

IRES & ESE Combi-Conference Platform 2021

Tuesday 16.03.2021 – ESE & IRES Joint plenary day

10:00 - 10:25	<p>WELCOME AND INTRODUCTION — with Peter Schossig, Fraunhofer Institute for Solar Energy Systems ISE, Andreas Hauer, Bavarian Center for Applied Energy Research, Prof. Dr. Andreas Pinkwart, Minister of Economics NRW, Wolfram Diener, Messe Düsseldorf, Prof. Peter Droege, Eurosolar, Bernhard Rill, Gustav Klein GmbH & Co. KG, ESE Trade Fair Advisory Board</p>
10:30 - 12:00	<p>CLIMATE ACTION, POLITICAL FRAMEWORK AND MARKETS — with Kadri Simson, EU Commissioner, Leonore Gewessler, Federal Minister for Climate Protection, Environment, Energy, Mobility, Innovation & Technology of Austria, Dr. Dolf Gielen, IRENA, Rohit Khanna, ESMAP, World Bank, Prof. Dr. Hans Martin Henning, Fraunhofer Institute ISE, German Expert Council on Climate Issues, Co-moderation: Thomas Speidel – German Energy Storage Association</p>
12:30 - 14:00	<p>CLIMATE AND BUSINESS: THE CEO'S VIEW — with Torsten Kallweit, Bosch Climate Solutions GmbH, Dr. Joachim Kuhn, Va-Q-Tec AG, Michael Menhart, Munich Re, Dr. Christoph Noeres, thyssenkrupp AG, Dr. Christian Bauer, Partner Watson Farley & Williams, Dennis Schulz, Linde Engineering, Co-moderation: Britta Buchholz – Hitachi ABB Power Grids</p>
14:30 - 16:00	<p>PANEL DISCUSSION - THE FUTURE OF STORAGE IN A DISTRIBUTED RENEWABLES UNIVERSE — with Britta Buchholz, Hitachi ABB Power Grids, Heinrich Gärtner, GP Joule, Peter Newman, Curtin University, Alexander Junge, BP Europe SE Electrification, Bernhard Rill, Gustav Klein GmbH & Co. KG and ESE Trade Fair Advisory Board, Dr. Martin Schichtel, Kraftblock</p>

