

# EERA Joint Programme on Energy Storage

## FACTSHEET

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| <b>Joint Programme Coordinator</b>      | Stefano Passerini     |
| <b>Joint Programme Manager</b>          | Myriam E. Gil Bardaji |
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| <b>Number of full/associate members</b> | 33                    |

### Why a Joint Programme on Energy Storage?

As Europe moves towards a greater share of energy generated by renewable energy sources such as wind power and solar photovoltaic, our energy systems will require a greater degree of flexibility to adjust for the fluctuations in energy production. Energy storage is - in combination with other technologies - well suited to respond to this challenge and ensure a continued security of energy supply at any time. The JP ES is the first pan-European programme to bring together all major fields of energy storage research and therefore represents a unique opportunity to align research and development activities in the field.

### JP on Energy Storage – vision and objectives

This JP strongly fosters the efficient development of new energy storage technologies and supports the SET-Plan objectives and priorities by “pooling and integrating activities and resources including international partners” on all levels of the value chain. From the collaborations within the JP ES and with other joint programmes, synergies result and a long-term, durable integration of European research capacities in energy storage is achieved. Strong links to industrial partners support the transfer of research outcomes to innovation and products in order to establish a strategic European leadership in energy storage.

### More information

[www.eera-es.eu](http://www.eera-es.eu)



## JP on Energy Storage sub-programmes

### Sub-programme 1: Electrochemical Energy Storage

Coordinated by Edel Sheridan (SINTEF), deputy: Jesús Palma (IMDEA)

The aim of the SP1 is to create an R&I battery eco-system in which research organizations can come together to create synergies, improve the quality of research through collaboration and provide an impartial expert forum across the entire value chain of battery technology.

### Sub-programme 2: Chemical Energy Storage

Coordinated by Adelbert Goede (DIFFER), deputy: Roland Dittmeyer (KIT)

Renewable electrical energy is converted and stored in high energy density chemicals providing long term (seasonal) and large scale (EJ) energy storage for back conversion into power as well as liquid and gaseous fuels for sustainable transport and chemicals.

### Sub-programme 3: Thermal Energy Storage

Coordinated by Abdessamad Faik (CIC Energigune)

The SP3 aims at developing high performance thermal energy storage technologies for applications strategic to the EU member states. The sub-programme covers three main activities related with materials, design concepts and storage integration.

### Sub-programme 4: Mechanical Energy Storage

Coordinated by Atle Harby (SINTEF), deputy: Giovanna Cavazzini (University of Padova)

The mechanical storage sub-programme includes pumped storage and reservoir hydropower, flywheels and compressed and liquid air energy storage. Mechanical energy storage can be applied at temporal resolution ranging from mili-seconds to months.

### Sub-programme 5: Superconducting Magnetic Energy Storage

Coordinated by Xavier Grandos (CSIC), deputy: João Murta Pina (FCT/NOVA)

High Temperature Superconductors enable the production of high energy density magnetic coils at reasonable temperatures being a robust, efficient and fast energy storage system ideal for hybridation. SP5 focuses on the cost viability and reliable integration in applications.

### Sub-programme 6: Energy Storage: Techno-Economics and Stability

Coordinated by Manuel Baumann (KIT), deputy: Marco Ferraro (ITAECNR)

SP6 has an important role by cross-linking the individual technologies addressed in the techno centric SPs. It provides feedback to the five SPs and the stakeholders regarding indicators like cost, environmental impacts, resource demand or recycling potential.

