

EEM24  10th INTERNATIONAL CONFERENCE ON THE
EUROPEAN ENERGY MARKET
10 - 12 June 2024, Istanbul, Türkiye



INTERNATIONAL CONFERENCE ON THE EUROPEAN ENERGY MARKET

10 - 12 June 2024
Istanbul, Türkiye



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20th INTERNATIONAL CONFERENCE ON THE
EUROPEAN ENERGY MARKET
10 - 12 June 2024, Istanbul, Türkiye

EEM24 Conference Program

Welcome to the **20th International Conference on the European Energy Market**, held in Istanbul, Türkiye from 10th of June to 12th of June.

In this booklet, you will find detailed information about the conference, schedule, and presentations.

Organized by:



**KADIR HAS
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**Center for Energy
and Sustainable
Development**



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CONFERENCE ON THE
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Welcome address



Dear Colleagues,

It is our pleasure to welcome you to the **20th International Conference of European Energy Market (EEM24)** hosted by the **Center for Energy and Sustainable Development (CESD)** at the **Kadir Has University in İstanbul, Türkiye**. As we gather in this unique city that bridges two continents, we are reminded of the vital connections and collaborations that define our work in the energy sector. Istanbul, with its rich history as a crossroads of trade and culture, serves as a fitting backdrop for our discussions on the future of energy markets in Europe.



Emre Çelebi, EEM24 General Co-Chair

Our conference comes at a pivotal time. The European energy market is undergoing significant transformations, driven by advancements in technology and artificial intelligence, the urgent need for sustainable and renewable energy sources, and the shifting geopolitical landscape. These changes present both challenges and opportunities that require our collective insight and action.

Over the next few days, we will explore a broad range of topics critical to the future of energy in Europe. We have an impressive lineup of keynote speakers who will share their expertise and vision for the future. Their insights will undoubtedly provoke thought, inspire new ideas, and spur us to consider how we can collectively shape a more sustainable and resilient energy market.

I encourage each of you to take full advantage of the opportunities this conference provides – to engage in meaningful dialogue, to network with peers, and to exchange knowledge and best practices. It is through these interactions that we can forge stronger connections and drive forward the innovations and policies necessary for our shared energy future.

I would like to extend my heartfelt thanks to our sponsors, organizers, and volunteers who have worked tirelessly to bring this event to fruition.

Thank you once again for being here, I wish you all a productive and successful conference.

Emre Çelebi on behalf of the EEM24 Local Organizing Committee



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Local Organizing Committee

- **General Co-Chairs**

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Emre Çelebi, CESD, Kadir Has University

- **Technical Program Co-Chairs**

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Conference Program at a Glance

MONDAY, June 10th

08:00–09:00 Registration
09:00–09:30 Opening session
09:30–11:00 Keynote session 1
11:00–11:30 Coffee break
11:30–13:00 Keynote session 2
13:00–14:00 Lunch
14:00–15:30 Paper sessions 1 (A-E)
15:30–16:00 Coffee break
16:00–17:30 Paper sessions 2 (A-E)
19:00–22:00 Welcome reception, Boat tour on Bosphorus

TUESDAY, June 11th

09:00–09:30 Registration
09:30–11:00 Keynote session 3
11:00–11:30 Coffee break
11:30–13:00 Keynote session 4
13:00–14:00 Lunch
14:00–15:30 Paper Session 3 (A-E)
15:30–16:00 Coffee break
16:00–17:30 Paper session 4 (A-E)
19:00–22:00 Gala dinner, Legacy Ottoman Hotel

WEDNESDAY, June 12th

09:00–09:30 Registration
09:30–11:00 Special sessions
11:00–11:30 Coffee break
11:30–13:00 Paper session 5 (A-E)
13:00–14:00 Closing Ceremony, Coffee break
13:15–18:00 Technical visit, Seymen Biomass Generation Plant at Silivri

Keynote speakers



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KEYNOTE SESSION 1

June 10th, Monday 09:30 - 11:00 D-Block Great Hall



VAHID VAHIDINASAB

Associate Professor of Smart Power & Energy Systems and Leader of Sustainable Energy Research Group (SERG) Director of NTU-GridLab, Nottingham Trent University

Title: *Vehicle-for-Everything (V4X): Empowering Energy Citizens through EV-Driven Flexibility Markets*

Vahid Vahidinasab *is an Associate Professor of Smart Power and Energy Systems, Leader of Sustainable Energy Research Group (SERG), and Director of NTU-GridLab at Nottingham Trent*

University (NTU), Nottingham, UK. The focus of his research is on the development of local energy systems and markets with an emphasis on the development of innovative solutions to empower people and communities and enhance the resilience of energy systems in the transition toward net-zero. He has more than two decades of experience in academia and industry and is a committed volunteer for professional organizations. In addition, he has a remarkable record of attracting significant external funds and effectively managing large-scale industrial projects, in addition to his extensive involvement in 12 large and complex national and international projects. He is the Vice Chair of UK and Ireland IEEE Industry Applications Society (IAS), a Senior Member of the IEEE, and a Fellow of the Higher Education Academy. He is the Editor-in-Chief of Springer Smart Grids and Sustainable Energy, Subject Editor of IET Smart Grid, IET GTD, and Editor of the IEEE Transactions on Power Systems. Vahid is the recipient of the Vice-Chancellor Research Excellence Award and the IEEE Power and Energy Society (PES) Chapter Outstanding Engineer Award in 2023.



KUTALMIŞ ERSOY

Secretariat Türkiye, Zero Emission Traders Association (ZETA)

Title: Hydrogen Exports to the EU and the European Regulatory Environment

Kutalmış Ersoy is a dedicated lawyer with extensive experience in regulatory and compliance realms within the energy sector. He is acting as the Secretary General of the Zero Emissions Traders Alliance Türkiye, which is independent organization committed to creating transparent markets for low-carbon and renewable energy. He is based in Brussels and following regulatory developments in the EU.

KEYNOTE SESSION 2

June 10th, Monday 11:30 - 13:00 D-Block Great Hall



MICHAEL POLLITT

Professor, Energy Policy Research Group, University of Cambridge Centre on Regulation in Europe, Brussels

Title: *Lessons for electricity market design from the 2021-23 European Energy Crisis*

Michael Pollitt is Professor of Business Economics at the Judge Business School, University of Cambridge. He is an Assistant Director of the Energy Policy Research Group (EPRG) and an academic co-director of the Centre on Regulation in Europe (CERRE). Michael is a Fellow in Economics and Management at Sidney Sussex College, Cambridge. Michael was external economic advisor to Ofgem from 2007 to 2011. He has published 13 books and over 100 refereed journal articles on efficiency analysis, energy policy and business ethics. He was Vice President of the International Association for Energy Economics (IAEE) for 2020-23 and has been the convenor of the Association for Christian Economics UK, since 2000.



AUDUN BOTTERUD

Principal Research Scientist, Laboratory for Information and Decision Systems (LIDS), Massachusetts Institute of Technology (MIT)

Title: *Towards Zero-Carbon: Challenges and Solutions for Electricity Markets*

Audun Botterud is a Principal Research Scientist in Laboratory for Information and Decision Systems (LIDS) at MIT, where he leads the Energy Analytics Group. He has a co-appointment in the Energy Systems and Infrastructure Analysis Division at Argonne National Laboratory. His research interests include power systems, electricity markets, renewable energy, and energy storage. Audun holds a M.Sc. (Industrial Engineering) and a Ph.D. (Electrical Power Engineering), both from the Norwegian University of Science and Technology. He was previously with SINTEF Energy Research in Trondheim, Norway.

