

AENEAS Testimonial – innovative energy storage systems onboard vessels

Funded under Horizon Europe ([HORIZON-CL5-2022-D5-01-02](#)) and running from 2023 to 2026, the AENEAS project focuses on innovative energy storage systems onboard vessels. Its core ambition is to expedite the adoption of advanced electrification solutions across the shipping industry. To achieve this goal, AENEAS is advancing the development of innovative electric energy storage solutions tailored for waterborne transport. These solutions go beyond conventional battery technologies and include advanced concepts such as (semi)solid-state battery and supercapacitor. In parallel, the project is creating simulation tools and digital-twin platforms to support the optimal integration of new energy storage systems into vessels, assess their impact on overall system efficiency, and quantify potential reductions in greenhouse gas emissions.

The project is coordinated by Flanders Make and brings together 14 partners from 8 European countries. The consortium combines the expertise of research institutes, universities, and industrial stakeholders across the maritime and energy storage sectors, including two Flanders-based organizations. Flanders Make as a partner contributes to the optimization of energy/power system of the use case vessels and development of energy storage solutions at system level for testing and validation. Avesta Holding contributes to AENEAS based on their expertise in battery manufacturing.

Project results demonstrate that integrating next-generation batteries and supercapacitors combined with optimized energy management strategies can substantially reduce emissions in maritime applications. For large vessels in particular, the findings show that significant environmental benefits arise from achieving zero-emission operation during port stays and reducing emissions during manoeuvring phases. The project has identified medium- and long-term market segments where AENEAS technologies offer strong deployment potential, expanding the understanding of future fleet opportunities.



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URL <https://www.project-aeneas.eu> **LINKEDIN** [AENEAS EU Project](#)