Ivan Diaz-Rainey (University of Otago)

Session 6B: Flexibility & Storage III (P-021)

Chair: **Joachim Geske** (Imperial College London)

Influence of Electric Vehicle Uptake on Competitive Dynamics of Storage Technologies in Electricity Sector Applications

Authors: Martin Beuse (ETH Zürich), Bjarne Steffen, Tobias S. Schmidt
Presenter: Bjarne Steffen (ETH Zurich)

Energy Storage Investment in Switzerland: A Household Model Approach Linking Heat and Electricity

Authors: Héctor Antonio Ramírez Molina (University of Basel), Hannes Weigt
Presenter: Héctor Antonio Ramírez Molina (University of Basel)

From Single Family Buildings to Energy Communities - Economic Viability of Upscaling Battery Storage Systems

Authors: Albert Hiesl (Technische Universität Wien)
Presenter: Albert Hiesl (Technische Universität Wien)

Pumped Hydro Storage in France: Stand-Alone Market Player, TSO Service Provider or EDF Nuclear Fleet Support

Authors: Corentin Simon (Université de Nantes), Rodica Loisel
Presenter: Corentin Simon (Université de Nantes)

Session 6C: Energy Access & Energy Poverty (P-217)

Chair: **Nevenka Hrovatin**
(University of Ljubljana, School of Economics and Business)

Energy Poverty and Energy Inequality in Japan: a Direct Measurement Approach

Authors: Shinichiro Okushima (University of Tsukuba)
Presenter: Shinichiro Okushima (University of Tsukuba)

Subjective Well-Being and Energy Poverty: New Insights from the Combination of Objective and Subjective Indicators

Authors: Rinaldo Brau (University of Cagliari), Erica Delugas
Presenter: Rinaldo Brau (University of Cagliari)

Paying for Green Energy: The Fiscal Incidence of Renewable Energy Support Mechanisms in the EU

Authors: Lawrence Haar (Oxford Brookes University), Doctor Laura Haar
Presenter: Lawrence Haar (Oxford Brookes University)

Lessons From Deploying Large Scale Solar Electrification in Bangladesh. Can the Last-Mile Become the First?

Authors: Georg Heinemann (TU Berlin, WIP, Workgroup for Economic and Infrastructure Policy), Raluca Dumitrescu, Christian von Hirschhausen

Presenter: Georg Heinemann (TU Berlin, WIP, Workgroup for Economic and Infrastructure Policy)

Session 6D: Household Behaviour IV (P-128)

Chair: **Claudio Agostini** (Universidad Adolfo Ibanez)

Residential Energy Efficiency Investment and Demand Response under Different Electricity Pricing Schemes: a Hybrid Physical-Microeconomic Approach

Authors: Walid Matar (KAPSARC)
Presenter: Walid Matar (KAPSARC)

Designing Effective and Acceptable Energy Policies for a Low Carbon Heating Consumption

Authors: Elena López Bernabé (Basque Centre for Climate Change (BC3))
Presenter: Elena López Bernabé (Basque Centre for Climate Change (BC3))

Time to Pick up Pace of Dynamic Electricity Pricing

Authors: Abbas Hussain (Frontier Economics)
Presenter: Abbas Hussain (Frontier Economics)

Utilising Applied Behavioural Research to Execute Subsidy Reform in Kuwait

Authors: Hessah AlOjayan (Kuwait University)
Presenter: Hessah AlOjayan (Kuwait University)

Session 6E: Renewables IV (P-216)

Chair: **Machiel Mulder** (University of Groningen)

Measuring Regional Impacts of an Energy System Transformation - a Contribution to Sustainability Analysis

Authors: Philip Ulrich (Institute of Economic Structures Research (GWS mbH)), Ulrike Lehr
Presenter: Philip Ulrich (Institute of Economic Structures Research (GWS mbH))

A Version of Net Metering for a Set of Households after the Feed-in Tariff Regime
Authors: Yoshihiro Yamamoto (Takasaki City University of Economics)
Presenter: Yoshihiro Yamamoto (Takasaki City University of Economics)

The Long-Term Effect of Renewable Electricity on UK Employment

Authors: Theodoros Arvanitopoulos (University College London)
Presenter: Theodoros Arvanitopoulos (University College London)

Analysis of Consumer Preference on a

Hypothetical Green Certificate Program in Korea: Application of a Choice Experiment

Authors: Jeonghwan Bae (Chonnam National University), Hojeong Park
Presenter: Jeonghwan Bae (Chonnam National University)

Session 6F: Energy Investment & Finance II (P-127)

Chair: **Simon Cadez** (University of Ljubljana)

Evaluating the Impacts of Auctions on Financing Conditions for Renewable Energy Projects

Authors: Mak Dukan (Technical University of Denmark), Lena Kitzing
Presenter: Mak Dukan (Technical University of Denmark)

Rethinking Renewable Energy Auctions: Revenue Stabilisation Instead Of Support Payments

Authors: Lena Kitzing (Technical University of Denmark), Barbara Breitschopf
Presenter: Lena Kitzing (Technical University of Denmark)

Mapping Climate and Energy Finance: Lessons Learnt from Czechia and Germany

Authors: Michaela Valentová (Czech Technical University in Prague), Aleksandra Novikova, Jaroslav Knápek
Presenter: Michaela Valentová (Czech Technical University in Prague)

Pricing of Associated Petroleum Gas, the Feedstock of GPPs, Considering Environmental Aspects

Authors: Rohollah Mahdavi (Sobhan Institution for Energy Studies (SIES)), Ali Taherifardhanjani, Hamed Sahebbonar, Mostafa Pourkaveh Dehkordi
Presenter: Mostafa Pourkaveh Dehkordi (ISU)

Session 6G: Transportation III - Policies & Household Choices (P-126)

