

ENERDAY 2022

Legacy assets and infrastructures in the energy system transformation Out with the old, in with the new?

Pre-Conference-Dinner **Thursday, 29 Sept 2022,**
Informal Get Together **18:00 Uhr**

Restaurant Campus, Hübnerstraße 13,
01069 Dresden

Conference venue **Friday, 30 Sept 2022,**
 08:00 Uhr – 17:35 Uhr

Chemistry-Building ([Link to the campus navigator](#))

8:00	Registration, Coffee & Tea			
8:30	Opening Address (Room: CHE/S91, hybrid) Prof. Dr. Dominik Möst, TU Dresden			
9:00 - 9:45	Keynote Talk (Room: CHE/S91, hybrid, Chair: Prof. Dr. Dominik Möst, TU Dresden) Use of energy scenarios at a TSO in Germany – recent developments and opportunities for research Martin Klein, 50Hertz Transmission GmbH			
9:45	5 minute for change of room			
Parallel Session 1				
09:50 - 10:50	Energy security	Flexibility and energy management systems	Low carbon energy transformation pathways I	Advanced optimisation in energy economics
	Room: CHE/S91, hybrid Chair: Christoph Kost	Room: CHE/S89, hybrid Chair: Steffi Misconel	Room: CHE/183 Chair: Hendrik Scharf	Room: CHE/184 Chair: Felix Schmidt
09:50	The impact of energy security on a German energy system by 2030 and 2045 and the role of heat pumps Christoph Kost, Fraunhofer ISE	Assessing demand response potentials in the climate-neutral German power system Johannes Kochems, Deutsches Zentrum für Luft- und Raumfahrt e. V.	Developing low carbon scenarios for the European energy system: Exploring the role of renewable hydrogen in a sector-coupled European energy system towards 2050 Konstantin Löffler, TU Berlin	Hybrid Optimization - The impacts of extreme climate conditions on the future European electricity system Maximilian Bernecker, BTU Cottbus-Senftenberg
10:10	European gas scenarios for the upcoming winter Andreas Schroeder, ICIS	Operational optimization of existing energy systems Arne Martin, Fraunhofer IOSB-AST	How does an early coal exit impact Germany's natural gas dependence? Implications of the current coalition contract for the power sector in 2030 Hendrik Scharf, TU Dresden	Benders decomposition for energy system planning with multiple climatic years Felix Schmidt, DIW Berlin
10:30	Natural gas markets between energy security and energy transition Dzhanneta Medzhidova, Higher School of Economics	How flexible electrification integrates fluctuating renewables Leonard Göke, TU Berlin	Is Germany on the right track to achieve 2030 climate and energy targets? Smaranda Sgarciu, BTU Cottbus-Senftenberg	Multistage modelling approach to optimize investment and operational decisions in electricity markets with a high level of detail Laura Torralba-Diaz, IER Stuttgart
10:50	Coffee & tea break			

Parallel Session 2

11:15 - 12:15	Hydrogen markets and market integration Room: CHE/S91, hybrid Chair: Lauritz Bühler	Sector coupling and market innovation Room: CHE/S89, hybrid Chair: Hannes Hobbie	Low carbon energy transformation pathways II Room: CHE/183 Chair: Lucas de la Fuente	Statistical approaches for energy economics Room: CHE/184 Chair: Felix Jakob Fliegner
11:15	The role of hydrogen in a sector-integrative European energy system model [cancelled] Christoph Schmitz, r2b energy consulting GmbH	Suggestions for improvements in TSOs regulation to foster energy innovation Eva Marie Kurscheid, TenneT TSO GmbH	Policy effects and implications on the future low-carbon energy and transportation sector Karlo Hainsch, TU Berlin	Shazam for the power sector - Application of Fourier transformation to unravel energy portfolio intermittency in the European power system Felix Jakob Fliegner, TU Dresden
11:35	Green hydrogen - How grey can it be? Johannes Brauer, MINES ParisTech	Investments in coupled energy sectors and market pricing Jonas Egerer, FAU Erlangen-Nürnberg	Premature nuclear retirements and nuclear decommissioning funds: Insights from New York Muhammad Maladoh Bah, University of Basel	Simulation of Germany's security of supply: long-term forecasting of electric load profiles using machine learning Benedikt Prusas, HS Düsseldorf
11:55	Global hydrogen trade - A single-period mixed complementary model for the global hydrogen market in 2030 Leonhard Dux, TU Berlin	Power sector effects of different supply chains for green hydrogen in Germany Dana Kirchem, DIW Berlin	Nuclear bias in energy scenarios - A review and results from an in-depth analysis of long-term decarbonisation scenarios Björn Steigerwald, TU Berlin	The financialization of the European futures market for carbon emission allowances Tom Dudda, TU Dresden
12:15 - 13:30	Lunch break			
13:30 - 14:15	Keynote Talk (Room: CHE/S91, hybrid, Chair: Prof. Dr. Christian von Hirschhausen, TU Berlin, and DIW Berlin) Flexibility in infrastructure markets - A multi-level perspective Prof. Steven A. Gabriel, PhD, University of Maryland, and NTNU Trondheim			
14:15	5 minute for group picture and change of room			

