



## Press Release

BERGEN, 23 APRIL 2026



### A GROUNDBREAKING MARINER PARTNERSHIP KICKS OFF TODAY IN BERGEN

A new generation of hydrogen fuel cell — powerful enough to run large ships completely without emissions — is at the heart of a European initiative launched this week in Bergen, Norway.

Industry leaders and researchers from all around Europe meets in Bergen for the kick-off of the MARINER project. Their goal is, over the next 4 years, to develop a 1 MW fuel cell system that can be built in modules, making it suitable for a wide range of vessels — from small ships to large ocean-going vessels. This matters because today's maritime transport relies almost entirely on fossil fuels. Shipping carries around 90% of global trade and accounts for roughly 3% of global greenhouse gas emissions. At the same time,

recent geopolitical tensions have highlighted Europe's dependence on fossil fuels and the need for more resilient, homegrown energy solutions.

Co-funded by the European Union through the Clean Hydrogen Partnership, MARINER aims to develop, validate and demonstrate a modular 1 MW PEM (proton-exchange membrane) fuel cell system, scalable to  $\geq 10$  MW. The system is designed to meet strict maritime requirements in terms of performance, durability, safety, certification and cost — key barriers that have so far limited large-scale adoption..

*“Launching Mariner in such a collaborative and engaging setting sets the tone for the entire project,”* said Ulf Jakob Flø Aarsnes project coordinator from NORCE. NORCE is a norwegian research Institute and is responsible for coordinating this project.

*“By combining technical discussions with interactive formats, we are building not just a project, but a strong partnership capable of delivering impactful innovation”,* Flø Aarsnes adds.

### Why the MARINER project matters

Decarbonising shipping is one of the toughest challenges in the energy transition. Without significant action, maritime emissions could increase by 50–250% by 2050.

In response, the European Union has introduced major regulatory measures, including the extension of the **EU Emissions Trading System** (EU ETS) to maritime transport in 2024<sup>1</sup>, putting real price on CO<sub>2</sub> and the **FuelEU Maritime regulation**<sup>2</sup>, which will progressively limit the greenhouse gas intensity of marine fuels, effectively banning fossil-only propulsion by 2050.

In this context, hydrogen-based fuel cells are emerging as a key solution—but scaling them up to the size, reliability and cost required by the maritime industry remains a major challenge.

MARINER directly addresses this gap. By bringing together the full value chain—from component developers to ship integrators and research organisations—the project aims

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<sup>1</sup> [https://climate.ec.europa.eu/eu-action/carbon-markets/about-eu-ets\\_en](https://climate.ec.europa.eu/eu-action/carbon-markets/about-eu-ets_en)

<sup>2</sup> [https://transport.ec.europa.eu/transport-modes/maritime/decarbonising-maritime-transport-fueleu-maritime\\_en](https://transport.ec.europa.eu/transport-modes/maritime/decarbonising-maritime-transport-fueleu-maritime_en); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1805>



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to move beyond small-scale demonstrators and enable industrial, market-ready solutions.

***In short: MARINER is turning hydrogen technology into something robust, practical and ready for real ships — a key step toward zero-emission shipping.***

#### **Kick-off in Bergen: building a European collaboration**

From April 22–23, 2026, the project officially kicks off at NORCE's premises in Bergen, bringing together the thirteen partners. The meeting combines plenary sessions with interactive workshops designed to foster collaboration, align objectives and build strong relationships among partners.

The first day concludes with a visit to Bryggen, the city's iconic UNESCO World Heritage Site. The old wharf stands as a testament to Bergen's central role in the Hanseatic League's trading network from the 14th to the mid-16th century. This cultural experience reinforced the project's connection between maritime heritage and future innovation, linking centuries of seafaring tradition with the transition toward clean, sustainable shipping.

Over the coming months, Mariner partners will focus on advancing system design, integration and validation activities, including the development of a modular fuel cell architecture, testing under different maritime operating conditions.

#### **About MARINER**

MARINER is a Horizon Europe project dedicated to enabling the next generation of zero-emission maritime power systems. By developing scalable PEM fuel cell solutions and facilitating their industrialisation, Mariner aims to unlock multi-megawatt applications for a wide range of vessels. The project contributes to the European Green Deal and the EU's Fit for 55 objectives, strengthening Europe's industrial leadership in clean maritime technologies and support the transition toward climate-neutral shipping.



- GRANT AGREEMENT ID: 101251528
- FULL NAME: MARINER Partnership – Validation and Demonstration of a Reliable, Efficient, Scalable, and Low-Cost PEM Fuel Cell System
- CALL TOPIC: HORIZON-JU-CLEANH2-2025-03-03 Reliable, efficient, scalable and lower cost 1 MW-scale PEMFC system for maritime applications
- BUDGET: €6 999 954,84
- DURATION: 48 months

### For more information

- NORCE webpage: [MARINER Partnership – Validation and Demonstration of a Reliable, Efficient, Scalable, and Low-Cost PEM Fuel Cell System - Norce](#)
- Clean Hydrogen Partnership: [https://www.clean-hydrogen.europa.eu/index\\_en](https://www.clean-hydrogen.europa.eu/index_en)
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