Chair: **Amela Ajanović** (TU WIEN)

Vehicle Tax Design and Car Purchase Choices: A Case Study of Ireland

Authors: Ivan Petrov (University College Dublin), Lisa Ryan
Presenter: Ivan Petrov (University College Dublin)

The Cost of Driving: Choices, Policies

Authors: Boyko Nitzov (ACER)
Presenter: Boyko Nitzov (ACER)

The Impact of Preferences and Socio-Economic Factors on Households' Travel Mode Choice

Authors: Alessandro Silvestri (Basque Centre for Climate Change (BC3)), Sébastien Foudi, Ibon Galarraga
Presenter: Alessandro Silvestri (Basque Centre for Climate Change (BC3))

7A - 7G

1:30 pm to 3:00 pm

Session 7A: Energy Markets V - Market Design & Trading Arrangements (P-019)

Chair: **Carlos Silva** (Universidad de Chile)

Revising the Trading Arrangements of the Nordic Electricity Market?

Authors: Lars Bergman (Stockholm School of Economics)
Presenter: Lars Bergman (Stockholm School of Economics)

The Competitive Effect of EU Transparency Reforms: Evidence from Nord Pool

Authors: Ewa Lazarczyk (Reykjavik University), Chloe Le Coq
Presenter: Ewa Lazarczyk (Reykjavik University)

Proposing a Framework for Cross-Border Electricity Trade in South America

Authors: Shahriyar Nasirov (Universidad Adolfo Ibañez), Carlos Silva
Presenter: Carlos Silva (Universidad de Chile)

Investors' Perspectives on Factors Influencing Bidder Participation in the Chilean Energy Auctions

Authors: Shahriyar Nasirov (Universidad Adolfo Ibañez), Carlos Silva, Diego Jorrete
Presenter: Shahriyar Nasirov (Universidad Adolfo Ibañez)

Session 7B: Energy Modelling IV (P-021)

Chair: **Pantelis Capros** (E3MLab)

Run-Time Reduction for Linear Optimizing Energy System Models

Authors: Yvonne Scholz (German Aerospace Center), Karl Kiên Cao, Manuel Wetzels, Kai von Krbek, Hans Christian Gils, Benjamin Fuchs, Frieder Borggrefe
Presenter: Yvonne Scholz (German Aerospace Center)

Quantifying The Worst Case Impact Of INC-DEC Gaming on a Redispatch Market

Authors: Simon Voswinkel (University of Duisburg-Essen)
Presenter: Simon Voswinkel (University of Duisburg-Essen)

Energy System Response to Future Uncertainties

Authors: Sannamari Pilpola (Aalto University), Peter Lund
Presenter: Sannamari Pilpola (Aalto University)

Stochastic Generation of Household Electricity Load Profiles in 15-minute Resolution on Building Level for Whole City Quarters

Authors: Sally Köhler (University of Applied Sciences Stuttgart)

Presenter: Sally Köhler (University of Applied Sciences Stuttgart)

Session 7C: Energy Policy IV (P-217)

Chair: **Jelena Zoric**

(University of Ljubljana, School of Economics and Business)

Towards Decarbonizing the European Building Stock: Policies and Their Impact on Vulnerable Household Groups

Authors: Andreas Müller (Technische Universität Wien)

Presenter: Andreas Müller (Technische Universität Wien)

Evaluating the Use of Bioenergy With Carbon Capture and Storage to Achieve Energy Transition and Decarbonization

Authors: Sandrine Selosse (MINES ParisTech - Centre for Applied Mathematics)

Presenter: Sandrine Selosse (MINES ParisTech - Centre for Applied Mathematics)

The Impact of Low-Carbon Policy on Stock Returns

Authors: Alessandro Ravina (Paris I Panthéon-Sorbonne University), Rania Hentati Kaffel

Presenter: Alessandro Ravina (Paris I Panthéon-Sorbonne University)

Low-carbon Electricity Generation Scenarios for Tanzania: Implications for the Country's Economy and the Environment

Authors: Matteo Rocco (Politecnico di Milano), Elena Fumagalli

Presenter: Elena Fumagalli (Copernicus Institute of Sustainable Development, Utrecht University)

Session 7D: Firm Performance (P-128)

Chair: **Dominik Schober** (ZEW)

Electricity Market Restructuring and Plant Generation Costs: Evidence from the United States

Authors: Souvik Datta (Fachhochschule Nordwestschweiz), Massimo Filippini, Chiara Lo Prete

Presenter: Souvik Datta (Fachhochschule Nordwestschweiz)

Productivity Growth in Electricity and Gas Networks in Great Britain since Privatisation

Authors: Michael Pollitt (University of Cambridge), Victor Ajayi, Karim Anaya
Presenter: Michael Pollitt (University of Cambridge)

Environmental Regulations and Firm Performance: An Application of Porter Hypothesis on Turkish Manufacturing Industry

Authors: Ezgi Ozkirim (University of Ljubljana, School of Economics and Business), Nevenka Hrovatin, Istemi Berk

Presenter: Ezgi Ozkirim (University of Ljubljana, School of Economics and Business)

Corporate Environmental Responsibility and Financial Performance: an Empirical Examination

Authors: Simon Cadez (University of Ljubljana)

Presenter: Simon Cadez (University of Ljubljana)

Energy Communities (P-216)

Chair: **Julia Blasch**

(Vrije Universiteit Amsterdam)

Energy Communities as an Enabler for PV

Authors: Johannes Radl (TU Wien), Andreas Fleischhacker, Georg Lettner

Presenter: Johannes Radl (TU Wien)

Quantifying the Social Potential of Community-Based Energy Cooperatives to Contribute to EU-28 Climate and Renewable Energy Targets

Authors: Cristian Pons-Seres de Brauer (Energy Institute at Johannes Kepler University), Jed Cohen, Johannes Reichl, Andrea Kollmann, Valeria Azarova

