AGISTIN

Advanced Grid Interface for Innovative STorage INtegration

2023-2026

ABOUT

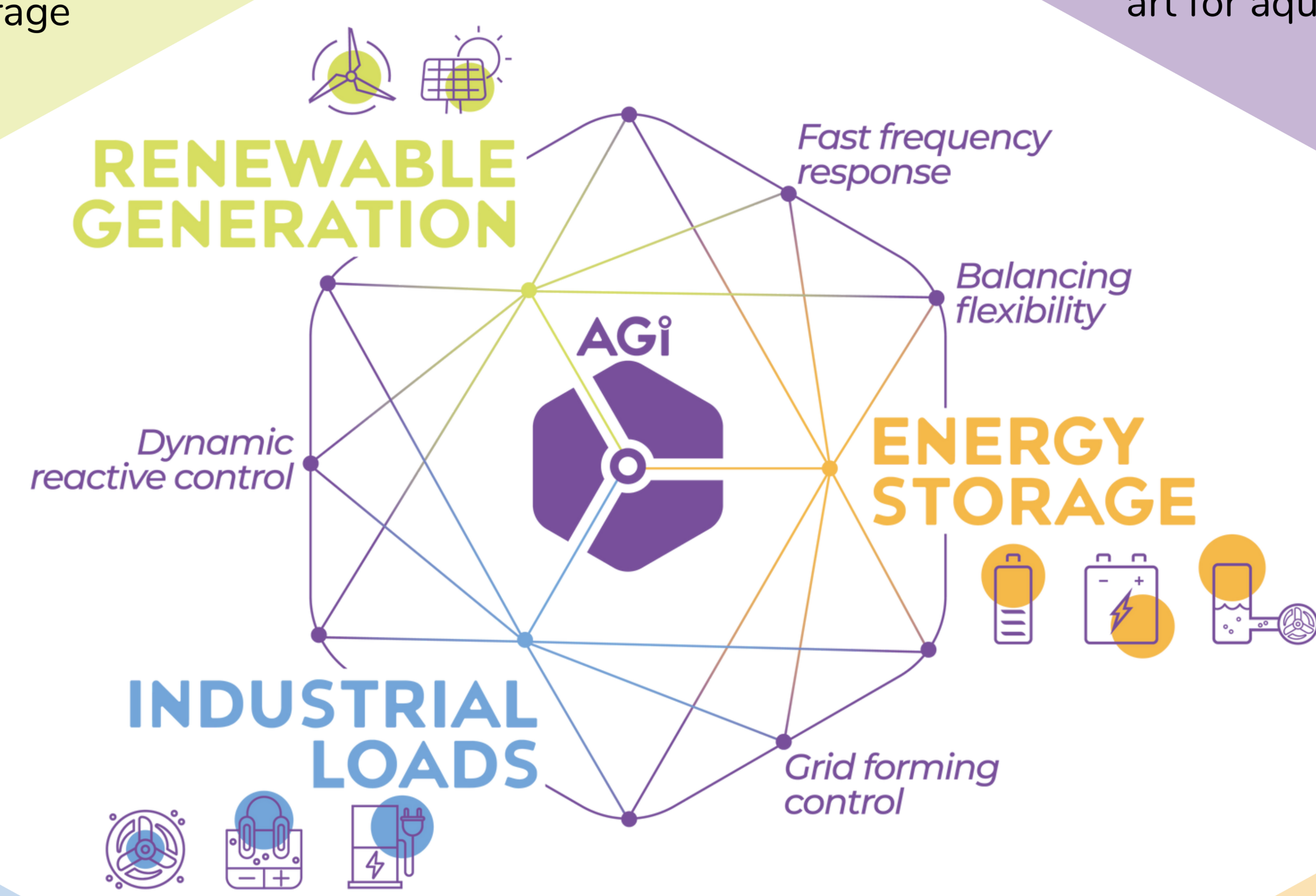
Rapid decarbonisation of industry through electrification, the growth of renewables, and the need for grid stability present a unique opportunity for new forms of storage and integration schemes to emerge.

AGISTIN will enable industrial grid users to rapidly deploy renewables through advanced integration of innovative energy storage technologies at the interface with the grid.

OBJECTIVES

- To develop new forms of energy storage that meet grid needs for short-duration flexibility and stability;
- To reduce the impact of new, large demand on the grid;
- To reduce costs for large grid users through innovative storage integration.

This project will exceed the state of the art for aqueous batteries, use of irrigation systems as energy storage, grid interface designs and provision of advanced grid services from large load users.



BENEFITS

- Increased flexibility and resilience of the energy system.
- Provided solutions to short-duration energy storage needs.
- Delivered efficient solutions for transporting & transforming energy (on-shore & off-shore).

AGISTIN results in reduced grid connection for industrial grid users, reducing H2 production cost by 10% and improved grid stability through advanced grid services, that enable grids to run with 100% renewables.

TECHNOLOGIES

The innovative storage technologies directly addressed in the project include aqueous electrochemical recuperators, with properties between supercapacitors and batteries, use of irrigation systems as energy storage and aluminium ion batteries. These technologies will be developed to test and demonstrate in the target use cases, resulting in TRL level increases for each.

These technologies will be demonstrated in two demonstrations and three test activities centred around renewable hydrogen electrolysis, irrigation pumping, and fast EV charging.

The consortium consists of 14 members from 9 countries , coordinated by EPRI Europe.

Funded by the European Union

FUNDING

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Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

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