

Stuttgart Research Partnership on Integrated Systems Analysis for Energy





SWISS

2nd International Symposium on Energy System Analysis (ISESA)

"Implementing the energy transition: Holistic challenges and solutions for resilient energy systems & 10-year STRise anniversary"

October 13th and 14th, 2025

ZSW, Meitnerstraße 1, 70563 Stuttgart, Germany

Program

Monday, October 13		
12:00 - 12:45	Arrival, Registration, Hanging posters, Light lunch	
12:45 – 1:55	Welcome to ZSW (Prof. Dr. Frithjof Staiß, ZSW)	
	Welcome to ISESA (Prof. Dr. Patrick Jochem, DLR Institute of Networked Energy Systems)	
	Welcome by GEE-AAEE-SAEE & first impulse: Decarb of a City: The example of Vienna (Michael Strebl, WienENERGIE)	
	Keynote 1: The economics of sustainable solutions in transport (<i>Prof. Dr. Amela Ajanovic, TU Vienna</i>)	
2:00 - 3:30	 Session 1 (Chair: Prof. Dr. Kai Hufendiek, University of Stuttgart, IER) 1. Heading towards democratic, sustainable competitive electricity systems (Reinhard Haas, TU Vienna) 	
	2. Handling uncertainty in long-term active distribution network planning (David Ulrich Ziegler, Comillas Pontifical University, Madrid)	
	 Dynamic electricity pricing and time-of-use network charges for private households – Are mixed signals favorable? (<i>Henrik Kramer</i>, University of <i>Duisburg-Essen</i>) 	
	4. Economic and regulatory assessment of new gas power plants in the Austrian electricity market (<i>Hamid Aghaie, Wien Energie</i>)	
3:30 - 4:00	Coffee break	
4:00 - 5:30 5:30 - 6:30	 Session 2 (Chair: Maike Schmidt, ZSW) 1. Resilience in hydrogen supply and infrastructure: Market responses to disruption in Europe and MENA (<i>Ellen Österlein, Fraunhofer ISI</i>) 2. Global production and trade pathways of low-carbon fuels: Trade-offs between liquid bio- and e-fuels (<i>Martin Densing</i>, ETH Zurich, <i>Paul Scherrer Institute</i>) 3. Hydrogen horizons: Charting New Zealand and the Pacific Islands' path to a clean energy future (<i>Hadi Vatankhah Ghadim, University of Canterbury, NZ</i>) 4. Dynamic context scenario analysis for robust hydrogen transition pathways in the EU and Germany (<i>Wolfgang Hauser, University of Stuttgart, ZIRIUS</i>) Poster pitches (<i>Chair: Steffen Schlosser, DLR Institute of Networked Energy</i>) 	
	Systems) Poster session	
6:30	Social Event 10 Years STRise, ZSW Stuttgart	

Tuesday, October 14	
9:00 - 9:45	Keynote 2
	tbc (Prof. Dr. Michèle Knodt, TU Darmstadt)
9:50 - 11:20	Session 3 (Chair: Prof. Dr. Kai Hufendiek, University of Stuttgart, IER)
	1. Thermal storage as a sector coupling technology – a case study for Germany
	(Alexander Burkhardt, Fraunhofer ISI)
	2. From coal to green iron: Repurposing combined heat-and-power plants to run on carbon-free iron (<i>Jannik Neumann, TU Darmstadt</i>)
	3. From walls to watts: Modelling the envelope retrofit-supply temperature-heat
	pump interaction in building energy system optimisation (Julian Hermann, ETH
	Zurich)
	4. Examining the flexibility resulting from heat sector coupling with an energy system
	model (Colton Chow, Robert Bosch GmbH and TU Munich)
11:20 – 11:45	Coffee break (including another chance to chat at the posters)
11:45 – 1:15	Session 4 (Chair: Dr. Wolfgang Hauser, University of Stuttgart, ZIRIUS)
	1. Storyline development for resilient energy system transformations: A structural
	complexity reduction approach integrating shock events and slow burn
	processes (Richard Schmitz, Fraunhofer IEE and University of Kassel)
	2. Electricity transitions for the overlooked: 14 Pacific Island Countries (Akash Jyoti Handigue, University of Canterbury, Christchurch)
	3. Dealing with uncertainties: Actor strategies in an electricity market dominated by
	flexible renewable energies (Sandra Wassermann, University of Stuttgart,
	ZIRIUS)
	4. Bridging systems for sustainability: The innovation dynamics of synthetic fuels
	(Tobias Buchmann, ZSW)
1:15 – 2:15	Farewell (Organizing Committee), Light lunch
2:00 - 4:00	IAEE PhD paper session (Prof. Dr. Russell McKenna, ETH Zurich & Paul Scherrer
	Institute, Prof. Dr. Reinhard Haas, TU Vienna, Prof. Dr. Patrick Jochem, DLR-VE)
	(Submission of full paper required)