Presenter: Jed Cohen (Energy Institute at Johannes Kepler University)

Economic Viability of Local Energy Communities: A Special Focus on PV and Different Settlement Structures

Authors: Bernadette Fina (AIT - Austrian Institute of Technology), Hans Auer, Werner Friedl

Presenter: Bernadette Fina (AIT - Austrian Institute of Technology)

Willingness to Pay for Microgrids to Enhance Community Resilience

Authors: Chelsea Hotelling (Energy Futures Group), Stephen Bird, Martin Heintzelman

Presenter: Martin Heintzelman (Clarkson University)

Session 7F: Energy & the Economy (P-127)

Chair: **Adonis Yatchew**

(University of Toronto)

Revisiting the Growth Hypothesis for the Renewables in the Energy-Growth Nexus

Authors: Minyoung Yang (Hanyang University), Jinsoo Kim

Presenter: Minyoung Yang (Hanyang University)

Energy Retrofit in a Post Natural Disaster Context: Effective Driver of Resilient Growth?

Authors: elisa valeriani (Università di Modena e Reggio Emilia), Maria Giovanna Bosco

Presenter: Maria Giovanna Bosco (Università di Modena e Reggio Emilia)

A Glance at the Marginal Product of Energy From the Lens of a Time-varying Panel Data Production Function With Latent Type Heterogeneity

Authors: David Broadstock (Hong Kong Polytechnic University)

Presenter: David Broadstock (Hong Kong Polytechnic University)

Royalties and Fiscal Equalization - the Case of Swiss Hydropower

Authors: Werner Hediger (HTW Chur), Marc Herter, Christoph Schuler

Presenter: Werner Hediger (HTW Chur)

Session 7G: Transportation IV (P-126)

Chair: **Matej Švigelj**

(University of Ljubljana, School of Economics and Business)

E-Mobility from a Multi-Actor Point of View

Authors: Stefan Voegelé (Forschungszentrum Juelich), Christopher Ball, Wilhelm Kuchshinrichs

Presenter: Stefan Voegelé (Forschungszentrum Juelich)

Insights Into the Strategic Roll-out and Usage of Public Charging Infrastructure in Germany

Authors: Laura Prawatky (NOW GmbH Nationale Organisation Wasserstoff- und Brennstoffzellentechnologie), Dr.-Ing. Franziska Lobas-Funck

Presenter: Laura Prawatky (NOW GmbH Nationale Organisation Wasserstoff- und Brennstoffzellentechnologie)

Corri-door Project: Did it Really Boost the French Electric Vehicle Market?

Authors: Bassem Haidar (CentraleSupélec), Jan Lepoutre, Pascal Da Costa, Yannick Perez

Presenter: Bassem Haidar (CentraleSupélec)

Applying Best-Worst Scaling to Assess Consumer Preferences for Alternative Fuel Vehicles in Japan

Authors: Kentaro Yoshida (Kyushu University)

Presenter: Kentaro Yoshida (Kyushu University)

POSTER SESSION

Tuesday, 27th of August

**Foyer between
lecture rooms in the
ground floor**

12:30 pm to 2:00 pm

Life Cycle Cost and Global Warming Potential of a Wooden Detached House in Finland

Authors: Nargessadat Emami (University of Iceland), Jukka Heinonen, Björn Marteinson, Jani Laine

Presenter: Nargessadat Emami (University of Iceland)

An Optimization Approach for the Economic Dispatch Problem Incorporating the Effects of Retail Power Markets

Authors: Nikolaos Koltsaklis (Energy & Environmental Policy lab, School of Economics, Business & International Studies, University of Piraeus)

Presenter: Nikolaos Koltsaklis (Energy & Environmental Policy lab, School of Economics, Business & International Studies, University of Piraeus)

Corporate Social Responsibility and Chinese Energy Industry

Authors: Kun Li (Beijing Normal University)

Presenter: Kun Li (Beijing Normal University)

Transition Towards Electricity Scarcity Pricing in Poland: Lessons Drawn from International Experiences

Authors: Pablo Benalcazar (Mineral and Energy Economy Research Institute, Polish Academy of Sciences), Patryk Nalepka

Presenter: Pablo Benalcazar (Mineral and Energy Economy Research Institute, Polish Academy of Sciences)

Benchmarking Carbon Savings and Economic Effectiveness of Renewable Energy Sources: A Methodological Comparative Study

Authors: Saeed Alokka (Imperial College London)

Presenter: Saeed Alokka (Imperial College London)

Behaviour-driven Battery Electric Vehicle Charging Decisions and Its Implications for the German Power System

Authors: Niklas Wulff (German Aerospace Center (DLR)), Felix Steck, Carsten Hoyer-Klick, John Erik Anderson

Presenter: Niklas Wulff (German Aerospace Center (DLR))

A Speculative Trading Model of Electricity Market

Authors: Jun Maekawa (Ritsumeikan Univ), Koji Shimada

Presenter: Jun Maekawa (Ritsumeikan Univ)

Economic Barriers for Energy Crop Development: Lessons Learnt from Czechia

Authors: Jaroslav Knápek (Czech Technical University in Prague, Faculty of Electrical Engineering), Kamila Vávrová, Tomáš Králík, Martin Beneš

Presenter: Jaroslav Knápek (Czech Technical University in Prague, Faculty of Electrical Engineering)

Comparative Analysis on Environmental Kuznets Curve Focusing on the Turning Point

Authors: Taeyoung Jin (Hanyang University), Jinsoo Kim

Presenter: Taeyoung Jin (Hanyang University)

Energy Efficiency Financing: A Review of Risks and Uncertainties

Authors: Daniel Hill (Vienna University of Economics and Business)

Presenter: Daniel Hill (Vienna University of Economics and Business)

Intermittent Capacity Resources in the Polish Capacity Market: The Case of Wind Power

Authors: Aleksandra Komorowska (Mineral and Energy Economy Research Institute of the Polish Academy of Sciences), Jacek Kamiński

Presenter: Aleksandra Komorowska (Mineral and Energy Economy Research Institute of the Polish Academy of Sciences)

All conference participants will have the chance to cast their ballot in the ballot box at the registration desk on Tuesday, 27 August 2019 until 4:00 pm.



