



POWERING THE FUTURE

Exploring the Role of Innovative Hybrid Energy Storage Systems in Green Energy Empowerment

CONCEPT NOTE & AGENDA



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POWERING THE FUTURE: EXPLORING THE ROLE OF INNOVATIVE HYBRID ENERGY STORAGE SYSTEMS IN GREEN ENERGY EMPOWERMENT

PUBLIC DEBATE

DATE AND TIME

June, 22nd, 2023, 13:30 – 14:30 CET

VENUE (HYBRID EVENT)

Universidad Carlos III de Madrid – Puerta de Toledo Campus

Grade room

Ronda de Toledo, 1

28005 Madrid/ Spain

How to get there:

<https://shorturl.at/tGK46>

<https://shorturl.at/uvUV5>

Platform: Zoom Webinar. A link will be provided at a later stage.

CONCEPT NOTE

The i-STENTORE workshop aims to delve into the concept of innovative hybrid energy storage systems and their crucial role in enabling green energy empowerment. This workshop will present the objectives, technical framework, and valuable insights derived from i-STENTORE pilots. It will facilitate a lively discussion among experts about the vast potential of energy storage technologies.

OBJECTIVES

The workshop's primary objectives are as follows:

1. Highlight the significance of hybrid energy storage systems in advancing the transition to sustainable and green energy solutions.
2. Share knowledge and experiences gained from the i-STENTORE project pilots, which involve the deployment and integration of various versatile energy storage technologies.

3. Foster collaboration and partnerships among industry experts, researchers, policymakers, and investors to accelerate the adoption of hybrid energy storage systems.
4. Identify challenges, opportunities, and best practices for maximising the effectiveness and efficiency of energy storage solutions in different applications and contexts.

TECHNICAL FRAMEWORK

The workshop will provide a comprehensive overview of the technical framework underpinning innovative hybrid energy storage systems. Key topics for discussion may include:

- A. Overview of different energy storage technologies (e.g. battery storage systems, supercapacitors, hydrogen storage, thermal storage in industrial furnaces, pump-hydro storage) their combinations in hybrid storage systems and their characteristics.
- B. Integration and optimization techniques for hybrid energy storage systems to support the distribution and transmission grids and enhance their overall performance, reliability and flexibility.
- C. Advanced control and management strategies to ensure seamless operation, grid stability, and effective utilisation of stored energy.
- D. Synergies between hybrid energy storage systems and renewable energy sources, such as solar and wind, to overcome intermittency challenges and enable a more sustainable energy mix.
- E. Evaluating economic viability, cost-benefit analysis, and potential revenue streams associated with hybrid energy storage deployments.
- F. Environmental and sustainability considerations in the design, manufacturing, and end-of-life management of energy storage systems.
- G. Regulatory updates to enable the multi-purpose use of storage and to promote its deployment

INSIGHTS FROM i-STENTORE PILOTS

The workshop will showcase real-world insights and lessons learned from the i-STENTORE project pilots. These pilots involve the deployment and integration of versatile energy storage technologies in various applications.

LIVELY DISCUSSION

The workshop will facilitate an interactive and engaging discussion among participants, focusing on:

- a. Exploring the untapped potential of energy storage technologies and their role in achieving a clean, reliable, and decentralised energy future.
- b. Identifying barriers and opportunities for scaling up hybrid energy storage systems, including regulatory frameworks, market incentives, and public acceptance.

- c. Examining emerging trends, innovations, and breakthroughs in energy storage technologies and their implications for future deployments.
- d. Collaborative brainstorming on novel applications and use cases of hybrid energy storage systems across different sectors and regions.
- e. Sharing experiences and best practices from diverse stakeholders, including utilities, project developers, financiers, and policymakers.

In conclusion, the Powering the Future workshop organised by i-STENTORE will contribute to knowledge exchange, collaboration, and exploration of innovative hybrid energy storage systems. Through the presentation of Project pilots, technical discussions, and interactive sessions, the workshop aims to accelerate the transition to a sustainable, green energy future empowered by advanced energy storage solutions.

AGENDA

TOPIC	PRESENTER	TIME SLOT
Welcome	ANA LUÍSA ALVES, INNOVATION MANAGER, F6S	13:30 – 13:35
Setting the scene: reflections on thematic and i-STENTORE presentation	NIKOLAOS BILIDIS, EUROPEAN DYNAMICS, i-STENTORE PROJECT COORDINATOR	13:35 – 13:40
i-STENTORE Demos pitch session		
Demo 1 – Slovenia	MIHA SMOLNIKAR, COMSENSUS	13:40 – 13:55
Demo 2 – Portugal (Madeira Island)	CARLOS MOREIRA, INESC	
Demo 3 – Spain	CAROLINA MARIA MARTIN SANTOS,	
Demo 4 – Italy	MATTIA RIBERA, UNINA	
Demo 5 – Luxembourg	PEDRO RODRIGUEZ, LIST	
Panel discussion and Q&A Collecting experiences on challenges and successful measures to understand the Role of Innovative Hybrid Energy Storage Systems in Green Energy Empowerment	MODERATOR: ANA LUÍSA ALVES, INNOVATION MANAGER, F6S PANELLISTS: PEDRO RODRIGUEZ, LIST; GEORGE TRACHANAS, NTUA; ZSUZSANNA PATO, RAP; CARLOS MOREIRA, INESC; SANTIAGO ARNALTES, UC3M; NIKOS BILIDIS, ED	13:55 – 14:25
Wrap-up and closure	NIKOLAOS BILIDIS, EUROPEAN DYNAMICS, i-STENTORE PROJECT COORDINATOR	14:25 – 14:30

IMPORTANT LINKS

- Registration:
Link <https://www.f6s.com/i-stentore-powering-the-future>
- Remote access:
Link **TBC**
- Questions & Answers:
Link <https://app.sli.do/event/4VjZDyui2PF1YZGUnYfxaJ/live/questions>