SMHYLES

SAFE, SUSTAINABLE AND MODULAR HYBRID SYSTEMS FOR LONG-DURATION ENERGY STORAGE AND GRID SERVICES







PROJECT PARTNERS

- Fondazione Bruno Kessler
- Technology Centre for Energy (TZE) University of Landshut
- Fraunhofer Gesellschaft zur Foerderung der angewandten Forschung eV
- Bavarian Research Alliance (BayFOR)
- CIRCE – Technology Centre
- Gebr. SCHMID GmbH
- Charge2C-NewCap Lda
- HORIEN Salt Battery Solutions
- Capwatt SA
- Capwatt Services Sa
- Graciólica Unipessoal Lda
- Inesc Tec - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciencia
- Univerzita Tomase Bati ve Zline
- RINA Consulting Spa
- COMETE ENGINEERING
- Indrivetec AG
- EDA - Electricidade Dos Acores SA

EU project SMHYLES develops novel salt- and water-based hybrid energy storage systems (HESS) on an industrial scale.

MAIN OBJECTIVES

One of the greatest challenges of the 21st century is the transition to climate-neutral energy sources.

Each storage technology has technical and economic characteristics that are ideally suited for a specific application. These characteristics include, for example, energy and power density, reaction time, environmental sustainability, and safety.

Redox flow and salt batteries have a large storage capacity but can only be charged and discharged slowly. A supercapacitor, on the other hand, has fast charging times but cannot store large energy quantities over a long period of time.

Only the efficient combination of both functionalities provides the necessary performance and flexibility in use.

The central goal of the SMHYLES project is to develop and demonstrate such innovative, safe, and sustainable hybrid energy storage systems on an industrial scale.

In SMHYLES, a water-based supercapacitor and, either a redox flow battery or a salt battery, are to be combined to create innovative hybrid energy storage systems.

CONSORTIUM

The consortium includes 16 partners from seven countries.

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