

## World Café workshop on the future of JP Energy Storage

### Scope

The Joint Program on Energy Storage have been working for 10 years organized in sub-programmes reflecting different energy storage technologies. This is a very good way to discuss, promote and develop technologies. We now see an emerging need to address general issues that are relevant for all technologies, and it is time to discuss some of these issues and ideas more. Therefore, we are organizing an event to brainstorm and bring up topics and ideas that are relevant across the different energy storage technologies and applications. We will use the World Café method to promote the discussions and brainstorming. This will be an in-person meeting only open to JP ES members.

### World Café method

The World Café methodology is a simple, effective, and flexible format for hosting large group dialogue. JP ES will use the method to discuss the future of the Joint Programme with the focus on cross-cutting activities between the single sub-programmes and the way to strengthen the solution and application-oriented exchange. There will be several tables like in a real café. Different topics will be discussed at each table. There will be a moderator at the table. All participants will circulate between tables to visit all.

### Topics to be discussed

There will be three topics related to different applications of energy storage, two general cross-cutting topics and one open topic to be discussed:

- Mobility applications of energy storage. There is an increasing need in making all kinds of transport emission-free, leading to a strong need for mobile energy storage that are cost-effective. *Table moderator: Margherita Moreno, ENEA*
- Buildings, industrial and residential applications of energy storage. It is challenging to make buildings, households and industries carbon neutral or even negative. Many applications for energy storage are needed in this sector. *Table moderator: Salvatore Vasta, CNR ITAE*
- Grid-connected storage. Today, most power system has dispatchable units that offer flexibility without a lot of storage needs. As more and more variable renewables are connected to the grid, there is a strong increasing need for grid-connected storage at timescales ranging from seconds to seasons. *Table moderator: Atle Harby, SINTEF Energy Research*
- Digitalization of energy storage technologies. Automation, artificial intelligence, smart metering and all kinds of digital monitoring and control of energy and energy storage technologies are necessary to meet challenges and make all energy storage systems more efficient, better and smarter. *Table moderator: Giovanna Cavazzini, University of Padova*
- Sustainability issues in energy storage. All aspects related to economic, environmental and social factors in energy storage can be discussed. *Table moderator: Manuel Baumann, KIT*
- Future of EERA Joint Program on Energy Storage. This is an open topic where participants can bring their wishes and ideas to the table. *Table moderator: Olga Sumińska-Ebersoldt, KIT*

At each table, a short introduction to the topic will be given by the moderator. Important questions to discuss are, state-of-the-art, research needs, industrial needs, future potential and how to generate political and public interest, funding and further work.