



Moonshots of the 2020s on Energy and Mobility

How to make the most of the missions of Horizon Europe?

SUSTAINABLE ENERGY TRANSITION PATHWAYS

Place: [Thon Hotel EU](#), The Netherlands III room, Brussels

Time: Monday 8th of October 2018, at 12.00 – 15.00

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The event presents feasible sustainable energy transition pathways and required research and innovation directions for Horizon Europe to enable it. It is the energy and mobility part of a series of high-level seminars (by invitation, [RSVP](#)), addressing the future visions of Finnish universities and their partners regarding EU Research and Innovation Policy and Horizon Europe.

The event presents you the feasibility of 100% renewables energy future and possible transition pathways supported by award winning simulation model. Speakers highlight the steps needed for global sustainable energy and mobility future and the added value of Horizon Europe for developing EU leadership in trailblazing energy technology industries and solutions. The event brings you our European research and industry partners to share their future visions and recent research and innovation actions. Furthermore, the role of Horizon Europe research and innovation funding for realizing these visions and EU long-term strategy for EU greenhouse gas emissions reductions will be discussed.

Welcome to participate the ongoing debate that has raised already major interest e.g. during EU sustainable energy weeks 2017-18 and within EERA and will be continued during forthcoming Finnish presidency. Join the debate.

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Programme

- 12:00 – 12:30 **Lunch**
- 12:30 – 12:40 **Event opening**
President **Juha-Matti Saksa** LUT
- 12:40– 13:10 **Keynote: European Renewable Energy System as Part of Global Climate Solution**
Professor **Christian Breyer** LUT (www.lut.fi/breyer)
- 13:10 – 13:25 **Enabling Sustainable Mobility Systems**
Assistant Professor **Milos Mladenovic** Aalto University
- 13:25 – 13:40 **CO₂ Management – Need for Negative Greenhouse Gas Emissions**
Associate Professor **Tero Tynjälä** LUT
- 13:40 – 13:55 **H2020 project STORE&GO - Shaping the energy supply for the future** (<https://www.storeandgo.info/>)
Dr **Johannes Schaffert** Gas- und Wärmeinstitut Essen e.V.
- 13:55 – 14:10 **View of European Energy Research Alliance (EERA) on the Sustainable Energy Transition Pathways**
Senior Policy Officer **Marco Franza** ENEA/EERA, Brussels
- 14:10 – 14:20 **Coffee, discussion**
- 14:20 – 14:30 **Industry Comment on Sustainable Energy Transition Pathways**
Wärtsilä vision towards a 100 % renewable energy future
Director of Sales and Marketing **Matti Rautkivi** Wärtsilä Energy Solutions
- 14:30 – 15:00 **Questions & Answers (panel)**
Chairing Vice President **Jari Hämäläinen** LUT
- 15:00 **End of meeting**

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Speakers



Juha-Matti Saksa received his D. Sc. (Econ. & Bus. Adm.) in Management and Organizations from LUT in 2007. After completion of his degree he was appointed as an acting professor of strategic management at LUT School of Business. Since autumn 2008 Dr. Saksa has worked for university rectorate as a development director, director of administration and provost. He became LUT's 8th rector (president) on February 15, 2016. Saksa is experienced rector with a demonstrated history of working in the research industry. He is strong community and social services professional skilled in innovation management, entrepreneurship, international business, lecturing, and public speaking. [@JuhisSaksa](https://www.linkedin.com/in/juha-matti-saksa-3a1548/)
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Jari Hämäläinen is Vice-president for research and innovation at LUT. He is Chair of the Scientific Committee of COST (European Cooperation in Science and Technology) and Board member of euro-CASE (The European Council of Academies of Applied Sciences, Technologies and Engineering). He is a professor (industrial mathematics) at LUT with a research focus on computational methods for wind energy. He has been a professor at University of Eastern Finland in 2004-2010. After his Ph.D. in 1993 he worked at VTT Technical Research Centre of Finland and in Valmet Corporation. Recently he published a textbook on Finite element methods for computational fluid dynamics (SIAM). [@jari_pi_hamalai](https://www.linkedin.com/in/jari-pi-hamalai)
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Christian Breyer is Professor for Solar Economy at LUT. His major expertise is the integrated research of technological and economic characteristics of renewable energy systems specialising in energy system modeling for 100% renewable energy. His team published the most studies on 100% renewable energy for countries or major regions globally. Publications on integrated sector analyses with power, heat, transport, desalination, industry and negative CO₂ emission options gain ground in his team. He worked previously for Reiner Lemoine Institut, Berlin, and Q-Cells. He is member of ETIP PV, IEA-PVPS, scientific committee of the EU PVSEC and IRES, chairman for renewable energy at the Energy Watch Group and reviewer for the IPCC. [@ChristianOnRE](https://www.linkedin.com/in/christian-breyer-ba91b686/) <https://www.linkedin.com/in/christian-breyer-ba91b686/>



