



NEWSLETTER #5 | September 2024

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Editorial

Dear Reader,

Welcome to the fifth edition of the ISLANDER project newsletter! We are excited to share the latest updates as we continue our journey toward sustainable energy solutions for islands.

In this issue, you'll find an interview with Begoña Gomez, where she discusses the Li-Ion Storage Systems installed as part of the project. Additionally, we provide updates on the establishment of an energy community on Borkum, insights from the replication board webinar, and information on upcoming events.

To stay updated about the latest developments of the ISLANDER project you can also check out our website www.islander-project.eu or follow us on [LinkedIn](#) and [X](#), where you will find additional news and insights about the ISLANDER project.

Enjoy reading this fifth issue,

The ISLANDER team



Project Insights: How do Li-Ion Storage Systems Support Borkum's Energy Transition?

The installation of multiple technologies aimed at optimizing the use of renewable energy on Borkum is well underway as part of the ISLANDER project. This includes a range of household and building solutions, a hydrogen storage system, a seawater district heating system, and a power-intensive energy storage system. All of these technologies will be integrated and managed through a Smart IT platform developed by project partner AYESA.

In an interview with Begoña Gomez, project manager at [cegasa](#), she discusses the role that Li-Ion storage systems play in the ISLANDER project and how they contribute to the island's decarbonization goals.



What is the function of the Li-Ion Storage System and what role does it play in the ISLANDER project?

The Li-Ion Storage System is a type of rechargeable battery technology used to store electricity, typically generated from renewable sources such as wind and solar power. This stored energy can be utilized during periods when renewable sources are not producing energy, such as at night or during calm weather, as well as during peak demand periods.

In the ISLANDER project, the Li-Ion Storage Systems work alongside other technologies to ensure that energy from local renewable sources is effectively stored and utilized. This includes balancing supply and demand and stabilising the grid.

In other words, Li-Ion Storage systems facilitate the integration of renewable energy, provide short-term backup power, and help reduce the island's dependence on fossil fuels. This contributes to a stable, reliable power supply and supports Borkum's transition to a decarbonised and self-sufficient energy system. The ISLANDER project is therefore a critical component of the island's efforts to become carbon neutral by 2030.

Where on Borkum will the Li-Ion Storage Systems be installed?

The Li-Ion Storage Systems will be strategically installed across various locations on the island of Borkum. This includes the installation of 30 residential systems and 3 building systems, each integrating photovoltaic panels with Li-Ion batteries to provide local energy storage. Additionally, the ISLANDER project will introduce hybrid energy storage systems designed for peak shaving and intra-day storage, combining ultracapacitors with Li-ion batteries to improve energy management.

How much storage capacity will the systems provide to the island?

Each home system will have a 13 kWh battery, providing a total storage capacity of 194 MWh per year, while each building system will have a 70 kWh battery, providing a total storage capacity of 244 MWh per year. This ensures a reliable source of energy when needed. All system components, including the batteries, will be managed by an intelligent IT platform for local energy balancing and aggregation.

In addition, the ISLANDER project will introduce advanced hybrid storage solutions. These include ultracapacitors capable of providing up to 1 MW of power during peak demand periods. Combined with 1 MWh lithium-ion batteries that store energy for several hours or days, these systems will efficiently manage energy use and reduce the need for costly grid upgrades.

Who will benefit from the installations?

The entire island community will benefit from a more stable, resilient and efficient energy grid, reduced greenhouse gas emissions, and a significant step towards achieving the island's goal of becoming emission-free by 2030. The

innovative technologies and systems will contribute to a more resilient and sustainable energy infrastructure. In addition, the residents of the 30 houses and the occupants of the three larger buildings will benefit from reduced energy costs, increased energy reliability and a cleaner energy supply.

When will the installations be completed?

Although the installation schedule has been delayed due to late delivery of some electronic components, the ISLANDER project team is working diligently to finalise the schedule. Updates on the completion date will be provided as the project progresses.

Arrival of the Hydrogen Storage System on Borkum

The units of our Hydrogen Storage System finally arrived on the island of Borkum at the end of September. Developed by [Idener](#) and provided by [Solenco Power NV](#), the system is designed to store renewable energy when demand is low and supply it during peak consumption by converting hydrogen. With a 12-hour running time, the system can produce up to 6 kg of hydrogen per day, enhancing the island's renewable energy penetration and self-consumption. Once fully installed, the system will be connected to the Smart IT platform, which acts as an aggregator and distributed energy resources management system.



Replication Board Webinar for EU islands decarbonisation

Our project partner DAFNI represented the ISLANDER project at the Replication Board for EU Islands Decarbonisation hosted by MAESHA. The event brought together 12 island decarbonisation projects on 18 September 2024. The webinar focused on the wide range of solutions for decarbonising energy systems specifically for island contexts and the concrete tools to support the large-scale replication of these innovations developed by these European projects.



An energy community for Borkum – New developments

The ISLANDER project is helping to establish an energy community on the island of Borkum, empowering local citizens to actively participate in the island's energy transition. Initial workshops introduced the concept and benefits of an energy community, and sparked interest among residents. Following these workshops, a small group of committed citizens started to develop initial project ideas. Read more about the progress.



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ISLANDER Project Partner Meeting in Vitoria-Gasteiz

At the beginning of March, the ISLANDER project partners gathered in Vitoria-Gasteiz for their bi-annual consortium meeting. Hosted by project partner Cegasa, the meeting served as a platform to update partners on the progress of the different work packages and to discuss open issues. This was particularly important in view of the upcoming milestones, the completion of the installations on Borkum.



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Events to look forward to




EU Regions Week 2024: The Island Regions and the Upcoming EU Legislative Cycle

 09 Oct 2024  Brussels, Belgium  [More information](#)

ROBINSON H2020 Training Module

 23 Oct 24  online  [More information](#)

ENLIT Europe 2024

 22 - 24 Oct 2024  Milan, Italy  [More information](#)

More events can be found on the website of [BRIDGE](#) and the [Clean Energy for EU Islands Secretariat](#).

CONTACT

info@islander-project.eu



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