KEYNOTE SESSION 3

June 11th, Tuesday 09:30 - 11:00 D-Block Great Hall



HASAN ÖZKOÇ

Director, Mediterranean Energy Regulators (MEDREG)

Title: The role of a coherent regulation in establishing a functioning Mediterranean energy market

Hasan Özkoç is the Director of the Mediterranean Energy Regulators (MEDREG). He leads MEDREG in developing activities, tools, regulatory standards and good practices to promote a functioning, interoperated, compatible and sustainable regulatory framework in the Mediterranean region. Prior to MEDREG, he occupied the position of Sector Manager for Energy at the Delegation of the European Union to Turkey, managing reform process, implementation and follow-up of pre-accession developments, monitoring and coordinating the programmes/projects under the EU Financial Assistance to Turkey between July 2010 and March 2018. In 2006, he worked as Senior Gas Expert (Head of Hydrocarbons) for the Energy Community Secretariat in Vienna, where he contributed to the development of strategies for gas market structures in the South-Eastern European Countries and monitored the compliance of Members with the EU's internal energy directives. He worked for the Turkish Energy Market Regulatory Authority (EMRA) from its establishment in 2001 until 2009. He was involved in the

preparation and implementation of the implementing legislation of the Natural Gas Market Law. Following his graduation, he joined Petroleum Pipeline Corporation (BOTAS) in 1994 as a natural gas engineer and specialised on natural gas and LNG sales and purchase agreements as well as gas infrastructures. He received a BS in Metallurgical and Materials Science Engineering and later an MS from the Middle East Technical University (METU).



[OKAN YARDIMCI](#)

Head of Digital Transformation Group, Energy Market Regulatory Authority (EMRA)

Title: Empowering Türkiye's Energy Future: The Role of Digital Transformation in Energy Transition

Dr. Okan Yardımcı graduated from the Middle East Technical University (Türkiye), Department of Petroleum and Natural Gas Engineering in 2004. He joined an Executive Program on economics of regulation in the Michigan State University (USA) in 2008. Afterwards, he participated in Master of Law (LL.M.) at the PennState University (USA) between 2013-2015. He completed Ph.D. on finance in the Hacettepe University (Türkiye) in 2016 and held a post-doctorate research at the University of Oxford, St Antony's College, South East European Studies (UK) between 2019-2021. He had been working as a reservoir engineer in an international oil company before he was recruited by the Energy Market Regulatory Authority (EMRA) of Türkiye. He has been working for EMRA since 2006 and currently serving as the Head of the Digital Transformation Group under the Energy Transition Department. He held teaching positions at undergraduate and graduate levels in several universities. He teaches energy economics, financing energy investments and economics of regulation.



NURİ ŞENSOY

Data Analytics Manager, Senkron.Energy Digital Services

Title: The key to the transition to the New Power System: Digital Technologies and Artificial Intelligence

Dr. Nuri Şensoy serves as the Data Analytics Manager at Senkron.Energy Digital Services, a subsidiary of Enerjisa Üretim, one of Turkey's leading energy production companies. After completing his bachelor's and master's degrees in Mathematics at Koç University, he earned his PhD in Industrial Engineering. In 2023, he completed the Executive MBA program at Sabancı University. Nuri Şensoy began his career as an operational research specialist at Energy Exchange Istanbul. With nearly 10 years of experience in the energy sector, he has specialized in solving complex energy problems. He manages a team of data engineers and data scientists, developing innovative applications to enhance the performance and profitability of energy production facilities and energy trading operations.

KEYNOTE SESSION 4

June 11th, Tuesday 11:30 - 13:00 D-Block Great Hall



STEIN-ERIK FLETEN

Professor, Norwegian University of Science and Technology (NTNU)

Title: *Electricity Forward Curves: The Challenges of High-Resolution Estimation*

Stein-Erik Fleten received the Ph.D. degree in operations research from the Norwegian University of Science and Technology, Trondheim, Norway, in 2000. He is currently Professor at the Norwegian University of Science and Technology, Trondheim, Norway. His areas of interest include electricity markets, hydro scheduling under uncertainty, hedging and risk management in electricity utilities, real options, and bidding in short-term electricity auctions. His main scientific fields are stochastic programming, finance and energy economics, with applications for electricity companies. He has been doing research on the liberalized electricity market since the 1990s. He has been a visiting scholar in University of British Columbia, University College London and University of Michigan. Fleten has extensive experience in participation and leadership of applied research projects, both nationally and internationally, within the electricity area.



JALAL KAZEMPOUR

Associate Professor and Head of Section for Energy Markets and Analytics, Technical University of Denmark (DTU)

Title: *The P90 requirement of Energinet: How does it promote stochastic flexible assets bidding in Nordic ancillary service markets?*

Jalal Kazempour *is an Associate Professor at the Technical University of Denmark (DTU), Department of Wind and Energy Systems, where currently heading the section "Energy Markets and Analytics" with 15+ research staff. He is also the head of studies for the MSc program "Sustainable Energy Systems" of DTU. Jalal is interested in data-driven and market-oriented approaches to power system operation and planning, also in coordination with other energy systems (hydrogen, gas, heat, etc). His focus area is the intersection of multiple fields, including optimization, game theory, control, and machine learning for energy applications. He is currently serving as an Associate Editor for INFORMS Operations Research.*



Scientific programme

PAPER SESSIONS

Session PS1A			Monday June 10, 14:00 -15:30
Chair		Juan Pedrero Alegria, TECNALIA	Room : D103
Session	Paper ID	Title	Author(s)
PS1A.1	381	Methodology for the geo-referenced urban-scale assessment of high electrification scenarios	<u>Juan Pedrero</u> , Eneko Arrizabalaga Uriarte, Nekane Hermoso Martinez, Ander Zubiria Gomez, Amaia Gonzalez Garrido, Raul Moneo Hernandez
PS1A.2	417	Willing to Wait? Acceptance for Load Management at e-Vehicle Charging Stations in Germany	<u>Paul Fabianek</u> , Reinhard Madlener
PS1A.3	391	Dynamic pricing in EV charging stations with renewable energy and battery storage	Carlos A. M. Silva, Filipe Lobo, José R. Andrade, Ricardo J. Bessa
PS1A.4	415	Operation of an EV parking lot subject to capacity-based grid tariffs offering demand response	<u>Andreas Fosse Hansen</u> , Jonas Henrik Pinderud, Kasper Emil Thorvaldsen
PS1A.5	465	Operation Pattern Analysis of Electric Vehicle Taxis considering Electricity Market Price	<u>Raiki Morisako</u> , Masahiro Mae, Ryuji Matsuhashi
PS1A.5	342	The role of energy storage in promoting sustainable energy transition in an island community	<u>Ville Sihvonen</u> , Samuli Honkapuro

Session PS1B		Monday June 10, 14:00 -15:30	
Chair		Margarita Matias Robaina, University of Aveiro	Room: D113
Session	Paper ID	Title	Author(s)
PS1B.1	364	Energy security in the European Union – main determinants	Maria Beatriz Pereira, Susana Silva, <u>Margarita Matias Robaina</u>
PS1B.2	501	Carbon dioxide emissions of transport sector transformation pathways considering CO2 emission budget allocation approaches	<u>Niklas Wulff</u> , Andreas Meurer, Hans Christian Gils, Patrick Jochem
PS1B.3	382	EU ETS Impact on Companies Performance in Portugal: A Sector Analysis	Mara Madaleno, <u>Margarita Matias Robaina</u> , Mónica Meireles, Pablo Silva
PS1B.4	368	Investigating the Potential of Balancing Reserve Sharing in Central Europe	<u>Claire Maria Adriana Lambriex</u> , Maria Dietz, Albert Moser
PS1B.5	332	How to decarbonize European heavy-duty road transport by 2050	Behrang Shirizadeh, <u>Aurélien Ailleret</u> , Johannes Trüby, Torben Gehring, Bjoern Mais, Sezin Maden, Julian Theis
PS1B.6	204	Multi-Energy Systems and Sector Coupling through participation in Multi-Markets	<u>Edoardo Corsetti</u> , Alberto Vannoni