Milos Mladenovic is an Assistant Professor in Spatial Planning and Transportation Engineering group at the School of Engineering, Aalto University. He has received his Ph.D. from the Department of Civil and Environmental Engineering at Virginia Tech in 2014. In addition, he has obtained a renowned Engineering Education and Future Professoriate graduate certificates from Virginia Tech. His research interests include development of decision-support methods and concepts for human-centered planning of mobility systems, as well as governance and methods for development of emerging mobility technologies. Recently, he has been a visiting researcher in Spatial Planning and Strategy group, at the Faculty of Architecture and the Built Environment, Delft University of Technology, the Netherlands. [@MilosPlanner](https://www.linkedin.com/in/milosnmladenovic/) <https://www.linkedin.com/in/milosnmladenovic/>



Tero Tynjälä is an Associate Professor in Engineering Thermodynamics with special focus on carbon dioxide balances and energy storages at LUT. He holds D.Sc. (Tech.) in Energy Technology from LUT. He is a member of EERA Joint Programme in Carbon Dioxide Capture and Storage and IEA – GHG High Temperature Solid Looping Networks. His research interests range from complex reactive multicomponent flows to energy system analysis. [@TeroTynjala](https://www.linkedin.com/in/tero-tynj%C3%A4l%C3%A4-b45397ab/)
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Johannes Schaffert received his PhD in physics at the University of Duisburg-Essen, Germany. Since 2013 he works as an energy scientist at Gas- und Wärme-Institut Essen. As a project manager, he gained experience in the fields of Energy Transition, Energy Conversion and Storage, esp. Power-to-Gas, Biogas, grids, Power-to-Heat, mobility, emissions and many others.
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Marco Franza is a senior policy officer at the 'European Union and International Organizations Office' of ENEA (Italian Government Agency on New Technologies, Energy and Sustainable Economic Development), based in Brussels. He is member of the Secretariat of EERA as well as of the EERA's Policy Working Group. He served for seven years at the European Commission, DG Research-Directorate Energy, Euratom International Cooperation, as seconded national expert. He is former Italian delegate at the Nuclear Law Committee (OECD - Nuclear Energy Agency) and served at OSCE for the implementation of the Dayton Agreements. Marco Franza received his Master degree in Political Science from LUISS University (Rome). He is specialized in International Nuclear Law at the University of Montpellier (France) and in Public Affairs at LUMSA University (Rome).
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Matti Rautkivi is an energy industry thought leader. As an engineer for the Finnish energy technology company Wärtsilä, his innovative, value-based ideas have helped electric utilities in North America, Europe, Australia and the Middle East seize new business opportunities through flexible power generation. Matti is an active speaker and writer, posting a monthly blog at www.smartpowergeneration.com/powertalk. His articles about energy markets have been published in TIME magazine and in many energy industry publications. Mr. Rautkivi holds Masters' degree in Industrial Engineering and Nuclear Energy from the Lappeenranta University of Technology. <https://www.linkedin.com/in/matti-rautkivi-084a553/>