Parallel Session 3

14:20 - 15:20	Energy efficiency and environment Room: CHE/S91, hybrid Chair: Maximilian Happach	Renewables in transportation systems Room: CHE/S89, hybrid Chair: Bjarne Steffen	Hydrogen and impact on electricity transport infrastructure Room: CHE/183 Chair: Martin Lieberwirth	Renewable auctions and financing Room: CHE/184 Chair: Lisa Lorenz
14:20	Ecological footprint-environmental regulations nexus: The case of the Union for the Mediterranean Burak Erkut, Bahçeşehir Cyprus University	The competition of zero-emission vehicle technologies in road freight Bjarne Steffen, ETH Zurich	Hydrogen electrolysis and electricity networks – What to support, what not? Friedrich Kunz, TenneT TSO GmbH	Renewable procurement auctions and default: pre-qualification requirements Silvester van Koten, CERGE-EI Prague
14:40	Municipal networks for mutual support: How can this contribute to the implementation of energy efficiency measures? Uta Burghard, Fraunhofer ISI	Reviewing comparative life cycle assessments for battery electric vs. internal combustion engine vehicles for passenger cars Christina Kockel, RWTH Aachen University	Benefits of a hydrogen network in Europe with repurposed gas pipelines Fabian Neumann, TU Berlin	Market-financed large-scale solar power without support schemes? Anurag Gumber, ETH Zurich
15:00	Determinants of energy intensity in Turkish manufacturing industry Umut Erksan Senalp, Trakya University	The role of public investment in building up a public electric vehicle charging grid Marie-Louise Arlt, LMU München	Decarbonizing the industry sector and its effects on electricity transmission grid operation – implications from a model based analysis for Germany Martin Lieberwirth, TU Dresden	Preferential treatment in renewable energy auctions: an analysis of the reference yield model & German wind auctions Prokop Čech, Jan Evangelista Purkyně University
15:20	Coffee & tea break			
15:45 - 16:30	Keynote Talk (Room: CHE/S91, hybrid, Chair: Prof. Dr. Dominik Möst, TU Dresden) Technical pathways to and economic issues with decarbonizing electricity systems Prof. Ramteen Sioshansi, PhD, The Ohio State University			
16:30	5 minute for change of room			



Parallel Session 4

16:35 - 17:35	Hydrogen and hydrogen-based commodities Room: CHE/S91, hybrid Chair: Philipp Hauser	Renewables in developing countries Room: CHE/S89, hybrid Chair: Constantin Dierstein	Sector integration of heating and cooling appliances Room: CHE/183 Chair: Carl Philipp Anke	Decentralised energy systems Room: CHE/184 Chair: Jens Maiwald
16:35	Opportunities for the German gas grid by using synthetic fuels from an energy system perspective Felix Kattelmann, IER Stuttgart	ENERWARD: Winners of the best Diploma / Master's thesis award Alexander Michael Floren Malte Karitzky	Optimisation of costs, carbon emissions and thermal comfort in a building-level energy system model David Hucklebrink, Ruhr-University Bochum	Optimal economic and environmental design of multi-energy islands Tom Terlouw, Paul Scherrer Institut
16:55	Amonia and its role in the European hydrogen market ramp-up Philipp Hauser, VNG AG	South Africa's energy transition - Unravelling its political economy Jonathan Hanto, Europa-Universität Flensburg, TU Berlin	Sector integration with residential heat pumps: the impact of building characteristics and user behaviour Evelyn Sperber, Deutsches Zentrum für Luft- und Raumfahrt e. V.	Local sustainable communities: consumer involvement for sustainable development in energy transition Matthias Maldet, TU Vienna - Energy Economics Group
17:15	Estimating global production and supply costs for green hydrogen and hydrogen-based green energy commodities Michael Moritz, Uniper	How population migration affects carbon emissions in China: Factual and counterfactual scenario analysis Yan Bu, Dalian University of Technology	Load shifting of distributed cross-sectoral energy systems in economically optimised operation Sebastian Berg, Fraunhofer UMSICHT	Peer-to-peer trading in decentral energy markets with pro-active consumers Jens Maiwald, HS Zittau/Görlitz
17:35	End of parallel sessions			
18:00	Bus transfer to gala dinner (departing from Mommsenstraße)			
Gala Dinner Official closing event and award ceremony		Friday, 30 Sept 2022, 19:00	Restaurant Lingnerterrassen https://lingnerterrassen.de/ Bautzner Str. 132, 01099 Dresden	
23:00	Bus transfer to central train station (departing from the gala dinner)			