Session PS1C		Monday June 10, 14:00 -15:30	
Chair		Tuomas Vanhanen, Tampere University	Room: D114
Session	Paper ID	Title	Author(s)
PS1C.1	414	Are You Flexible Enough? The Impact of Energy Literacy and Environmental Values on Flexibility Provision	<u>Laura Andolfi</u> , Hanna Marxen, Muriel Frank
PS1C.2	421	Preferred Configurations of Renewable Energy Communities: Insights from In-Depth Interviews	<u>Ewa Neska</u> , Anna Kowalska-Pyzalska, Maksymilian Bielecki
PS1C.3	428	Economics of Public Charging Stations in Solar–Covered Parking Lots under the German GHG Quota	<u>Jonas Bannert</u> , Jens-Eric von Düsterlho, Sebastian Timmerberg
PS1C.4	447	Renewable Energy Challenges and Market Dynamics in a Renewables Dominated Power System: The Case of The German Power System	<u>Anas Abuzayed</u> , Mario Liebensteiner, Niklas Hartmann
PS1C.5	457	Energy allocation and settlement in collective self-consumption	<u>João Mello</u> , Luís Rodrigues, José Villar, João Saraiva
PS1C.6	470	Energy Policy Integration for Sector Coupling: a scoping review	<u>Tuomas Vanhanen</u> , Minna Hanhijärvi
PS1C.7	419	Analysis of the Portuguese and Spanish NECPs using the CEVESA MIBEL market model	<u>André Rodrigues de Oliveira</u> , José Villar Collado, Salvador Doménech Martínez, João Abel Peças Lopes, João Tomé Saraiva, Fco. Alberto Campos

Session PS1D			Monday June 10, 14:00 -15:30
Chair		Thorsten Weiskopf, Karlsruhe Institute of Technology	Room: D104
Session	Paper ID	Title	Author(s)
PS1D.1	488	Explainable Deep Reinforcement Learning for Multi-Agent Electricity Market Simulations	<u>Kim K. Miskiw</u> , Philipp Staudt
PS1D.2	349	An Agent Based Model applied to a Local Energy Market (LEM) Considering Demand Response (DR) and Its Interaction with the Wholesale Market (WSM)	<u>António Santos</u> , João Tomé Saraiva
PS1D.3	490	Impacts of climate change on the European energy market	<u>Thorsten Weiskopf</u> , Eric Jahnke, Anthony Britto, Max Kleinebrahm
PS1D.4	372	Know your tools - a comparison of open-source energy market simulation models	<u>Florian Maurer</u> , Felix Nitsch, Johannes Kochems, Christoph Schimeczek, Volker Sander, Sebastian Lehnhoff
PS1D.5	489	Do Block Orders Matter? Impact of Regular Block and Linked Orders on Electricity Market Simulation Outcomes	Johanna Adams, <u>Nick Harder</u> , Anke Weidlich
PS1D.6	436	Congestion Management in European Electricity Systems through Aggregators and Local Flexibility Markets: A Systematic Literature Review	<u>Rawan Ahmad Akkouch</u> , Sergio Potenciano Menci, Ivan Pavic
PS1D.7	440	Unlocking flexibility for congestion management with redispatch bids: Requirements for a new bid structure	<u>Swasti R. Khuntia</u> , Raymond Smeets

Session PS1E			Monday June 10, 14:00 -15:30
Chair		Mahmoud Fotuhi-Firuzabad, Sharif University of Technology	Room: D119
Session	Paper ID	Title	Author(s)
PS1E.1	348	Security-Constrained Energy and Flexibility Bidding in Power Distribution Networks	<u>Niloofar Pourghaderi</u> , <u>Mahmoud Fotuhi-Firuzabad</u> , Payman Dehghanian, Fei Wang, Milad Kabirifar, Moein Moeini Aghataei
PS1E.2	380	Price Clearing Alternatives for the Day-Ahead Electricity Markets to Balance Consumers and Producers Outcomes	Bruno Diogo, <u>Jorge Sousa</u> , João Lagarto
PS1E.3	363	Pricing Mechanisms' Impact on Welfare Distribution in Energy Communities with Energy Storage	<u>Marthe Fogstad Dyrge</u> , Kjersti Berg, Sigurd Bjarghov, Umit Cali
PS1E.4	395	A novel order type for storage units in day-ahead electricity auctions	<u>Dávid Csercsik</u> , Dániel Divényi, Ádám Sleisz, Péter Grabner, Péter Sörös
PS1E.5	477	Efficient Dispatch in Cross-Border Balancing Platforms: Elastic Demand through Parametric Cost Function Approximation	<u>Jacques Cartuyvels</u> , Gilles Bertrand, Anthony Papavasiliou
PS1E.6	509	Strategic Bidding Zone Configuration for Enhanced Grid Efficiency: A Case Study of Germany's Electricity Market	<u>Dimitrios Glynos</u> , Thorsten Weiskopf, Lisa Lorenz, Lucas De la Fuente
PS1E.7	336	Optimal State of Charge Control of EV Batteries within Energy Community Considering Cost Minimization and Environmental Impact	<u>Nemanja Mišljenović</u> , Goran Knežević, Matej Žnidarec, Danijel Topić

Session PS2A			Monday June 10, 16:00 -17:30
Chair		Ivan Pavic, University of Luxembourg	Room: D119
Session	Paper ID	Title	Author(s)
PS2A.1	401	Assessing the Contribution of Flexibility to System Adequacy in a Pan-European Market	<u>Izabella Faifer</u> , Dario Siface, Roberto Calisti, Diego Cirio
PS2A.2	405	Enhancing Retail Flexibility Bidding in European Electricity Markets through Bid Conversion	<u>Max Harst</u> , Johannes Knörr
PS2A.3	383	Virtual Batteries Business Models for Energy Suppliers	Isaias Gomes, <u>Jose Villar</u> , João Sousa, Alexandre Lucas
PS2A.4	384	Benefits of sharing and exchange for the procurement of aFRR by Transmission System Operators using a chance-constrained approach	Damien Bouvier, Viktor Terrier, <u>Nathalie Grisey</u>
PS2A.5	389	GLocalFlex, New Flexibility Solutions and Services. Cross-Pilot Overarching Business Use Cases.	Carlos Madina, Ines Gomez-Arriola, Maider Santos-Mugica, <u>Amaia Gonzalez-Garrido</u> , Pirkko Kuusela, Arttu Tamminen, Stephan Mehnert
PS2A.6	387	Energy and Energy Communities Business Models for a Sustainable Agrifood Sector	Fabio Dias Cruz, <u>A. Sérgio Faria</u> , Armando Moreno, João Mello, André Garcia, Isabelle Andrade, José Villar
PS2A.7	379	Exploring the Effectiveness of the Integrated European Balancing Markets in Encouraging Demand Response Engagement	<u>Estibalitz Ruiz Irusta</u> , Christine van Stiphoudt, Ivan Pavić