PhD Day

Sunday, 25th of August

Seminar 1: How to write papers for publication in scientific journals?

Location: Senate Conference Room, SEB LU

Time: 11:00 am to 1:00 pm

Speaker: **Adonis Yatchew**, University of Toronto, Editor-in-Chief of the Energy Journal.

Description: It is very important for PhD students and young researchers to learn how to present their research findings clearly, and how scientific papers should be structured. However, these topics are rarely covered in depth in PhD programmes. This seminar with Professor Yatchew is intended for PhD students and young professionals that want to learn how to write papers for publication in scientific journals. The lecturer is Editor-in-Chief of the Energy Journal, one of the most important scientific journals in the field of energy economics, and his experience and advice are indispensable for every aspiring researcher in this area.

Break: 1:00 pm to 1:30 pm

Seminar 2: How to present research work in scientific conferences?

Location: Senate Conference Room, SEB LU

Time: 1:30 pm to 4:00 pm

Speakers: **Georg Erdmann**, Berlin University of Technology and **Markus Graebig**, WindNODE Project Leader.

Description: It is a common and disappointing experience at conferences: Excellent content gets lost in poor presentations. We want to help you and your audience make the most of your opportunity to be on stage. This workshop will focus on the delivery rather than the content of scientific presentations. Best-practices both from the academic and the business world will be applied in order to make presentations as effective as possible. Topics will range from “mind your audience”, “identifying key messages”, “developing a clear storyline and storyboard” to “designing state-of-the-art slides” and “performing on stage”. All of this will be practiced in a hands-on workshop: Participants in the workshop are invited to deliver 10-minute presentations, followed by detailed feedback and recommendations for improvement. Participants that received the acceptance notification for their paper, and that are interested in presenting and receiving feedback on their presentations during the workshop should send an e-mail stating their interest at: iaee2019ljubljana@oyco.eu. We have time for a maximum of 5 presentations – slots will be allocated to students selected by the conference organisers.

Break: 4:00 pm to 4:30 pm

PRE-CONFERENCE SEMINAR

Sunday, 25th of August

Special Seminar open to all conference participants: *Teaching energy – where does one begin?*

Location: Senate Conference Room, SEB LU

Time: 4:30 pm to 6:00 pm

Speaker: **Adonis Yatchew**, University of Toronto, Editor-in-Chief of the Energy Journal.

Description: The seminar covers 'Ten Big Ideas' which are necessary for understanding today's energy issues and focuses on bare essentials that need to be communicated to a novice in the field of energy economics. The lecturer is Editor-in-Chief of the Energy Journal and Professor at the University of Toronto where he teaches undergraduate and graduate courses in energy economics, graduate courses in econometrics and 'big ideas' courses on energy with colleagues in physics and classics.



Photo: Postojna cave; Author: Iztok Medja

POST-CONFERENCE SEMINAR

Thursday, 29th of August

Energy Transition & Power Markets

Location: Executive Conference Room, SEB LU

Time: 9:00 am to 5:00 pm

The seminar will be given by **Richard Green**, Professor of Sustainable Energy Business at the Imperial College Business School in the United Kingdom.

The aim of this post-conference seminar is to give participants an overview of key economic and policy issues surrounding the transition to low-carbon electricity in market-based systems.

Programme:

9:00 am to 10:30 am Lecture 1: Fundamentals of electricity

What do you need to know about the workings of the electricity industry in order to understand the challenges we face in decarbonising the power system? This session concentrates on how economic costs can be minimised subject to the technical constraints imposed by the need to meet demand at all times without overloading the grid.

10:30 am to 11:00 am Coffee break

11:00 am to 12:30 pm Lecture 2: Electricity markets

How should the electricity industry be organised, and if a liberalised market is introduced, what rules should it have? This session will cover optimal prices for power, how to pay for capacity, and different ways of pricing transmission constraints. It will discuss the difference between “US” and “European” market designs, and how the operating constraints faced by power stations can affect electricity prices.

12:30 pm to 1:30 pm Lunch

1:30 pm to 3:00 pm Lecture 3: Renewables and storage

Wind turbines and solar PV panels are becoming dramatically cheaper, but how does the intermittent nature of their output affect their value to the power system? Electricity storage has the potential to absorb surplus energy and release it later – how far can this help system operators to manage the variable output from renewable generators?

3:00 pm to 3:30 pm Coffee break

3:30 pm to 5:00 pm Lecture 4: Emissions savings

How much have renewable generators already reduced our carbon emissions, and how should we measure this?

The sessions will set out the economic theory underlying these issues with a “tutorial” approach, but will also present a number of recent research papers that explore these issues.

SOCIAL PROGRAMME

Sunday, 25th of August

Welcome Reception

6:00 pm to 8:00 pm

Location: School of Economics and Business, University of Ljubljana

Address: Kardeljeva ploščad 17, Ljubljana

Student Happy Hour

09:00 pm to 11:00 pm

Location: Pivnica Lajbah

Address: Grudnovo nabrežje 15, Ljubljana



Meeting Point: The meeting point for Student happy hour is at the IAEE Conference Entrance of SEB LU (please consult the map of SEB LU). All students attending the Student happy hour will receive a free welcome drink!