Wednesday 17.03.2021

9:00	Welcome and Display of the course of day - Keynote: <i>Prof. Peter Newman</i>		<p align="center">ENERGY STORAGE EUROPE '21 Workshops</p> <p>Morning: 2 parallel sessions: Norms and Standards, Finance & Bankability</p> <p>Afternoon: 2 parallel sessions: Law / Legal Framework and Int'l Markets</p> <p align="center">Permanent Poster Exhibition</p>
09:30 - 11:00	<p align="center">Energy System Analysis</p> <p align="center">Chaired by <i>Dr. Verena Fluri</i></p>	<p align="center">Thermal I</p> <p align="center">Chaired by <i>Prof. Luisa F. Cabeza</i></p>	
	Techno-Economic Planning and Exergy Analysis of Large-Scale Hot-Water Tanks and Pits — <i>Dahash, Ochs, Tosatto</i>	Comprehensive Comparison of Different Models for Large Scale Thermal Energy Storage — <i>Ochs, Dahash, Tosatto, Reisenbichler, ODonovan, Gauthier, Kok Skov, Schmidt</i>	
	Renewable Energy Targets And The Storage Cycling Trap: Unintended Effects and Implications for Power Sector Modeling — <i>Kittel</i>	Experimental Performance Testing On Different Configurations Of Fillers For Packed Bed Thermal Energy Storage — <i>Weiss, Tchana, Müller, Fluri</i>	
	Impact of Load Profile Quality on the Optimal Design of Building Energy Systems — <i>Höttecke</i>	Analysis of the Thermal Management of a High-temperature Methanol Fuel Cell using a Latent Heat Storage — <i>Deinert</i>	
	Distribution System Planning With Battery Storage Using Multiperiod Optimal Power Flow — <i>Schachler</i>	Consecutive Operation of a Rock Bed Thermal Energy Storage - CFD Analysis — <i>Knobloch, Engelbrecht, Muhammad, Frandsen</i>	
		Novel Thermo-gravimetric Characterization Method for Thermochemical Storage Composite Materials — <i>Issayan, Zettl</i>	
11:00:00 - 11:30	Coffee break		
11:30 - 13:00	<p align="center">Battery I</p> <p align="center">Chaired by <i>Prof. Ingo Stadler</i></p>	<p align="center">Thermal II</p> <p align="center">Chaired by <i>Dr. Wim van Helden</i></p>	
	An Overview of Latest Research on Vanadium-Based Redox Flow Batteries at Fraunhofer ICT and UNSW — <i>Noack, Menictas, Roznyatovskaya, Skyllas-Kazacos, Tübke</i>	Organic Phase Change Materials: The Future Lies In Shape-Stabilized Phase Change Materials For Battery And Building Applications — <i>Marske, Hahn, Enke</i>	
	Experimental Evaluation of the Thermal Management for Cylindrical Li-Ion-Batteries based on Phase Change Material Composite — <i>Gamisch, Zou, Gschwander</i>	Experimental Investigations of a Dual-Media Thermal Energy Storage System with Liquid Metal — <i>Müller-Trefzer, Niedermeier, Daubner, Wetzel</i>	
	Towards Reproducible Performance Of Grid Connected Photovoltaic Battery Storage — <i>Graff, Wollersheim, May</i>	Xylitol Used As Phase Change Material: Nucleation Mechanisms Of The Overcooling Rupture By Stirring — <i>Piquard, Gagnière, Largiller, Mangin, Bentivoglio</i>	
	Mobile Batteries: Short-term Storage for Electric Distribution Grids — <i>Gschwendtner, Stephan</i>	Rock Bed 2.0 for High Temperature Energy Storage: Design and Testing — <i>Knobloch, Engelbrecht, Muhammad</i>	
	EUROBAT Battery Innovation Roadmap 2030 — <i>Riegel</i>		
13:00 - 14:00	Lunch break		
14:00 - 15:30	<p align="center">Battery II</p> <p align="center">Chaired by <i>Dr. Bernhard Riegel</i></p>	<p align="center">RenPower2X</p> <p align="center">Chaired by <i>Prof. Michael Sterner</i></p>	
	Analysis Of Battery Storage Usage Of Heuristic Energy Flow Controllers — <i>Kefer, Kefer, Stöger, Hofer, Affenzeller, Winkler</i>	Power-to-Process-Heat in Industrial Combined Heat and Power Plants – Integration of a Large-Scale Thermochemical Energy Storage — <i>Backofen, Würth, Gleis, Vandersickel, Spliethoff</i>	
	Photovoltaics and Battery Storage — A Python-Based Optimization for Innovation Tenders — <i>Schreiber, Hofmann, Wieland</i>	"multiTESS" - The Flexible Energy Storage System — <i>Herrmann, Dittmann-Gabriel, Dluhosch, May, Meyer, Hänel, Beeh, Doerbeck, Högermann, Schrüfer, Schmitz</i>	
	Energy System Modelling of a Single House by LEAP — <i>Sulukan, Sari, Can Yavuz, Sıdkı Uyar</i>	A Novel Micro Combined Heat And Power Engine With Integrated Energy Storage — <i>Cilia, Vella, Brincat, Ellul</i>	
	Unlocking the Full Potential of Battery Storage Through Dynamic Multi-use — <i>Englberger, Jossen, Hesse</i>	Flexibility of Power-to-Gas-Plants — <i>Hermann</i>	
		Efficiency of a Power-to-Heat-to-Power Energy Storage System with Packed-Bed Thermal Storage — <i>von der Heyde</i>	
15:30 - 16:00	Coffee break		
16:00 - 17:00	<p align="center">Panel Discussion</p> <p align="center">Chaired by <i>Prof. Dirk Uwe Sauer</i></p>		