Session PS2B			Monday June 10, 16:00 -17:30
Chair		Araavind Sridhar, LUT University	Room: D103
Session	Paper ID	Title	Author(s)
PS2B.1	478	Novel multimodal data for enhanced electricity spot price forecasting using a CNN-LSTM ensemble learning model for the Japan Electric Power Exchange (JEPX) spot market	<u>Ziyang Wang</u> , Masahiro Mae, Ryuji Matsuhashi
PS2B.2	346	Forecast or nowcast to predict electricity prices? The role of open data	<u>Araavind Sridhar</u> , Markku Karhunen, Samuli Honkapuro, Fredy Ruiz
PS2B.3	487	Meta-Forecasting for Solar Power Generation: Algorithm-Based Swarm Intelligence	<u>Souhir Ben Amor</u> , Prashanth Akkal Devi, Felix Müsgens
PS2B.4	359	Electricity Price Forecasting with Principal Component-Guided Sparse Regression	<u>Takuji Matsumoto</u> , Florian Ziel
PS2B.5	459	Bridging Accuracy and Explainability in Electricity Price Forecasting	<u>Maria Margarida Mascarenhas</u> , Hussain Kazmi, Mikael Amelin
PS2B.6	352	A Novel Criterion of Electricity Price Forecast for Demand-side Responses Participating in the Electricity Market	<u>Sinan Cai</u> , Masahiro Mae, Ryuji Matsuhashi
PS2B.7	495	Modeling and Predicting Constraints in Nordic Flow-Based Market Using Open Data	<u>Alexey Seleznev</u> , Marina Dolmatova

Session PS2C			Monday June 10, 16:00 -17:30
Chair		Hugo Algarvio, LNEG	Room: D113
Session	Paper ID	Title	Author(s)
PS2C.1	473	The Iberian mechanism impact on the day-ahead electricity prices and the welfare transfer between inframarginal power producers and consumers	João Marianito, <u>Jorge Sousa</u> , João Lagarto
PS2C.2	442	Benefits of an efficient cross-zonal reassessment of available intraday capacities	<u>Wilhelm Schweighofer</u> , Thomas Altmann, Milan Vukasovic
PS2C.3	511	Minimum Offered Volumes in Long-Term Flow-based Allocations of Transmission Rights	Mehdi Madani, <u>Yves Langer</u> , Giancarlo Marzano, Martin Starnberger, Marcelo Torres
PS2C.4	410	A double pricing and penalties ``Separated'' imbalance settlement mechanism to incentive self balancing of market parties	<u>Hugo Algarvio</u> , António Couto, Ana Estanqueiro
PS2C.5	362	Modifying electricity price signals in Germany for supply-oriented electricity demand and economical hydrogen use in industry.	<u>Carsten Schütte</u> , Sebastian Timmerberg

Session PS2D			Monday June 10, 16:00 -17:30
Chair		Edin Lakić, University of Ljubljana	Room: D114
Session	Paper ID	Title	Author(s)
PS2D.1	330	Practical Solutions to Limit Computational Burden of UC in Island Power Systems	<u>Enrique Lobato</u> , Pedro Sánchez-Martín, Mohammad Rajabdorri, Lukas Sigrist
PS2D.2	343	Estimating Hosting Capacities and Flexibility Potential in Different European Low Voltage Networks	Chloe Fournely, Matej Pečjak, Boštjan Blažič, <u>Edin Lakić</u>
PS2D.3	354	Active Power Curtailment and Reactive Power Control in PV-Rich Low-Voltage Distribution Network	<u>Marina Dubravac</u> , Danijel Topić, Krešimir Fekete, Zvonimir Šimić, Rene Prenc, Michele Rojnić
PS2D.4	376	Methods of obtaining and utilising reactive power used by selected TSOs in Europe and Australia and ISOs in the USA	<u>Michal Jan Sabat</u> , Piotr Sidor
PS2D.5	504	Risk Adverse Optimization on Transmission Expansion Planning considering climate Change and Extreme Weather Events – The Texas Case	<u>Luiz Eduardo Oliveira</u> , João Tomé Saraiva, Phillipe Vilaça Gomes
PS2D.6	347	Stochastic Optimization Framework for Microgrid Operation in Energy Communities: Ensuring Reliable Power Supply with Distributed Energy Resources	Mahsa Omri, Mohammad Jooshaki, <u>Mahmoud Fotuhi-Firuzabad</u> , Payman Dehghanian, Fei Wang
PS2D.7	338	Stochastic optimization for unit commitment applied to the security of supply	<u>Jonathan Dumas</u>

Session PS2E			Monday June 10, 16:00 -17:30
Chair		Hans Auer, Technische Universität Wien	Room: D104
Session	Paper ID	Title	Author(s)
PS2E.1	335	Learning in Stackelberg Games with Application to Strategic Bidding in the Electricity Market	<u>Francesco Morri</u> , H��l��ne Le Cadre, Pierre Gruet, Luce Brotcorne
PS2E.2	374	A cooperative game-theoretic approach for the payment method of virtual power plant units with heterogeneous reliability	<u>D��vid Csercsik</u> , Anna Fegy��
PS2E.3	448	Optimizing spatially dispersed power-to-heat flexibility for balancing power bid activation in congested bidding zones	<u>Sebastian Zwickl-Bernhard</u> , Hans Auer
PS2E.4	388	Determination of Locational Marginal Redispatch Prices of a Mixed-Integer Congestion Management Problem	Andreas Blank, <u>Jana Einsiedler</u> , Albert Moser
PS2E.5	510	Electric Vehicle Charging Implications on Distribution Locational Marginal Prices	<u>Sinem Kol</u> , Gokturk Poyrazoglu
PS2E.6	426	Strategic Plays in Electricity Markets: Exploring Gaming Opportunities for demand under Different Settlement Rules	Shilpa Bindu, Luis Olmos, <u>Jos�� Pablo Chaves-��vila</u>
PS2E.7	344	A Comparative Analysis of Cournot Equilibrium and Perfect Competition Models for Electricity and Hydrogen Markets Integration	<u>Luis Alberto Herrero Rozas</u> , Alberto Campos, Jos�� Villar

Session PS3A			Tuesday June 11, 14:00 -15:30
Chair		Nikolaos Chrysanthopoulos, Imperial College London	Room: D103
Session	Paper ID	Title	Author(s)
PS3A.1	390	Comparative study of different pricing algorithms on P2P market-based multicarrier energy communities: A case study in Bilbao	<u>Ander Zubiria</u> , Joseba Jimeno, Nerea Ruiz
PS3B.2	508	Local Energy Markets: Structural elements and the effects of upscaling	<u>Nikolaos Chrysanthopoulos</u> , Yuen Ying Chan, Goran Strbac
PS3A.3	357	Decarbonization scenarios assessment under local renewable energy communities: Ispaster Municipality	<u>Nicolas Pardo Garcia</u>
PS3A.4	446	Counter-intuitive Flows in European Day-Ahead Electricity Market Design: A Case Study of Slovenia	<u>Milo�� Tomi��</u>
PS3A.5	411	A methodology for dynamic procurement of secondary reserve capacity in power systems with significant vRES penetrations	<u>Hugo Algarvio</u> , Ant��nio Couto, Ana Estanqueiro
PS3A.6	412	Reduction of the market splitting occurrences: A Dynamic Line Rating approach for the 2030 Iberian day-ahead market scenarios	<u>Hugo Algarvio</u> , Ant��nio Couto, Ana Estanqueiro, Rui Carvalho, Gabriel Santos, Ricardo Faia, Pedro Faria, Zita Vale
PS3A.7	333	Review of Energy Communities in Agriculture	<u>Mikko Nykyri</u> , Salla Annala, Samuli Honkapuro, Pertti Silventoinen