Overview of posters

1	Analyzing Germany's hydrogen ramp-up from an investor's point of view (<i>Johannes Kochems, DLR Institute of Networked Energy Systems</i>)
2	Energy prices and firms' behavioural responses – Plant-level evidence from the German manufacturing census (Karsten Müller, DLR Institute of Networked Energy Systems)
3	Overcoming hurdles in implementing energy transition: A proven pathway to economic success for early entrepreneurial adopters (<i>René Schellenberger, Magility GmbH</i>)
4	Modeling investment behavior and energy management strategy of industrial prosumers under policy uncertainty (<i>Tom Warendorf, University of Bremen</i>)
5	Quantifying the regret of using simplified optimization models in multi-energy system operation (Bianca Helbach, RWTH Aachen)
6	Identifying drivers of lost load events in future energy systems under different climate scenarios (<i>Paul Pütz, Ruhr University Bochum</i>)
7	Swarm intelligence based cooperative framework for optimizing decentralized green hydrogen production in renewable-dominant grids (<i>Antony Dominic, Reutlingen University</i>)
8	Raw material risk at the level of energy transformation scenarios and the potential of recycling as
	a mitigating factor (Steffen Schlosser, DLR Institute of Networked Energy Systems)
9	Sociotechnical imaginaries of locals on the transformation in the German mining area "Rheinisches Revier" (Katharina Vollmer, Forschungszentrum Jülich)
10	Modeling of private mobility load profiles under future societal change in Germany (Camila Villarraga Díaz, DLR Institute of Networked Energy Systems)
11	Heat demand forecasting as a strategic tool for decarbonizing Vienna's energy system (Georg
	Scharinger-Urschitz,Wien Energie)
12	Vienna's municipal heat planning: A strategic framework for district heating expansion (Sophie
	Zeiger, Wien Energie)
13	OSEP – Optimized Strategic Energy Portfolio: Integrated long-term planning for thermal,
	renewable, and cooling systems in Vienna (Andreas Fleischhacker, Wien Energie)

Organizing Committee



Prof. Dr. Patrick Jochem patrick.jochem@dlr.de

Scientific Committee





Prof. Dr.-Ing. Kai Hufendiek kai.hufendiek@ier.unistuttgart.de

Prof. Dr. Cordula Kropp cordula.kropp@zirius.unistuttgart.de



Prof. Dr. Frithjof Staiß frithjof.staiss@zsw-bw.de

Steffen Schlosser steffen.schlosser@dlr.de



Nicolas Messerschmidt nicolas.messerschmidt@ ier.uni-stuttgart.de



Sandra Wassermann sandra.wassermann@ zirius.uni-stuttgart.de



Dr. Tobias Buchmann tobias.buchmann@ zsw-bw.de



Since 2015, STRise (Stuttgart Research Partnership on Integrated Systems Analysis for Energy) has been advancing the energy transition in Europe, Germany, Baden-Württemberg, and Stuttgart. The interdisciplinary systems research in Stuttgart is unique in Europe and enables new approaches to analyzing and implementing the sector-coupled energy transition with high system complexity and increasing interaction in the socio-technical-economic environment.

STRiseد

Stuttgart Research Partnership on Integrated Systems Analysis for Energy

