

Energy Symposium 2025

Powering the Future –
Accelerating the Energy Transition

June 24th to 27th, 2025, Karlsruhe, Germany

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Program Overview

Tuesday, 24 June 2025	
09:30 - 10:00	<i>Registration and Welcome Coffee</i>
10:00 - 10:20	Welcome and Opening Location: Aula, FTU
10:20 - 12:30	Session 1: From Electricity to Hydrogen to Power-to-X and Fusion Location: Aula, FTU
	Intermittent Renewables and Hydrogen Production in European Carbon-Neutral Energy Systems
	Patrick Jochem <i>German Aerospace Center (DLR)</i>
	Modularity: the Game-Changer for Commercial Scale E-Fuel Production from Power-to-X/PtX
	Samantha Michaux <i>INERATEC GmbH</i>
	Hydrogen for the Energy Transition
	Daniel Banuti <i>Karlsruhe Institute of Technology (KIT)</i>
	Advancing the Frontiers of Fusion: Background, Breakthroughs, and Burning Ambitions
	Sophia Henneberg <i>Max Planck Institute for Plasma Physics (IPP)</i>
12:30 - 14:00	<i>Lunch break</i>
14:00 - 15:30	Session 2: Innovations for Energy Storage Location: Aula, FTU
	Storing Energy: The Different Roles of Storage Technologies in Energy Systems Analysis
	Theresa Klütz <i>Forschungszentrum Jülich (FZJ)</i>
	Harnessing Heat: Advancements in High-Temperature Thermal Energy Storage
	Annelies Vandersickel <i>German Aerospace Center (DLR)</i>
	Exploration of Cathode Materials for Li-S Batteries
	Yan Lu <i>Helmholtz-Zentrum Berlin (HZB)</i>
15:30 - 16:00	<i>Coffee Break</i>
16:00 - 17:30	Session 3: Pathways to a Resilient Energy Future Location: Aula, FTU
	Rethinking Electricity Market Design: Lessons Learned and Future Needs
	Antonio J. Conejo <i>The Ohio State University</i>
	Planning the Net Zero Grid of 2050
	Robert Cox <i>University of North Carolina at Charlotte</i>
	Power Hardware in the Loop: How Experiments can Accelerate the Energy Transition
	Giovanni De Carne <i>Karlsruhe Institute of Technology (KIT)</i>
18:00 - 20:30	<i>BBQ</i>
Wednesday, 25 June 2025	
09:00 - 12:00	Lab Tours and Site Visits 1 Location: Campus North, Campus South
12:00 - 13:30	<i>Lunch break</i>
14:00 - 16:00	Postersession and Get together Location: Pavilion and Foyer FTU
16:00 - 16:30	Greetings from Helmholtz Vice President Bernd Rech, KIT President Jan Hesthaven Location: Aula, FTU
16:30 - 17:30	Presentation of the Heinrich Hertz Award Location: Aula, FTU
17:30 - 18:30	Science Slam Location: Aula, FTU
19:00 - 22:00	<i>Conference Dinner</i>

Thursday, 26 June 2025			
09:00 - 10:30	Session 4: Advanced Materials and Circular Processes		
	Location: Aula, FTU		
	Material Bottlenecks of the Energy Transition – Exemplary Case Studies from a Systems Perspective		
	Heidi Heinrichs	Forschungszentrum Jülich (FZJ)	
	The Role of Information and Energy for Closing Material Cycles		
	Karl Gerald van den Boogaart	Helmholtz-Zentrum Dresden-Rossendorf (HZDR)	
	A Hybrid Workflow to Discover Optimized Materials and Processes for the Energy Transition		
	Christoph J. Brabec	Forschungszentrum Jülich (FZJ)	
10:30 - 11:00	Coffee Break		
11:00 - 12:30	Session 5: Energy Economics and Perspectives		
	Location: Aula, FTU		
	Flexibility in the Electricity System – Surplus or Bottleneck?		
	Wolf Fichtner	Karlsruhe Institute of Technology (KIT)	
	Technical Safety Aspects of Small Modular Reactors and New Reactor Designs: Global Developments and Challenges		
	Sara Beck	Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH	
	Innovating Tomorrow! Focus on Industrial Solutions for the Energy Transition		
	Jens Dietrich	Siemens Energy Global GmbH & Co KG, Innovation Center Berlin	
12:30 - 12:40	Closing of the presentation part		
12:40 - 14:00	Lunch, Get-together		
14:00 - 16:00	Lab Tours and Site Visits 2	Open Space	
	Location: Campus North, Campus South, Campus East	Location: Pavilion, FTU	
16:15 - 17:45	Science Policy Dialog: Insights from Scientists, Consulting Experts, and Politicians		
Friday, 27 June 2025			
Helmholtz Energy Workshops for Young Scientists			
09:00 - 10:30	08:30 - 10:30		
	Women at Helmholtz Energy Breakfast and Networking event	Good Leadership in Teams - First Aid for Getting Started	Career Compass: Where You Are and Where You Want to Go
	Helmholtz Energy Office	Britta Hoffmann	Patrizia Köhler, Katrin Hess
	Location: Pavillion, FTU	Location: Room 164, FTU	Location: Aula, FTU
10:30 - 11:00	Coffee break		
11:00 - 12:30	Clear Communication	Ideas on Demand. Strategies for Creative Problem-Solving	Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections
	Simone McInturff	Stefan Götze	Patrizia Köhler, Katrin Hess
	Location: Room 163, FTU	Location: Room 164, FTU	Location: Aula, FTU
12:30 - 13:30	Lunch break		
13:30 - 15:00	How to Network and Make Valuable Connections	Your Personal AI-SSISTANT has arrived: Using Generative AI as a Professional Tool in Academia	Leading with Responsibility - First Aid for Getting Started
	Simone McInturff	Stefan Götze	Michael Stolle
	Location: Room 163, FTU	Location: Room 164, FTU	Location: Aula, FTU
15:00	End		