Session PS3B			Tuesday June 11, 14:00 -15:30
Chair		Knud Sinding, University of Southern Denmark	Room: D104
Session	Paper ID	Title	Author(s)
PS3B.1	493	Biomass Power Plants in Bosnia and Herzegovina: Potential, Challenges, and Economic Analysis	<u>Selma Hanjalic</u> , Vahid Helac, Nedim Hasanbegovic, Merisa Hanjalic
PS3B.2	355	Congestion management based on power-to-gas – Opportunities and challenges in European electricity markets	Johannes Predel, Bobby Xiong, Pedro Crespo del Granado, Ruud Egging-Bratseth, <u>Hongyu Zhang</u>
PS3B.3	397	Understanding the significance of biodiversity in onshore Wind Turbine Projects: Evidence from Denmark	Matilde Sehested Langeland, Yingkui Yang, <u>Knud Sinding</u>
PS3B.4	481	The regionalization tool: mapping future Belgian energy needs by coupling a long-term investment planning model with a national industry database	<u>Enya Lenaerts</u> , Negar Namazifard, Nienke Dhondt, Juan Correa Laguna, Pieter Valkering
PS3B.5	449	Applying spatial decomposition in energy system models	<u>Lene Marie Grübler</u> , Felix Müsgens
PS3B.6	361	Practical Experiences from Application of a Comprehensive Simulator for Pumped Storage Hydropower Investment Decisions on a Real Investment Case	<u>Kristine Schüller</u> , Per Aaslid, Kaspar Vereide, Hans Ivar Skjellbred
PS3B.7	402	Pilot study on residential measures against unpredictable outages with batteries and photovoltaics considering necessary loads	<u>Masashi Matsubara</u> , Masahiro Mae, Ryuji Matsuhashi

Session PS3C			Tuesday June 11, 14:00 -15:30
Chair		Francisco Lobo, FEUP	Room: D113
Session	Paper ID	Title	Author(s)
PS3C.1	514	Comparative Analysis of Revenue Generation from Different Photovoltaic Panel Orientations in Wholesale Electricity Markets	<u>Nida Riaz</u> , Sami Repo
PS3C.2	366	Using ProDRisk–SHOP Simulator for Investment Decisions of Solar and Hydro Hybridization	Jiehong Kong, <u>Stefan Rex</u>
PS3C.3	409	Beyond price – Assessing the impact of non-price criteria in solar photovoltaic auctions	<u>Michael Stecher</u> , Vasilios Anatalitis, Julia Panny
PS3C.4	429	Renewable Energy Bidding Strategy in Multiple Markets Considering Uncertainty in Generation and Price	<u>Kazuki Katsurada</u> , Yu Fujimoto, Akihisa Kaneko, Yasuhiro Hayashi, Shinichiro Minotsu, Ryuichi Shibata
PS3C.5	434	Assessing Operational Behaviour of a Hybrid Hydro-Solar Power Plant Providing Security of Supply Under Weather Uncertainty in the Nordics	<u>Benjamin Trondsen</u> , Oscar Steen, Alexandra Jane Sheppard
PS3C.6	360	Evaluation of the Economic Feasibility of Price Arbitrage Operations in the Iberian Electricity Market	<u>Francisco Lobo</u> , João Tomé Saraiva
PS3C.7	507	Optimizing Local Markets for Ancillary Services Procurement: A Case Study on Flexibility Markets in Italy	Alberto Vannoni, Carmine Rodio, <u>Edoardo Corsetti</u>

Session PS3D			Tuesday June 11, 14:00 -15:30
Chair		Nuno Soares Fonseca, INESC TEC	Room: D114
Session	Paper ID	Title	Author(s)
PS3D.1	438	Handling DER Market Participation: Market Redesign vs Network Augmentation	<u>Nuno Soares Fonseca</u> , Filipe Soares, José Iria
PS3D.2	454	Stochastic vs Monte Carlo-based bidding strategy for sequential electricity markets	<u>Matteo Spiller</u> , Filippo Bovera, Giuliano Rancilio, Marco Merlo
PS3D.3	461	(When) Should We Go for a 5-minute Temporal Granularity in European Intraday Markets?	<u>Bente ter Borg</u> , Longjian Piao, Elisa Papadis, Christopher Koch, Christian Linnemann, Christoph Neumann, Johannes Henkel
PS3D.4	462	Empowering Energy Communities by A User-Centric Model for Self-Managed Congestion via Local P2P and Flexibility Markets	<u>Fernando Garcia</u> , Sebastián San Martín, Josh Eichman
PS3D.5	466	Impact of Price Cap Policy on Concentrating Solar Power Plant Revenue in Electricity Markets	<u>María Berbey-Burgos</u> , Darío Pardillos-Pobo, Marta Laporte-Azcué, Pedro Ángel González-Gómez, Domingo Santana
PS3D.6	474	Willingness to Accept Direct Load Control within Socio-Economic Groups	<u>Constanze Sophie Liepold</u> , Reinhard Madlener
PS3D.7	494	Techno-Economic Analysis of Future Process-Specific Demand Response Potentials in European Energy-Intensive Industries	<u>Leandra Sophia Scharnhorst</u> , Xinyi Xie, Max Kleinebrahm, Wolf Fichtner

Session PS3E			Tuesday June 11, 14:00 -15:30
Chair		Michael Haendel, Fraunhofer ISI	Room: D119
Session	Paper ID	Title	Author(s)
PS3E.1	497	Impact of Dynamic Tariffs on Local Flexible Loads and Integration of Local Photovoltaic Power	<u>Michael Haendel</u>
PS3E.2	498	Pumped Hydropower Storage Balancing High Shares of Variable Renewable Generation in Europe	<u>Erik Seeger Bjørnerem</u> , Christian Naversen, Anders Arvesen, Magnus Korpås
PS3E.3	502	Economic Assessment of Battery Energy Storage for Frequency Regulation in the Nordic Power Systems	<u>Meryem Ahouad</u> , Ahmed Sunjaq, Evelina Wikner, Torbjörn Thiringer
PS3E.4	479	The Potentials of Energy Communities in Supporting Renewable Integration to the Distribution Grid	<u>Beata Polgari</u>
PS3E.5	375	Economic Opportunities of Power Curtailment and Peak Shaving on Residential PV-BESS Systems	<u>Joel Alpizar-Castilloj</u> , Koen Linders, Darío Slaifstein, Laura Ramirez-Elizondo, Pavol Bauer
PS3E.6	378	Addressing Premature Reinforcement of Low- Voltage Distribution Infrastructure with Peak- Shaving and Power Curtailment: a Business Model	<u>Joel Alpizar-Castillo</u> , Laura Ramirez-Elizondo, Pavol Bauer
PS3E.7	392	Analyses of the outcomes of the Intraday Continuous Trading Market in Europe: the French case	<u>Andrea Alberizzi</u>

Session PS4A			Tuesday June 11, 16:00 -17:30
Chair		Andrei Morch, SINTEF Energy Resarch	Room: D103
Session	Paper ID	Title	Author(s)
PS4A.1	485	TSO-DSO Coordination under Wind and Solar Power Uncertainty: A Two-Stage Stochastic Programming Approach	Siri Bjerland, Pedro Crespo del Granado, Hanne Grøttum, <u>Ehsan Nokandi</u>
PS4A.2	418	Flexibility market solution based on autonomous activation of P-U control characteristics in roof-top PV inverters	<u>Ágnes Závecz</u> , András János Horváth, János Csátár, Péter Sörös, Dániel Divényi, Dávid Raisz
PS4A.3	453	Electrification of airports and air transport: Airports becoming integrated energy systems.	<u>Andrei Morch</u> , Lorenzo Laveneziana, Ingvald Erga, Gabriele Restaldo, Mauro Odisio, David Chiaramonti
PS4A.4	486	Model-Based Analysis of Sustainable Energy Transition: A Case Study of Portugal's Regional Wind and Solar Power Generation	André Oliveira, Salvador Doménech Martínez, José Villar Collado, Max Alberto López-Maciel, <u>Fátima Lima</u> , Edimar Ramalho, Margarita Robaina, Mara Madaleno, Marta Ferreira Dias, Mónica Meireles
PS4A.5	463	Coping with Risk Factors in Energy System Transformations – Climate Change Impacts on Nuclear Power Plant Availability in Europe	<u>Richard Schmitz</u> , Felix Frischmuth, Martin Braun, Philipp Härtel
PS4A.6	358	Economic Prospects of Flexible Nuclear Energy Operation Under Different Market Conditions	Anders Olai Grotle, Simen Dyrkolbotn, <u>Martin Nørdland Hjelmeland</u> , Jonas Kristiansen Nørdland, Magnus Korpås
PS4A.7	350	Influence of Nuclear Investment Costs and Baseload Demand on the Optimal Energy Mix	<u>Martin Hjelmeland</u> , Jonas Kristiansen Nørdland, Magnus Korpås