Monday, 26th of August

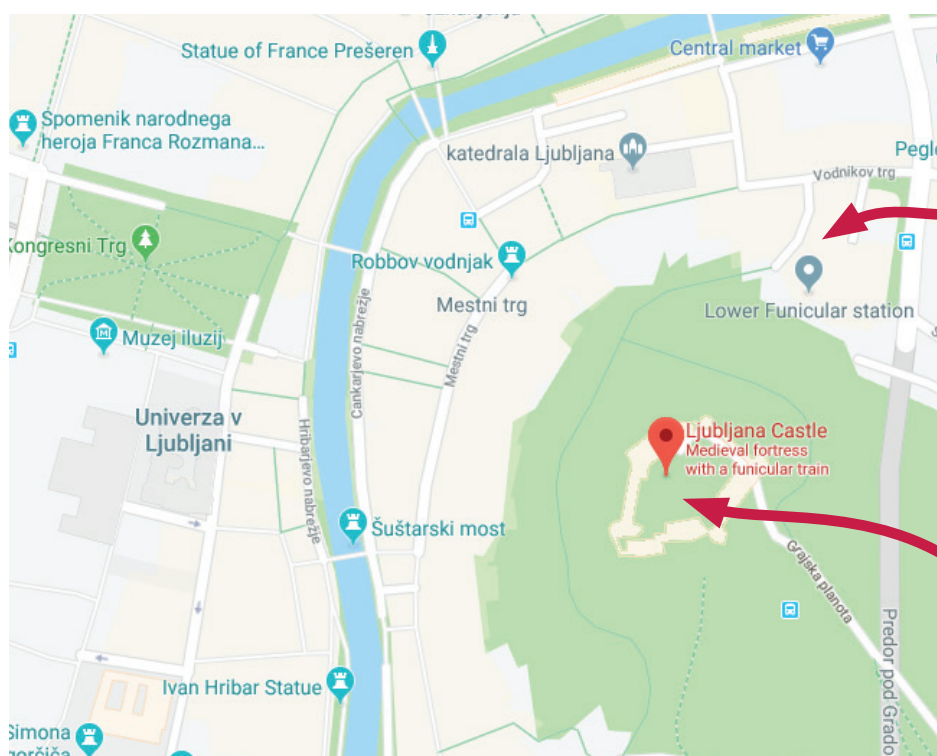
Conference Cocktail Dinner

7:00 pm to 10:30 pm

Location: Ljubljana Castle

Address: Grajska planota 1, Ljubljana

Meeting Point: The IAEE 2019 conference organizing team from SEB LU will meet you at the castle funicular (Lower funicular station, address: **Krekov trg 4, Ljubljana**) to accompany you to the Ljubljana Castle with the funicular. **The conference badge is your entrance ticket to the funicular.**



Meeting Point

Lower Funicular Station
Address: Krekov trg 4,
Ljubljana

Location of Ljubljana
Castle and Lower
Funicular Station

Conference Cocktail Dinner

Ljubljana Castle
Address: Grajska planota
1, Ljubljana

Please note that the funicular capacity is limited to one cabin with a maximum of 33 persons per ride, and 15 full cycles per hour. Therefore, participants are kindly requested to begin assembling at the meeting point starting from 06:30 pm. Ljubljana Castle is also accessible on foot. Please find more information on walking paths here: <https://www.ljubljanskigrad.si/en/visit-us/how-to-get-to-the-castle/>.

About the Castle: Ljubljana Castle has a rich past. Since its early period, the Castle has served a number of purposes – from a residence, a military outpost, fort, countryseat, and prison, to a tourist and cultural centre. In addition to the historical significance enjoyed by all visitors, the Ljubljana Castle is also becoming an important cultural centre for Ljubljana. It is a popular venue for exhibitions, theatre plays, and concerts.



Tuesday, 27th of August

Gala Dinner

7:00 pm to 10:30 pm

Location: Cankarjev dom

Address: Prešernova cesta 10, Ljubljana

Guests will be welcomed with a drink, followed by a seated dinner and award ceremony.

Meeting Point: The meeting point for Gala Dinner is directly at Cankarjev dom. Please be sure to use the entrance located at the Trg Republike. Cankarjev dom is in the city center, in the walking distance of majority of conference hotels. In the event that you are arriving from SEB LU, take bus 6 or bus 11 in the direction of city center to get to bus stop 'Konzorcij', from which Cankarjev dom is in five minutes walking distance.

About the Cankarjev dom: The Cankar Centre, also known as Cankarjev dom or Cankar Hall is a multipurpose centre. Designed by Prof. Edo Ravnikar, the student of the notable master of architecture Jože Plečnik, Cankarjev dom is an architectural gem, whose splendour has not diminished with time. Gala dinner will be held in Grand Reception Hall. Proclaimed a cultural heritage monument, the hall is considered one of the finest in Slovenia.



Gala Dinner

Cankarjev dom

Address: Prešernova
cesta 10, Ljubljana

Location of
Cankarjev Dom

Tesla vehicle test drive

At the 16th IAEE European Conference you will have the opportunity to experience the unique performance and technology of a Tesla electric vehicle, arranged by GEN-I, the conference golden sponsor! Book your slot, and our drivers will take you for a ride in the vicinity of Ljubljana. Please note that the number of time slots are limited. For more information and booking, please visit the Conference Registration Desk.

TECHNICAL TOURS

All information about technical tours and departure times are available at the Conference Registration Desk. For additional details and booking you may also contact IAEE 2019 Official Travel Office Go Green at iaee@go-green.si. Please note that the minimum number of participants is 16, and that in case of a lower number of participants the price might change or the Technical Tour may be canceled.

Sunday, 25th of August 2019

Technical tour to Kidričevo Compressor Station and Ptuj Wine Cellar

Duration: 8 hours

Guided tour of Kidričevo Compressor Station

The Kidričevo Compressor Station is an important part of Slovenian transmission network, and it provides uninterrupted supply and transfer of natural gas in the Republic of Slovenia. Discover more about Kidričevo Compressor Station during this very informative and insightful guided technical tour!

