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Opportunities and challenges of batteries for energy storage in the EU

EERA Expert Workshop

19 October 2016, Brussels

10:00 – 15:30

KOWI, 8th floor, Rue du Trône 98, 1050 Brussels

Europe is facing the major challenge of implementing the energy transition, as outlined by the Energy Union strategy, adopted by the European Commission and endorsed by the Council. To reach the goals proposed in the Strategic Energy Technology Plan (SET-Plan), new technologies are needed for usage and conversion, storage and distribution of primary energies.

EERA have been working together with industry and other energy stakeholders to contribute to these goals. As highlighted by the European Association for Storage of Energy, storage integration will play a key role in the coordination and value creation for the successful roll-out of storage technologies.*

A major challenge of ongoing research and industrial efforts is to connect technical research with an appreciation of economic and societal aspects. In this respect, user behaviour, acceptance of implemented technical solutions as well as an evaluation of different possible business cases for valorising offered current flexibility in electricity consumption are needed. Also, energy storage available at competitive market prices remains a missing piece in the large scale roll out of renewable energies worldwide. However, in recent years we are starting to see the deployment of storage technologies at end users gain momentum. The launch of the Tesla Power Wall batteries for home use brought attention to a development that was already underway around the world, including in some European regions.

What are the boundary conditions promoting the uptake of batteries for e-mobility, for residential storage and for stationary applications? What market mechanisms does it require and what novel materials and new technologies, including safety aspects, does it give rise to? What opportunities and challenges, including on access and affordability, does it imply for consumers? These are some of the questions the workshop will address.

This EERA expert workshop, led by the Joint Programme on Energy Storage, is a timely opportunity for bringing together researchers, industry, policymakers and other stakeholders. The goal is to exchange knowledge and experience and discuss possible future scenarios about this new trend of connecting storage devices at end users.

The meeting is by invitation only. All invited participants are expected to contribute constructively to the debate. We look forward to welcoming you to the meeting.

* *Issues Paper No.4 – DRAFT (version 17/12/2015) Energy Systems (Increase the resilience, security, smartness of the energy system)*, https://setis.ec.europa.eu/system/files/invited_contribution_edso.pdf

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Programme	
10:00	Welcome and objectives of the meeting Mathias Noe, Karlsruhe Institute of Technology (KIT) & EERA Joint Programme Energy Storage (JP ES)
10:10	EERA status: overview - Holger Ihssen, EERA Secretariat
10:20	EERA JP Energy Storage and Electrochemical Energy Storage - Mathias Noe, KIT & JP ES
10:30	<i>The policy perspective:</i> European Energy Policy Framework & Research and Innovation for Energy Storage - Henrik Dam, DG Energy, European Commission
10:45	Integrated SET-Plan – Key Action 7 – Declaration of Intent and future work - Marc Steen, Joint Research Center, European Commission
SESSION 1 11:00 – 12:00	Lithium is the present, what is the future? How can the production of future batteries and battery materials be assured and retained in Europe? <i>Chair: Frédéric Chandezon, French Alternative Energies and Atomic Energy Commission (CEA) & JP Advanced Materials & Processes for Energy Applications (JP AMPEA)</i>
11:00	Novel Materials for Electrochemical Storage – Edel Sheridan, SINTEF & JP ES
11:10	Industry perspective on new battery materials - Michael Lippert, European Association for Storage of Energy (EASE)
11:15	Sustainable battery materials - Fabrice Stassin, Energy Materials Industrial Research Initiative (EMIRI)
11:20	ROUND TABLE DISCUSSION
12:00 - 13:00	Lunch
SESSION 2 13:00 – 14:00	Are exploded batteries a phenomenon of the past? When developing new battery materials, is waste management and sustainability of the complete value chain an issue? <i>Chair: Edel Sheridan, SINTEF & JP ES</i>
13:00	Battery safety: a real concern? – Hans Seifert, KIT
13:10	The development of the battery industry in Europe will be sustainable - Claude Chanson, European Association for Advanced Rechargeable Batteries (RECHARGE)
13:15	The automotive & industrial battery value chain - collection and recycling - Rene Schroeder, Association of European Automotive and industrial Battery Manufacturers (EUROBAT)
13:20	ROUND TABLE DISCUSSION
SESSION 3 14:00 – 15:00	PV on the roof, wind turbine in the garden - rural autonomous private households are a reality. How will a secure power supply be realized in cities and for industry in the future? Will energy storage stay affordable for all? <i>Chair: Allan Schrøder Pedersen, Technical University of Denmark (DTU) & EERA JP ES</i>
14:00	Economics of battery storage – Peter Hall, University of Sheffield & EERA JP ES
14:10	R&D strategy for battery storage system integration – Kris Kessels, Flemish Institute for Technological Research (VITO)/ Battery-based Energy Storage Roadmap Project (BATSTORM) & EERA JP Economic, Environmental & Social Impacts (E3S)
14:15	Distribution grid integration of energy storage – Luciano Martini, Ricerca sul Sistema Energetico (RSE) & EERA JP Smart Grids
14:20	The consumers' perspective – Isabelle Buscke, Federation of German Consumer Organisations
14:25	ROUND TABLE DISCUSSION
15:00	Wrap-up & next steps - Mathias Noe, KIT & EERA JP ES
15:30	End of meeting