Session PS4B			Tuesday June 11, 16:00 -17:30
Chair		Stella Oberle, Fraunhofer IEG	Room: D119
Session	Paper ID	Title	Author(s)
PS4B.1	353	Green Hydrogen for the Energy Transition in Germany - Potentials, Limits, and Priorities	<u>Felix Doucet</u> , Marina Blohm, Jens-Eric von Düsterlho, Jonas Bannert
PS4B.2	369	Maximizing Value in Power-to-Hydrogen Plants within Eco-Industrial Clusters through Internal Energy Market	<u>Sina Ghaemi</u> , Amjad Anvari-Moghaddam
PS4B.3	370	Self-Scheduling for a Hydrogen-Based Virtual Power Plant in Day-Ahead Energy and Reserve Electricity Markets	<u>Erik Francisco Alvarez Quispe</u> , Pedro Sánchez Martín, Andrés Ramos Galán
PS4B.4	420	Development of a Global Market Model for Renewable Hydrogen	<u>Philipp Ortmann</u> , Stefan Reuter, Stefan Strömer
PS4B.5	424	Modelling the Transformation of Hydrogen Ecosystems via Geo-Techno-Economic Optimization	<u>Friedrich Mender</u> , Nikolas Müller, Christopher Voglstätter, Tom Smolinka, Christopher Hebling, Barbara Koch
PS4B.6	425	Investigating the hydrogen demand curve in road transport	<u>Lin Zheng</u> , Johannes Eckstein, Bastian Weißenburger
PS4B.7	460	How feasible is the transition to a hydrogen distribution network?	<u>Stella Oberle</u> , Helen Klopstein

Session PS4C			Tuesday June 11, 16:00 -17:30
Chair		Manish Khanra, Fraunhofer Institute for Systems and Innovation Research	Room: D114
Session	Paper ID	Title	Author(s)
PS4C.1	431	Hydrogen-Powered Agriculture: Cost Analysis of Hydrogen Logistics in Rural Areas	<u>Tim Wawer</u> , Andreas Stroink
PS4C.2	464	Green hydrogen in the chemical industry - Key factors and cost competitiveness	<u>Lucas Jürgens</u> , Hans Schäfers
PS4C.3	471	Economic Evaluation of Electricity and Hydrogen-Based Steel Production Pathways: Leveraging Market Dynamics and Grid Congestion Mitigation through Demand Side Flexibility	<u>Manish Khanra</u> , Parag Patil, Marian Klobasa, Daniel Scholz
PS4C.4	505	Economic viability analysis of a Renewable Energy System for Green Hydrogen and Ammonia Production	<u>Pedro Félix</u> , Filipe Tadeu Oliveira, Filipe Joel Soares
PS4C.5	404	Building Flexibility Bidding Curves for Energy Communities	<u>Luís Rodrigues</u> , João Mello, Kamalanathan Ganesan, Ricardo Silva, José Villar
PS4C.6	386	Review of commercial flexibility products and market platforms	<u>Luís Rodrigues</u> , Kamalanathan Ganesan, Fábio Retorta, Fábio Coelho, João Mello, José Villar, Ricardo Bessa
PS4C.7	385	GDBN, a Customer-centric Digital Platform to Support the Value Chain of Flexibility Provision	<u>Fábio Coelho</u> , Luís Rodrigues, João Mello, José Villar, Ricardo J. Bessa

Session PS4D			Tuesday June 11, 16:00 -17:30
Chair		Sinem Kol, Özyeğin University	Room: D113
Session	Paper ID	Title	Author(s)
PS4D.1	422	Shifted or additional charging of electric vehicles? The effect of smart charging on German prosumers	Laura Selgrad, <u>Anne Kesselring</u> , Sabine Pelka, Patrick Plötz
PS4D.2	423	Shared Batteries Business Models for Energy Communities	<u>Armando Miguel Moreno</u> , José Villar, Ricardo Silva, Pedro Macedo, Ricardo Bessa, Susana Bayo
PS4D.3	455	Implementing the Clean Energy Package: options for balance responsibility for active consumers in the Netherlands	<u>Aliene van der Veen</u> , Eva Winters, George Trienekes, Koen Kok
PS4D.4	398	Techno-Economic Evaluation of a Battery-as-a-Service Business Model in an Energy Community	<u>Nerea Goitia-Zabaleta</u> , Ane Feijoo-Arostegui, Aitor Milo, Haizea Gaztañaga, Elvira Fernandez
PS4D.5	413	A Cost Analysis of Integrating Industrial Assets in the Redispatch Process in Austria	Sophie Knoettner, <u>Regina Hemm</u> , Stefan Stroemer, Sarah Fanta, Tara Esterl
PS4D.6	435	Longitudinal Study of Dispatchable Power Units Trading Strategies on Electricity Spot Markets in Italy	<u>Guillaume Koechlin</u> , Filippo Bovera, Piercesare Secchi
PS4D.7	400	Edge-Cloud based EMS for distributed ESS integration in Smart Grids	<u>Ane Feijoo-Arostegui</u> , Adrián Orive, Jon Imaz, Haizea Gaztañaga, Marco Gonzalez-Hierro, Ander Goikoetxea

Session PS4E			Tuesday June 11, 16:00 -17:30
Chair		Barbara Breitschopf, Fraunhofer ISI	Room: D104
Session	Paper ID	Title	Author(s)
PS4E.1	506	Practical Demand Side Management and Demand Response in Large Scale Buildings with Multiple Case Studies	Ahmet Kose, Aleksei Tepljakov, <u>Eduard Petlenkov</u> , Ivan Suhkanov
PS4E.2	450	Dynamic Pricing and System Optimization of Integrated Energy System in Industrial Parks Based on Carbon Tax	<u>Yuanyuan Deng</u> , Masahiro Mae, Ryuji Matsuhashi
PS4E.3	467	Tangible overall economic benefits with decentralised virtual energy communities	<u>Antti, Kalle-Mikael Pesonen</u> , Juha Korpijärvi, Jari Kortelainen
PS4E.4	475	Comparison of Contracts in Vehicle-to-Load to Benefit Both Retailers and Electric Bus Operators	<u>Masahiro Mae</u> , Keisuke Abe, Ryuji Matsuhashi
PS4E.5	500	Incumbent Perspective to the Sustainability Transitions: District Heating Companies and the Rise of Energy Communities	<u>Marja Vilkkö</u> , Tuomas Vanhanen, Jussi Valta, Pertti Järventausta
PS4E.6	371	Comparative Study of Sustainable Heating Decision-Making: Insights from the Residential and Industrial Sectors	<u>Barbara Breitschopf</u>