Guided tour of Ptuj Wine Cellar

Wine is one of the most important building blocks of the history of Ptuj, the oldest town in Slovenia, aging back to the year 69 a.d. The Ptuj winery hosts the largest and most famous collection of vintage wines in the region. Guided tour of the cellar includes the audio-visual presentation titled "When the drop sparkles", cheese bread roll and tasting of the 4 different wines.

Thursday, 29th of August 2019

Technical tour to Hydro Power Plant Brežice and Otočec Castle

Duration: 6.5 hours

Guided tour of the hydro-power plant Brežice

The tour starts with the presentation of the model of the hydro power plant Brežice, located on the Sava River. The guide will explain the operation of the power plant and its building process, and then proceed to HPP Brežice command room, where all power plants on the lower part of river Sava in Slovenia are operated from. The tour ends outside, where you will have a chance to see the power plant's spillway, a passage for aquatic organisms (fish trails) and the accumulation pool.

Otočec Castle and food tasting

Otočec Castle is the only castle situated on a river islet in Slovenia, surrounded by a beautiful and picturesque landscape. The tour also includes food tasting, so be sure to sign up and try some of the local specialties of Dolenjska region!

SOCIAL TOURS

For information on duration, meeting points, and booking please visit the Registration Desk, or contact IAEE 2019 Official Travel Office Go Green at iaee@go-green.si. Please note that the minimum number of participants is 16, and that in case of a lower number of participants the prices might change.

Monday, 26th of August 2019

Ljubljana – the capital of Slovenia

The tour, beginning in front of the Town Hall, takes you through the historical city center, whose unique architecture is the legacy of the Baroque and Art Nouveau periods and, most notably, the work of the famous Slovenian architect Jože Plečnik. Enjoy the boat cruise along the Ljubljanica River. Tourist boats on the river Ljubljanica provide an opportunity to experience the old city centre's picturesque bridges, façades, and embankments from a completely different perspective. On this tour, a boat will take you on a circular cruise between the famous Plečnik's Ljubljana Sluice Gate and the Špica embankment.

Tuesday, 27th of August 2019

Postojna Cave, Predjama Castle and Piran

The mesmerizing beauty of the Postojna Caves and the mysterious castle of Predjama rank among the most precious jewels of Slovenia. We will explore the wonderful underground world of Postojna Cave and excite our imagination with the striking medieval Predjama Castle. We will continue towards Slovenian coast and drive along its narrow roads all the way to Piran, one of the most photogenic cities in the Mediterranean. In Piran, you will feel as though you have stepped right into a picture postcard. You will be charmed by the narrow streets within the old town wall. In the main square, you will be greeted by the statue of the most famous man in Piran, the well-known Giuseppe Tartini, composer and virtuoso violinist who was born in a house just step away from the square. On the pier, you can catch sight of fisherman unraveling fishing net.

Wednesday, 28th of August 2019

Lake Bled – an Alpine pearl

Often described as the 'Image of Paradise', the Alpine resort town of Bled will enchant you with its emerald-green lake, fairy-tale island and imposing castle reigning on top of a rocky cliff. Bled is often mentioned as the pearl of the Slovenian Alpine region. With its emerald-green waters, picture-perfect postcard church on the island, a medieval castle on the rocky cliff and some of the highest peaks of the Slovenian Alps as the background. Lake Bled is a place you should not miss. Take a short walk along the lakeshore. The beauty of the surrounding mountains reflects on the lake surface. Through the season's visitors will enjoy the peace of the lake and fresh air.

School of Economics and Business University of Ljubljana

The School of Economics and Business, University of Ljubljana (the SEB LU) was established in 1946. It is one of 23 faculties and 3 art academies of the University of Ljubljana, which is the largest public university in Slovenia with over 40,000 students. The School of Economics and Business is the largest higher education and research institution in the field of business and economics in Slovenia, and also the university's biggest centre for executive education.