Thursday 18.03.2021				
9:00	Welcome and Display of the course of day		Deutsche Vortragsreihe mit der EnergieAgentur.NRW	
09:30 - 11:00	Battery III	Case Studies I	09:30	Begrüßung Prof. Peter Droege, Eurosolar e.V. Lothar Schneider, EnergieAgentur.NRW
	Economic Analysis of Multi-Use Cases for Industrial Battery Energy Storage Systems in Automotive Production Facilities — <i>Schulz-Mönninghoff, Eigenbrodt</i>	Big Data In Storage Simulations – Turning Three Years Of Operating Data Into A Cell Voltage Model For Vanadium-Redox-Flow-Batteries — <i>Stegner</i>	09:45	Energiespeicher als Schlüsselkomponente der Energiewende – wo stehen wir in NRW? Franz-Wilhelm Iven, Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen
	PV-Battery Systems in Multi-family Houses - an Economic Analysis — <i>Fluri</i>	Experimental Results of a 182 kWh Thermochemical Heat Storage System for Domestic Applications integrated in an Orphanage in Warsaw — <i>Knabl</i>	10:15	Eine langfristige Energiesystemperspektive – NEP21 Strom Robin Kaiser., AMPRION
		Thermochemical Energy Storage for Seasonal Balance of Surplus Electricity and Heat Demand in Buildings – Operation of a 10kW Lab Scale Prototype — <i>Schmidt, Risthaus, Linder</i>	10:45	Die Rolle des Rheinischen Reviers in der Energiewende Dominic Nailis., BET und Björn Uhlemeyer, BU Wuppertal
11:00 - 12:00	Poster Session		11:15	Diskussion Moderation: Dr. Peter Schossig
12:00 - 13:00	Coffee break		12:00	Mittagspause
13:00 - 14:30	Case Studies II Chaired by <i>Dr. Jose Etcheverry</i>	Thermal III Chaired by <i>Dr. Peter Schossig</i>	13:00	Systemrelevanz von Stromspeichern Prof. Dirk Uwe Sauer, RWTH Aachen
	Solar Food Processing In An Off-Grid System In Kenya — <i>Reiners, Pfanner, Wüllner, Subasi</i>	Insulating Piles for the Cost-Effective Construction of Very-Large-Scale High Temperature Thermal Energy Storage — <i>Tosatto, Ochs, Dahash, Muser, Kutscha-Lissberg, Kremnitzer</i>	13:20	First und Second-Use Fahrzeugbatterien im Stromnetz – die Lösung der Energiewende. Marcus Fendt., The Mobility House
	First Findings on th Operation of a High-Temperature Storage System (Project High-T-Stor) — <i>Lechner</i>	Reduction Of Rotation Phase Supercooling In Nano n-Docosanol Phase Change Slurries — <i>Kick, Gschwander</i>	13:40	Netzpuffer - the next big battery thing: Mehr Erneuerbare, höhere Netzauslastung und mehr Versorgungssicherheit durch ein neues Speicherkonzept Prof. Michael Sterner, OTH Regensburg
	ETES in Action: Experiences operating a Power-to-Heat-to-Power Energy Storage — <i>Zacek</i>	Molten Chloride Salts for Thermal Energy Storage in Next Generation CSP: Mg Inhibitory Effect in Corrosion Control System (CCS) for MgCl ₂ -KCl-NaCl — <i>Gong, Ding, Chai, Shi, Bonk, Bauer</i>	14:00	Bericht zum Projekt „Konzepte zur energetischen Nachnutzung von Tagebaurestlöchern in NRW“ Stefan Reil, Tractebel
		Development of Compact Latent Heat Storage for Refrigeration Processes — <i>Müller</i>		
14:30 - 15:00	Pause		14:20	Diskussion
15:00 - 16:00	Closing Session Keynote II		15:00	Kaffeepause
			15:30	Wärmespeicher für Nah- und Fernwärmenetze Dr. Armin Kraft, EEB ENERKO
			15:50	Wärmespeicher und -netze für Niedertemperaturanwendungen Dietmar Schüwer, Stadt Herten / Wuppertal Institut
			16:10	Strom- und Wärmespeicher für Kraftwerke und zentrale KWK-Anlagen in der Prozessindustrie Dr. Thomas Bauer, DLR und Dr. Rainer Faatz, TSK Flagsol
			16:30	Innovative Wärmespeicher für BKWK- und Nahwärme-Lösungen Manuel Kirfel, STAWAG
			16:50	Diskussion Moderation: Prof. Ingo Stadler
			17:30	Ende

Permanent Poster Exhibition