



TradeRES

New Markets Design & Models for
100% Renewable Power Systems



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100% Renewable Power Systems

**2nd public
Workshop**

28 November 2022
13h00-17h00 CET (Brussels time)



TradeRES – Tools for the Design and Modelling of New Markets and Negotiation Mechanisms for 100% Renewable European Power System

28 November 2022, from 13:00 to 17:00 CET (Brussels time).



Research Group on Intelligent Engineering and Computing
for Advanced Innovation and Development



P.PORTO



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 864276





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13h00-17h00 CET (Brussels time)

13:00 – **Welcome and Contextualization of the Main Challenges to Ensure the Intensive, Efficient, and Secure Use of Renewables in Electricity Markets and Power Systems** | Zita Vale, *Polytechnic Institute of Porto, Portugal*

13:20 – **Challenges and market design choices for a sustainable electricity market** | L.J. (Laurens) de Vries, *Delft University of Technology, Netherlands*

13:40 – **Trading in Local Energy Market: Flexibility and Resilience** | Goran Strbac, *Imperial College London, United Kingdom*

14:00 – **Energy Communities – Research Theory and Practice** | Esther Mengelkamp, *MK consulting, Germany*

14:40 – **Break**

14:50 – **Management of Local Flexibilities in Distribution System Operation** | Hugo Morais, *Lisbon University, Portugal*

15:30 – **Impact of the Dynamic Operation of interconnection Lines in Market Splitting at MIBEL** | Ana Estanqueiro, *National Laboratory of Energy and Geology, Portugal*

15:50 – **How current market design proposals are threatening the expansion of renewables** | Silke Johandeiter, *Energy Baden-Württemberg AG, Germany*

16:10 – **Round table**

16:50 – **Closing Session**



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General Information

- During presentation, please place your questions in the chat.
- Q&A will be done after presentations in the round table.
- Workshop recording will be made available.



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13:20 – **Challenges and market design choices for a sustainable electricity market** | L.J. (Laurens) de Vries, *Delft University of Technology, Netherlands*

Prof. dr. ir. Laurens de Vries (TU Delft, Faculty of TPM) is an expert on energy sector market design and regulation and on energy systems integration. He is Full Professor of Complex Energy Transitions and the coordinator of the Energy Systems Integration Program of the European Energy Research Alliance (EERA). He is currently involved in a range of projects on topics like electricity market design for an all-renewable system (TradeRES, H2020) and modeling and designing markets for new forms of flexibility (DEMOSSES, Dutch Science Foundation). His participation in the Sustainable Energy Technology and Systems Program (2012-2020; Erasmus Mundus) resulted in the simulation of various capacity remuneration mechanisms and the CO₂ European Emission Trade System with TU Delft's EMLab model, an agent-based electricity market investment model.



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13:40 – **Trading in Local Energy Market: Flexibility and Resilience** | Goran Strbac, *Imperial College London, United Kingdom*

Goran Strbac is a Professor of Energy Systems at Imperial College London, with extensive experience in advanced modelling and analysis of operation, planning, security, economics and market design for future energy systems. He led the development of novel advanced methodologies that have been extensively used to inform industry, governments and regulatory bodies about the role and value of emerging new technologies and systems, including new market arrangements, in supporting cost effective evolution to smart and resilient low carbon energy future.



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14:00 – **Energy Communities – Research Theory and Practice** | Esther Mengelkamp, *MK consulting, Germany*

Dr. Mengelkamp is one of the renowned local energy market and P2P trading experts globally. She started researching local energy markets and P2P trading during her PhD at Karlsruhe Institute of Technology, which she completed summa cum laude. Afterwards, she spend time in various positions in business and IT in 2 of the largest utilities in Germany, the EnBW and Vattenfall. She is currently responsible for the IT of the decentralized heat systems at Vattenfall Energy Solutions Germany. Since 2019, she is the Founder and current CEO of MK Consulting, a consulting company focussing on bringing local energy markets and energy communities from the pilot and proof-of-concept stage to a scalable, sustainable product. She is consulting several companies - from start-ups to large companies - with a focus on the DACH region. In addition Dr. Mengelkamp is offering training on P2P and local energy markets in the Asia-Pacific region.



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14:50 – **Management of Local Flexibilities in Distribution System Operation** | Hugo Morais, *Lisbon University, Portugal*

Hugo Morais (IEEE SM18) (200 papers / 6000 citations) received B.E. and M.E. degrees from the Polytechnic of Porto in 2005 and 2010 respectively, and PhD degree in 2012 from the University of Tras-os-Montes e Alto Douro, all in the field of the electric power system. He is a senior researcher at INESC-ID and an Assistant Professor at the University of Lisbon. His research interests are in the development and deployment of smart grid methods and tools. He participates in the definition of operational planning tools used by the French DSO, the development of hardware-agnostic solutions, based on IEC standards, to be used in power substations and to control distributed energy resources and in the test and validation of tools to be used by an aggregator providing multiple services at the same time.



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15:30 – **Impact of the Dynamic Operation of interconnection Lines in Market Splitting at MIBEL** | Ana Estanqueiro, *National Laboratory of Energy and Geology, Portugal*

Ana Estanqueiro is a PhD and MSc in Mechanical Engineering (Energy) and holds degree in Electrical Engineering (Energy) from Instituto Superior Técnico - Technical University of Lisbon.

She is a senior researcher at LNEG –Laboratório Nacional de Energia e Geologia and coordinates the R&D area of Renewable Energies Integration in the Energy System at LNEG.

She was Chair of the IEA – International Energy Agency Implementing Agreement on Wind Energy (2006-08) and Vice-Chair (2004-06). She was a project expert and evaluator for the European Commission, the Danish Energy Agency, the Academy of Finland and the Nordic Energy Research among others.

Recent projects she was involved are H2020 TradeRES, FCT OptiGRID, POSEUR OffshorePlan, ERAnet+ NEWA, FP7 IRP.Wind, ESFRI Windscanner.eu, FP7 DEMOFLOAT, FP7 NORSEWInD, IEE 2020 SEANERGY, FCT Fluct.Wind, FCT ROADMAP, FAI REIVE, DEMTEC T.URBan among others.

She is reviewer of several scientific journals and author and co-author of more than 160 papers in scientific journals and conferences.



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15:50 – **How current market design proposals are threatening the expansion of renewables** | Silke Johandeiter, Energy Baden-Württemberg AG, Germany

Silke Johandeiter, *Energy Baden-Württemberg AG, Germany* After graduating with a Master of Science in Economics from the University of Mannheim in 2016, Silke Johandeiter worked for EnBW's distribution system operator Netze BW until 2020. Currently, she holds a position as doctoral candidate in EnBW's energy economics department, where she is mainly responsible for the company's contribution to the EU-Horizon2020-project "TradeRES – New Market Designs & Models for 100% Renewable Power Systems". With her personal research focus on the economics of variable renewables in European wholesale electricity markets, she is pursuing her PhD at Ruhr-University Bochum's chair of energy systems and energy economics.



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Round Table

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IASI Intelligent
Systems
Associate
Laboratory

isep Instituto Superior de
Engenharia do Porto

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