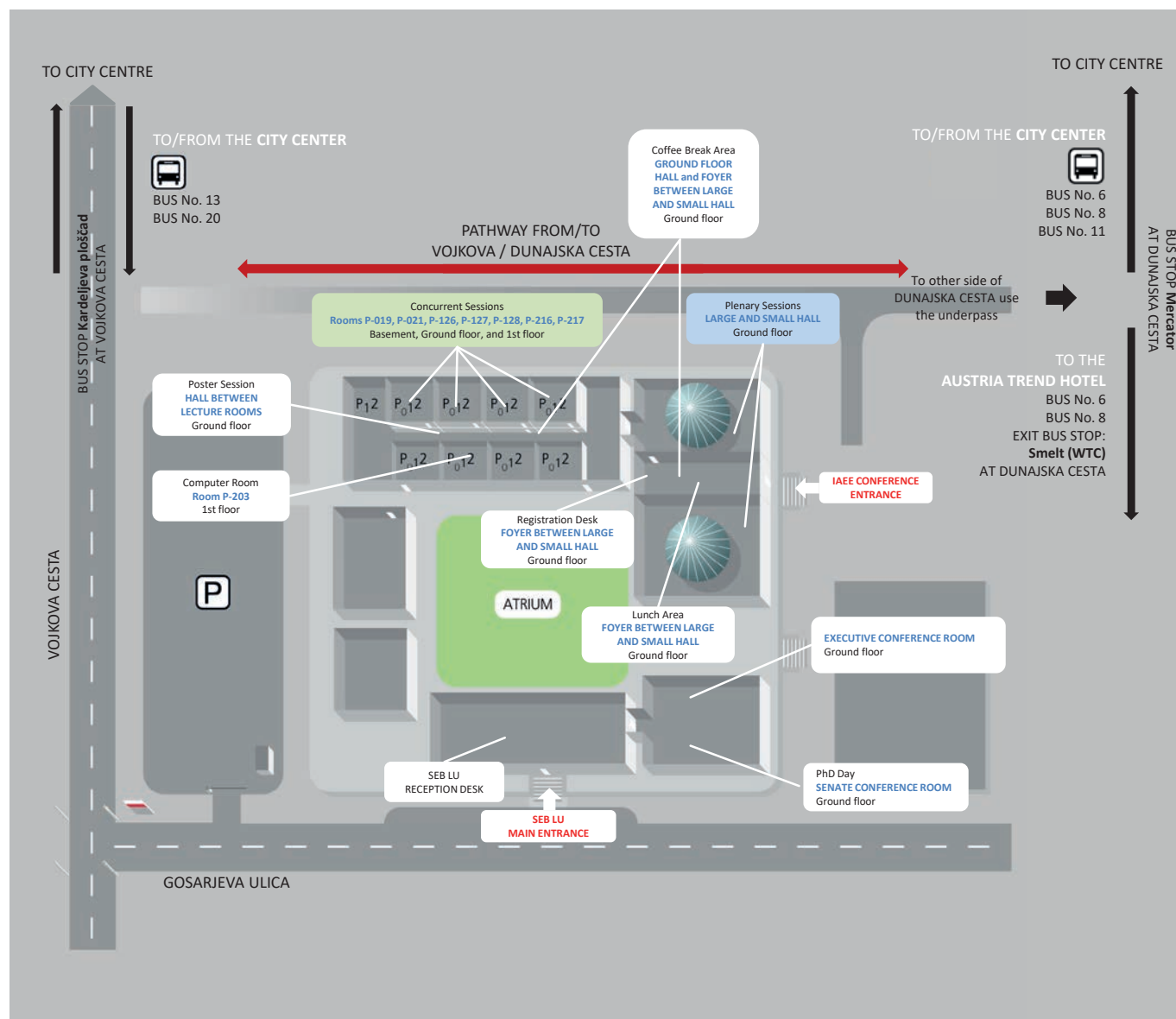
The SEB LU is among only 77 business schools in the world which have the so-called "triple crown" accreditation (EQUIS, AACSB, AMBA). It is positioned as a school of choice within Central Europe and has international partnerships with around 200 leading universities world-wide. It also hosts the only Confucius Institute located at a business school in Central and Eastern Europe, which was awarded for its excellence in 2018.

The SEB LU's core values are: eagerness to learn, creativity, entrepreneurialism, integrity, respect, inclusiveness. Following the adoption of the SEB LU's new 2016-2020 strategic plan, its new mission is to broaden horizons and build competences for the socially responsible management of business and economic challenges.

The SEB LU provides education at all levels (undergraduate, graduate, doctoral, executive and lifelong learning) and in most key areas of specialization. It offers Bologna type programmes in all three cycles (3+2+3 structure). Prospective students can choose among 17 study programmes at three different study levels (undergraduate, graduate, doctoral). Almost all of them are aimed at an international audience and are consequently offered in English (in parallel to constitutionally required Slovenian study tracks). Furthermore, several double and joint degree programmes with renowned schools are also offered. Close to a thousand international students study at the SEB LU each year or attend its famous Ljubljana Summer School "Take the Best from East and West", which last year attracted over 500 students from more than 40 different countries.



SEB LU MAP



FLOOR	EVENT	ROOM
Basement	Concurrent Session	P-019, P-021
Ground Floor	Plenary Session	Large Hall, Small Hall
	Concurrent Session	P-126, P-127, P-128
	Poster Session	hall between lecture rooms
	PhD Day	Senate Conference Room
	Post-Conference Seminar	Executive Conference Room
	Meetings	Senate Conference Room, Executive Conference Room
	Student Breakfast	Senate Conference Room
	Coffee Breaks	foyer between Large and Small Hall, Hall between lecture rooms
	Lunches	foyer between Large and Small Hall
	Registration Desk	foyer between Large and Small Hall
1st Floor	Concurrent Session	P-216, P-217
	Computer Room	P-203

USEFUL INFORMATION

Address of the Conference Venue

School of Economics and Business, University of Ljubljana, Kardeljeva ploščad 17, SI-1000 Ljubljana,
Phone number: +386 1 5892 400

Registration Desk

The desk is located in the Main Lobby (ground floor) and open on:

- Sunday 25 August: 10:00 am – 8:00 pm
- Monday 26 August: 07:30 am – 06:00 pm
- Tuesday 27 August: 08:00 am – 5:30 pm
- Wednesday 28 August: 08:00 am – 12:00 pm

Access to the Conference Rooms and Social Events

All participants will receive a conference package and a badge during the registration at the conference. The badge must be worn all times and is your entrance ticket to the session rooms and any events organized outside the conference venue.

Computer and Internet Access

Open wireless internet connection is included in your registration fee (select “EF public”, no password is required).

Participants have also the possibility to use the computers in the room P-203 (first floor).

Login information: username = efdogodek, password = ef1.

Uploading Your Presentation

Presenters can upload their presentations to a special IAEE-related (folder “IAEE2019”) partition of the FELU server using any of the computers made available to delegates in computer rooms and session rooms.

Login information: username = efdogodek, password = ef1.

Lost Property

Please contact the registration desk in the Main Lobby (ground floor), if you have lost or found any item.

Emergency Situations and Medical Services

In case of emergency call 112 (SOS – Ambulance, Fire Brigade) or 113 (Police). These calls are free. No region code is required.

Fire Alarm and Evacuation

In case of fire alarm you are required to evacuate the building immediately without further delay. The security staff will direct you to the emergency exits.

Smoking

SEB LU is a non-smoking facility. We kindly ask you to respect this.

