



FlexCHES

Flexibility services based on Connected and interoperable
Hybrid Energy Storage System

December 2024
Press Release No. 3

FlexCHES Project Advances Renewable Energy Solutions through Collaborative Initiatives

The FlexCHES project continues to make strides in developing innovative energy solutions with a series of significant events in 2024, including two **Cluster Webinars**, an **Assembly Meeting** in Turkey, and multiple **Living Labs** across its pilot sites.

Successful Webinars Address Key Themes in Energy Integration

The FlexCHES project, in partnership with EU Projects “PARMENIDES” and “InterSTORE”, successfully hosted two cluster webinars, in October and November 2024, that explored critical themes surrounding interoperability and the integration of distributed energy resources.

The first webinar, titled “Interoperable Concept for the Energy Communities,” focused on the essential role of interoperability in advancing renewable energy communities and integrating distributed resources such as hybrid storage systems. Experts from participating projects discussed the importance of seamless communication and integration across various energy technologies.

Nikolaj Candellari, Project Manager and Data Scientist at CyberGrid, addressed the challenges of connecting community assets using the IEEE 2030.5 protocol. Dr. Mark Stefan, Research Engineer and Thematic Coordinator for Power System Digitalization at AIT, along with Vieri Emiliani, Head of Innovation at Maps Group, provided insights into the development of energy management systems within the PARMENIDES project. Dr. Habib Nasser, an expert in Mechatronics and Smart Systems, highlighted how the interoperability of hybrid storage systems and flexible loads enhances the sustainability and profitability of energy communities. The presentations and discussions were moderated by Alexandre Lucas, Energy Systems Senior Researcher at InescTec.

The panel discussion that followed was moderated by Ludwig Karg from B.A.U.M. Consult GmbH, fostering engaging conversations on interoperability, energy communities, and hybrid energy storage systems.



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The second webinar, titled "Implementation of Data Space and Interoperability for Flexibility Services using DES," provided participants with a comprehensive understanding of data spaces, focusing on architecture, interoperability, ecosystem development, and standardization in smart energy systems.

Tim Farham from TOSHIBA, a key partner in the FlexCHES Project, presented an in-depth overview of the Asset Administration Shell (AAS) and Battery Passport data models, highlighting their role in enabling cross-domain digital twin interoperability. Léo CORNEC, Innovation Project Manager at Trialog, shared insights into the PARMENIDES project, underscoring the critical importance of ontologies and semantic interoperability in enabling better communication between diverse energy systems and stakeholders. Ferdinando Bosco, representing Engineering Group in the InterSTORE Project, showcased the transformative potential of data space approaches in the digitalization of energy systems.

Following the presentations, Dr. Mark Stefan, Research Engineer and Thematic Coordinator for Power System Digitalization at AIT, moderated a lively panel discussion, allowing participants to engage with the speakers and explore the implications of data interoperability in flexibility services.

16 October 2024 |
10:00 - 11:50 CET
ONLINE

CLUSTER WEBINAR

Interoperable concept for the energy communities. Different perspectives from the InterSTORE-FLEXCHES-PARMENIDES projects

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interstore FlexCHES PARMENIDES

6th of November, 10AM CET
Online

FlexCHES-InterSTORE-Parmenides Cluster Webinar

Implementation of Data Space and Interoperability for flexibility services using DES

PANEL DISCUSSION

MARK STEFAN, AIT

Tim Farham, Toshiba
Ferdinando Bosco, Eng Group
Léo CorneC, Trialog

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Assembly Meeting in Turkey Highlights Collaboration and Progress

On October 9, 2024, the FlexCHES project convened an assembly meeting in Çanakkale, Turkey, bringing together project partners and stakeholders for collaborative discussions. Each partner provided updates on their respective work packages, sharing progress, achievements, and ongoing initiatives since the project's launch. The meeting served as a platform for knowledge exchange and strategic alignment, strengthening the partnerships and ensuring that all parties were working toward common objectives.

In addition to the presentations, the assembly featured a series of technical workshops focused on critical areas such as optimization, interoperability, and asset integration. Led by industry experts, these workshops facilitated in-depth discussions, offering valuable insights into current trends, challenges, and emerging solutions in energy systems. The collaborative atmosphere of the meeting underscored the shared commitment of all partners to advancing the project's goals and driving the development of sustainable energy solutions.



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Engaging Communities through Living Labs

FlexCHES hosted a series of Living Labs across its pilot sites, offering stakeholders the opportunity to collaborate on innovative energy solutions in real-world environments. These online Living Labs serve as multi-stakeholder platforms that bring together diverse participants to discuss and align on the best strategies for developing solutions.

The project has established five Living Labs, one at each pilot site: the Bullas-Murcia site (Spain), the Wales site, the Slovenian site, the Turin site (Italy), and the Gökçeada site (Turkey). The FlexCHES Living Labs embody the quintuple helix model of public-private-public partnerships (PPPP), promoting community engagement and fostering innovation. By connecting various stakeholders, these labs enhance the visibility and competitiveness of innovative storage technologies.

Although the FlexCHES Living Labs took place during a phase when fully developed solutions were not yet available, the discussions focused on initial concepts and plans for each pilot case. Stakeholder feedback proved invaluable in identifying potential solutions and challenges, ensuring the FlexCHES project not only advances energy solutions but also motivates stakeholders by providing relevant insights into the project's architecture and innovations. This approach aims to boost the visibility and competitiveness of innovative storage capabilities and Virtual Energy Storage Systems (VESS) across Europe.

Looking Ahead: Future Engagement and Innovation

The FlexCHES project plans to organize additional stakeholder engagement events, including webinars and public trainings, to foster collaboration. These activities will aid in building exploitation strategies and improving solutions before finalization. Furthermore, an International Living Lab will be conducted toward the end of the project to showcase the solutions for each pilot case and facilitate global engagement with the outcomes.



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