

## From Local Trials towards a **European Knowledge Community**

# WORKING GROUP STORAGE AND CROSS ENERGY CARRIER SYNERGIES

Agenda 10.-11.03.2016 | Munich | Germany

Venue:
KULTION FACTORY
Westendstraße 123 F, 2<sup>nd</sup> floor
80339 Munich, Germany



#### Concept

The energy system of the future will be characterised by a high penetration of energy from renewable energy sources. Because of the intermittency of some renewables, guaranteeing grid stability in the future makes finding and deploying new balancing mechanisms indispensable. Storage is one of the means that will become a cornerstone for a safe and stable energy supply in the future. This applies to short-term storage solutions as well as to long-term storage technologies. Still, there is a lot of research and market scale effects needed for making these technologies reliable and affordable. Further, regulation has to be adapted as well as new business models need to be found in order to make widespread application feasible.

The first workshop of the Working Group will mainly cover the following topics:

- Provision of balancing power: is this market overestimated?
- Application of short-term storage possibilities beyond provision of balancing power and maximizing PV electricity self-consumption: what is the potential in the context of historically low energy market price spreads?
- Long-term storage opportunities: which of today's niche markets can provide the necessary push and can trigger industrial scale-effects?



### DAY 1 | THURSDAY 10 MARCH 2016 Moderation: Alexander von Jagwitz & Pia Saari, ERA-Net SG+ Support Team

14:00	Registration
14:15	Welcome & introduction of participants  Alexander von Jagwitz, B.A.U.M. Consult, & Pia Saari, CLIC Innovation
14:25	A Systemic Approach to Short Term and Long Term Storage  Michael Sterner, OTH Regensburg
14:55	Introduction to ERA-Net SG+ and the Knowledge Community Helena Geißler, B.A.U.M. Consult, ERA-Net SG+ Support Team
15:10	Scope and Operating Principles of the ERA-Net SG+ Working Group Storage and Cross Energy Carrier Synergies  Alexander von Jagwitz, B.A.U.M. Consult
15:25	Form and content of an expert discussion on energy storage and connected issues Michael Stöhr, B.A.U.M. Consult
15:40	<ul> <li>Long-term storage – short presentations (5-10 min)</li> <li>Pio Lombardi, Fraunhofer IFF: Battery storage &amp; Power-to-heat</li> <li>Doris Hafenbradl, Elektrochaea GmbH: Power-to-Gas</li> <li>Andreas Zeiselmair, FfE - Forschungsstelle für Energiewirtschaft e.V.: pumped hydro storage</li> <li>Elias Spanos, ENET S.A.</li> <li>tba</li> </ul>
16:30	Coffee Break
17:00	Discussion: Which options exist for long-term storage and what is needed for paving the way?
19:00	Social Dinner



### DAY 2 | FRIDAY 11 MARCH 2016 Moderation: Alexander von Jagwitz & Pia Saari, ERA-Net SG+ Support Team

09:00	The application of short-term storage technologies beyond the provision of balancing power and maximising PV electricity self-consumption  Marcello Chiaberge, Politecnico di Torino
09:30	<ul> <li>The application of short-term storage technologies – short presentations (5-10 min)</li> <li>Klaus Mayr, egrid applications &amp; consulting GmbH (subsidiary of Allgäuer Überlandwerk GmbH)</li> <li>Antonello Monti, E.ON Energy Research Centre, RWTH Aachen</li> <li>tba</li> </ul>
10:00	Discussion: Which options exist for short-term storage and what are their prerequisites?
11:00	Coffee Break
11:30	Provision of balancing power – is the market overestimated?  Wolfram Krause, Younicos
12:00	Balancing power – short presentations (5-10 min)  • tba
12:30	Discussion: How can storage solutions contribute to guaranteeing supply and efficient grid operation now and in future?
13:00	Wrap-up, future work within the Group and next meeting
13:30	Closure



#### **ERA-Net SG+ funding partners**





ERA-Net Smart Grids Plus will be supported by funding from the European Union's Horizon 2020 research and innovation programme.