Session PSSA			Wednesday June 12, 11:30 -13:00
Chair		Istemi Berk, Dokuz Eylul University	Room: D104
Session	Paper ID	Title	Author(s)
PSSA.1	345	Can success be planned? - China's path to technology leadership in green electricity and hydrogen and its implications for Europe and the United States	<u>Viktor Paul Müller</u> , Lin Zheng
PSSA.2	351	Energy Management in Organized Industrial Zones: Promoting the Green Energy Transition in Turkish Manufacturing Industry	Volkan Ş. Ediger, <u>Istemi Berk</u> , Fehmi Görkem Üçtuğ, Mehmet Ali Küçüker, Ali İnan
PSSA.3	403	About pipes and people: Analyzing factors for the adoption of district heating	<u>Anna Billerbeck</u> , Barbara Breitschopf, Sabine Preuß
PSSA.4	407	Carbon-based e-fuels - a sustainable option for decarbonization?	<u>Viktor Paul Müller</u> , Matia Riemer, Johannes Eckstein
PSSA.5	408	Market Designs, Actor Decisions and Market values: Assessment of remuneration mechanisms for future electricity system scenarios	Johannes Kochems, Evelyn Sperber, Kristina Nienhaus, <u>Christoph Schimeczek</u>
PSSA.6	393	The role of thermal energy storage in market integration of variable renewable electricity - A German case study	<u>Alexander Burkhardt</u> , Anna Billerbeck, Christiane Bernath, Pia Manz, Gerda Deac, Anne Held

Session PS5B			Wednesday June 12, 11:30 -13:00
Chair		Zeynep Bektas, Kadir Has University	Room: D114
Session	Paper ID	Title	Author(s)
PS5B.1	483	Impact of COVID-19 and Ukraine-Russia Conflict on the National Energy and Climate Strategies of Portugal and Spain	Max Alberto López-Maciél, Edimar Ramalho, Fátima Lima, Mara Madaleno, José Villar Collado, Marta Ferreira Dias, Mónica Meireles, André Oliveira, <u>Margarita Robaina</u>
PS5B.2	484	From Port to Policy: Studying Societal Impacts of Seaport Decarbonization	<u>Gonçalo Moura Lestre</u> , Margarita Robaina, João Matias, Miguel Oliveira
PS5B.3	513	Future energy mix – emission-free or achievable? Discussion on Poland’s target policy	<u>Michal Klos</u> , Maksymilian Grab
PS5B.4	341	Evaluation of Government Actions Discouraging Housing Energy Retrofit in the UK: A Critical Review	<u>Chamara Panakaduwa</u> , Paul Coates, Mustapha Munir
PS5B.5	331	Clean hydrogen economy outlook: green is the future	Behrang Shirizadeh, <u>Aurélien Ailleret</u> , Augustin Guillon, Emmanuel Bovari, Johannes Trüby
PS5B.6	452	De-risking transformative Technology operation: Applying the case of the German CCfD schem	<u>Robin Blömer</u> , Johannes Eckstein

Session PS5C			Wednesday June 12, 11:30 -13:00
Chair		Valentin Ilea, Politecnico di Milano	Room: D113
Session	Paper ID	Title	Author(s)
PS5C.1	468	A Sensitivity-Based Linear Model for Optimal Dispatch of Local Flexibility	<u>Valentin Ilea</u> , Riccardo Nebuloni, Cristian Bovo, Carlo Arrigoni, Filippo Re, Roberto Bonera
PS5C.2	445	Generalize the Bidding Strategy of Distributed Energy Resources for the Balancing Market	<u>Ryunosuke Imai</u> , Yutaka Iino, Yasuhiro Hayashi, Ayumu Miyasawa, Kojiro Nishioka
PS5C.3	444	Techno-economic optimization of services stacking for a battery participating to electricity spot markets	<u>Andrea Scrocca</u> , Filippo Bovera, Matteo Zatti, Giuliano Rancilio, Maurizio Delfanti
PS5C.4	441	Stochastic planning of energy system transformation pathways under uncertain industry demands	Felix Frischmuth, <u>Richard Schmitz</u> , Martin Braun, Philipp Härtel
PS5C.5	432	Wind-Battery Pool Optimal Bidding in German Energy and Secondary Control Reserve Markets	<u>Gianluca Mancini</u> , Stefanos Delikaraoglou, Eleni Stai, Ognjen Stanojev, Gabriela Hug
PS5C.6	430	Comparison of different hydropower equivalent formulations to improve high and low price performance	<u>Uli Max Rahmlow</u> , Mikael Amelin

Session PSSD			Wednesday June 12, 11:30 -13:00
Chair		Nikolaos Koltsaklis, Sabanci University	Room: D103
Session	Paper ID	Title	Author(s)
PSSD.1	427	Endogenous technology learning in TEMOA-Europe	<u>Daniele Lerede</u> , Davide Segantini, Valeria Di Cosmo, Laura Savoldi
PSSD.2	394	Timing the Electricity Markets in Hydropower Systems with Natural Time Delay	Per Aaslid, <u>Christian Naversen</u>
PSSD.3	373	Financial Economic Relief using Grid-Scale Battery Storage Systems in Future Electricity Markets	<u>Julius Beranek</u> , Sebastian Zietlow, Thorsten Weiskopf, Armin Ardone, Wolf Fichtner
PSSD.4	512	Market-based Generation Expansion Planning	<u>Nikolaos Koltsaklis</u>
PSSD.5	396	Users' willingness to participate in V2G – A comparison between German and UK households	<u>Nora Baumgartner</u> , Niklas Klumpp, Tim Signer, Zia Wadud, Wolf Fichtner

Session PS5E			Wednesday June 12, 11:30 -13:00
Chair		André Rodrigues Oliveira, INESC TEC	Room: D119
Session	Paper ID	Title	Author(s)
PS5E.1	472	Impact of Load Flexibility on Photovoltaic Hosting Capacity in Distribution Networks	<u>Goran Veljanovski</u> , Pande Popovski, Katerina Bilbiloska, Aleksandra Krkoleva Mateska, Metodija Atanasovski
PS5E.2	439	Comparing methods for sizing and operating heat pumps in low-voltage feeders	<u>Celia Masternak</u> , Simon Meunier, Vincent Reinbold, Dirk Saelens, Claude Marchand
PS5E.3	399	Neural Network Power Flow Approach to Detect Overload and Voltage Anomalies in Low-Voltage Unbalanced Networks, Agnostic of Network Topology	<u>Amaia González-Garrido</u> , Jon Ander Rivera, Juan Florez Zaballa, Jose Emilio Rodríguez-Seco, Eugenio Perea
PS5E.4	443	Comparison of SpineOpt and PyPSA in Hydro Power System Modelling	<u>Yi Liu</u> , Mikael Amelin, Topi Rasku
PS5E.5	416	Decision Aid Tool to Mitigate Quality of Service Asymmetries in Distribution Networks	Pedro Macedo, José Nuno Fidalgo, <u>André Rodrigues Oliveira</u>
PS5E.6	339	Deep Generative Methods for Producing Forecast Trajectories in Power Systems	Nathan Weill, <u>Jonathan Dumas</u>



th INTERNATIONAL CONFERENCE ON THE
O EUROPEAN ENERGY MARKET
N 10 - 12 June 2024, Istanbul, Türkiye

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SPECIAL SESSIONS

EEM24 Conference will have three special sessions on Wednesday:



GeoSmart

June 12th, Wednesday 9:30-11:00, D312

The GeoSmart project addresses the strategic flexibility required from European geothermal installations as they become significant energy sources over the next 20-30 years. Geothermal will need to exhibit a high level of fast flexibility if it is to function as a "dispatchable" (controllable) energy source in future, in combination with the lowest-carbon renewable energy sources - solar thermal and wind power - whose supply of energy is sporadic in its delivery.