Copying Service

A copying service COPIS is located in the basement of the SEB LU.

Transportation: Please see <https://iaee2019ljubljana.oyco.eu/gettingtotheconference> for more information.

Official IAEE 2019 Airport Transfer Service

Participants have the option to book airport transfers, hotels and sightseeing trips at reduced rates during the registration process through our third-party provider Go Green, which is the Official Travel Office for the conference (The company name is Ekoturizem).

Shuttle Transfer Service

Ljubljana is approximately 30 min drive from the Jože Pučnik Ljubljana Airport. The shuttle service will run through the day and please note maximum waiting time at the airport (upon arrival or at departure) is 40 minutes to combine transportation. In case of an emergency please call our 24/7 Office phone number: +386 (0)51 303 404.

Arrival Shuttle Transfer Service will be organized on Saturday, 24 August 2019 and Sunday, 25 August 2019 from Airport Jože Pučnik Ljubljana (Slovenia) to the official IEEE 2019 hotels/IAEE 2019 venue.

Departure Shuttle Transfer Service will be organized on Wednesday, 28 August 2019 and Thursday, 29 August 2019 from the IAEE 2019 venue/official IEEE 2019 hotels to Airport Jože Pučnik Ljubljana (Slovenia).

Individual Transfer Service

Individual transfers will be also organized for all participants and accompanying persons from all nearest airports (Airport Jože Pučnik, Ljubljana; Ronchi Airport, Trieste; Marco Polo Airport, Venice; Airport Franjo Tuđman, Zagreb) to the hotel/venue and back for a maximum of 3 people per car/passage with no waiting time and an English-speaking driver.

Please see the following link for rates and additional information:

<https://iaee2019ljubljana.oyco.eu/gettingtotheconference>.

Other transfer options from the Ljubljana Airport

There are regular bus lines leaving from the Ljubljana Airport to Ljubljana daily. The buses stop in front of the 'Departures' entrance to the Ljubljana Airport (please note that buses are less frequent on Saturdays and Sundays).

Different shuttle-van services operate from Ljubljana airport. Their stops are in front of the 'Arrivals' entrance to the Ljubljana airport.

Parking

Parking options are available in the area surrounding the SEB LU. The entrance to the largest parking in the proximity of SEB LU is from Gosarjeva ulica. Please find the rates here:

http://www.ef.uni-lj.si/visit_us.

Public Transportation

Please note that for using public transportation in Ljubljana, you need to have purchased and topped-up your Urbana card. **Urbana card** cannot be purchased or topped-up on the bus. Additionally, the bus fare cannot be paid directly on the bus in cash.

There are 5 buses at your service and School of Economics and Business can easily be reached via:

- Bus routes no. 13 (Sostro) and no. 20 (Nove Stožice); you may get in at the bus stop Turist, Dalmatinova or Bavarski dvor (bus stops in the city centre), the exit bus stop is **KARDELJEVA PLOŠČAD**
- Bus routes no. 6 (Črnuče), no. 8 (Brnčičeva) or no. 11 (Ježica); you may get in at the bus stop Konzorcij, Ajdovščina or Bavarski dvor (bus stops in the city centre), the exit bus stop is **MERCATOR**

Both stops are approximately 200 m from the conference venue.

You can also download **Urbana Mobile Application** which offers a user-friendly experience for smartphone owners equipped with NFC technology and with Android 4.4 or higher. Here is the QR code:



Urbana single city card is a no-contact smart card, allowing quick and convenient cash-free payment for rides on Ljubljana city buses. The Urbana card can also be used to pay for cable-car rides to the Ljubljana Castle, parking fees for white zones and parking lots managed by Javno podjetje Ljubljanska parkirišča in tržnice as well as the services of the Ljubljana City Library.

How to purchase Urbana? You can buy it at the “Urbanomat” (Urbana city card vending machine), which are located at several bus stops around Ljubljana, or at various points of sale. We suggest you take a look at links on conference web page for more information: <https://iaee2019ljubljana.oyco.eu/gettingtotheconference>.

Taxi

For taxi service please dial +386 41 97 00 00 or +386 41 445 406 or ask for help at the Conference Registration Desk. We recommend you to order a taxi service by phone because stopping a taxi on the street could be more expensive.

Time Zone

Time zone currently used in Slovenia is CEST (Central Summer European Time). Slovenia is thus two hours ahead of the Greenwich Mean Time (GMT+2).

Foreign Exchange and Banking

The euro is the official currency in Slovenia. The exchange office closest to the conference venue is located in the World Trade Centre Ljubljana, two blocks away from SEB LU on Dunajska cesta 156. All major international credit cards are accepted in shops, hotels and restaurants. Traveller's cheques are also accepted by all banks, travel agencies and hotels, and in many shops. Foreign exchange services are also available at hotels.

Most banks are open weekdays from 8 am to 4 pm. ATMs (Automatic Teller Machines) are available 24/7 and located throughout the city. Almost all ATMs have a language key which enables you to follow the instructions in English.

VAT

Value-added tax is nearly always included in quoted prices (9,5 % or 22 %). Numerous shops advertising “Tax-Free Shopping” in their windows make it possible for visitors from non-European Union countries to receive a refund of value added tax paid on a minimum of 50 euros worth of goods purchased in a single shop within a single day on condition that the goods are taken outside the country within three months from the purchase date.

Electricity

Electricity in Slovenia is a 230 Volts 50 Hz system. Slovenia uses the Europlug (CEE 7/16). This is the plug used in most other European countries.

Opening Hours of Retailers

Most stores are open weekdays at least from 9 am to 7 pm and Saturdays at least from 9 am to 5 pm. On Sundays large stores are open from 9 am to 3 pm.



Photo: Tromostovje; Author: Nea Culpa d.o.o.

Notes

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