The more flexibility we can introduce into the geothermal sector, to cover both the fluctuations within a day and the seasonal swings in heat to power ratio, the more RES integration it can support, achieving policy objectives towards energy sector decarbonisation, energy security and reduced gas import burden. In the context of the GeoSmart project we optimise and demonstrate innovations to improve the flexibility and efficiency of geothermal heat and power

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- *Energy storage and power block management innovations to provide daily flexibility for "dispatchability" - to ramp up and down to the extent and speed required to fill the gaps between the sporadic and "duck curve" demand curves and the supply curves from solar and wind.*
 - *Integration of more flexible ORC systems that can cope with variations in needs in the electricity markets*
 - *Innovative methods to allow a CHP supplier to extract more heat from the post-generator ("waste" heat) brine outflows when required for increased heating supply during colder weather, using aquifer heat storage/re-cooling, and by removing the scale-formation constraints to cooling in high-silicate brines.*

For more information: <https://www.geosmartproject.eu/>



open ENTRANCE

June 12th, Wednesday 9:30-11:00, D312

Open ENTRANCE (Open ENERGY TRansition ANalyses for a low-Carbon Economy), addresses the development, use and dissemination of an open, transparent and integrated modelling platform for assessing low-carbon transition pathways that cuts across the boundaries of established fields of knowledge. The platform populated with a suite of modelling tools and data selected to cover the multiple dimensions of the energy transition. This facilitates and improves the dialogue between researchers, policy makers and industry when investigating key questions linked to the energy transition:

-
- *What are the possible pathways towards a low carbon-emission energy system,*
 - *What key environmental, social, technical and economic factors may affect the energy system transition and how they should be addressed holistically,*
 - *What will be the main consequences of such pathways in terms of energy mix, environmental and economic impacts.*
-

For more information: <https://openentrance.eu/>



S-PARCS

June 12th, Wednesday 9:30-11:00, D312

S-PARCS aims at moving from a single-company energy efficient intervention approach to cooperative energy efficient solutions within the framework of industrial parks, thus enabling higher energy savings and the subsequent increase of competitiveness of the companies located in the parks. S-PARCS systematically analyses technical, economic, regulatory, legal, organisational, environmental and social barriers to energy-efficient park design and operation on all levels and provides innovative, market-ready solutions to overcome them. The specific objectives of S-PARCS therefore addresses the fundamental components required to implement these new and innovative concepts and to facilitate undelayed actions, to raise widespread awareness and to foster their swift replication.

In the S-PARCS project, industrial park managers, large, medium and small-scale companies, engineering consultants, innovation exploitation specialists and research organizations work together to significantly improve the energy efficiency and competitiveness of industrial parks by breaking the barriers toward energy cooperation and mutualised energy services. S-PARCS revises the paradigm of single-process or single-plant optimisation in industrial parks and puts cooperation mechanisms at the centre of its optimization approaches. S-PARCS develops and tests innovative solutions, providing instruments for turning promising concepts into real-world applications. Together with a diverse group of project supporters, the consortium creates a community of industrial players jointly aiming at new models of energy-related cooperation, while taking full account of their environmental and social responsibilities.

For more information: <https://cordis.europa.eu/project/id/785134>



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2 10 - 12 June 2024, Istanbul, Türkiye

Social programme

WELCOME COCKTAIL



June 10th, Monday, 19:00-22:00

Cocktail Prolonge: Boat Tour on Bosphorus

Meet at D-Block Entrance at 18:00 (sharp) for transport to Kabataş harbour

A cruise tour along Bosphorus is scheduled on Monday, June 10th starting at 19:00. We will sail up the Bosphorus, the waterway between Europe and Asia, passing under the suspension bridges and viewing Ottoman summer palaces, waterside mansions and modern villas which line the European and Asian coasts. The panoramic view of Istanbul by the Bosphorus at night and cocktail prolongé will both be memorable.



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GALA DINNER



Gala Dinner

June 11th, Tuesday 19:00-23:00

Legacy Ottoman Hotel

Take the T5 Tram at Cibali stop and get off at Eminönü stop (all contactless credit cards OR [IstanbulKart app](#) works on public transport), see the [map for directions](#)

OR take a 20 min. walk by the tramline to Eminönü and then to the hotel.

<https://maps.app.goo.gl/VkXVsht1QuGnvwuM6>



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10 - 12 June 2024, Istanbul, Türkiye

Rezan Has Museum Tour



Rezan Has Museum

We offer free museum tour at Kadir Has University, Rezan Has Museum.

Each group is **limited to 50 people, first come first served. Please sign up at the registration desk.**

Rezan Has Museum Group I: 13:00-13:30, Monday 10, June 2024

Rezan Has Museum Group II: 13:30-14:00, Monday 10, June 2024

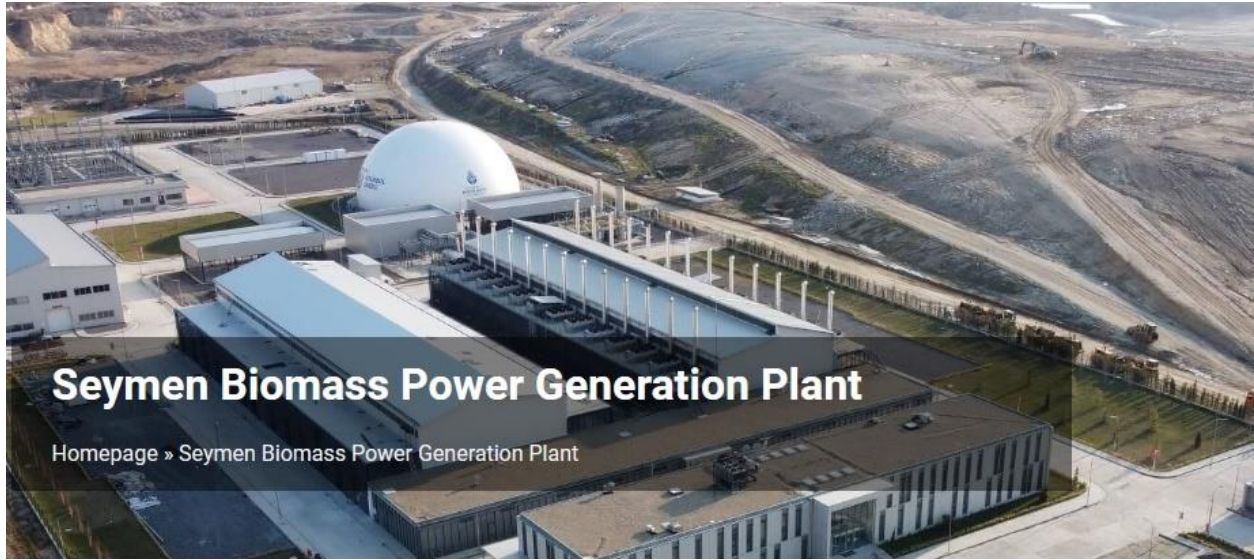
Rezan Has Museum Group III: 13:00-13:30, Tuesday 11, June 2024

Rezan Has Museum Group IV: 13:30-14:00, Tuesday 11, June 2024



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10 - 12 June 2024, Istanbul, Türkiye

Technical tour



June 12th, Wednesday, 13:15-18:00

Seymen Biomass Generation Plant at Silivri on 12 June, Wednesday, 13:30-18:00

Tour Coordinator: **Dr. Gokhan Kirkil**, Kadir Has University

Meet at D-Block Entrance around Registration Booth at 13:15 (sharp)

<https://enerji.istanbul/en/seymen-biomass-power-generation-plant/>

Other information

Email: eem24@khas.edu.tr

Address of the conference venue: Cibali Mah. Kadir Has Cad. 34083 Fatih, İstanbul

Phone number: +90 (212) 533 65 32

Internet access: Open wireless internet connection is included in your registration fee (select “KHAS-Guest”, **username:** eem24 and **password:** eem2024. EDUROAM is also available in all buildings on the campus.

Public transportation: Please note that for using public transportation in İstanbul, you will need a contactless credit card OR [İstanbulKart app](#), the transportation fares cannot be paid in cash.

Taxi: We recommend using UBER or similar services.

Time zone: Time zone currently used in Türkiye is (GMT/UTC+3).

Map:





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INTERNATIONAL CONFERENCE ON THE EUROPEAN ENERGY MARKET

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