



# INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality

**Swap2Zero: Swap2Zero**

The Innovation Fund is 100% funded by the EU Emissions Trading System

## | Project Factsheet

The project aims to build the first zero-emission ocean-going cruise ship capable of carrying 400 persons for 30 days. The boat will integrate a combination of renewable energy sources such as wind, solar, renewable hydrogen (RFNBO), and liquefied methane by using Proton Exchange Membrane Fuel Cells (PEMFC) and Solid Oxide Fuel Cells (SOFC). Coupled with a Wind Assisted Propulsion System (WAPS) contributing to 50% of the propulsion energy consumption, the ship aims to reduce greenhouse gas (GHG) emissions by more than 80% compared with reference levels. Swap2Zero's multi-energy and eco-design model attempts to solve maritime decarbonisation with a project based on energy sobriety, energy efficiency and optimal use of renewable energies.

Swap2Zero combines various innovative technologies into the maritime sector, demonstrating the feasibility of their integration and performance and overcoming technical and regulatory hurdles. It contributes to the scalability of high-power fuel cells

### COORDINATOR

ARVAG

### LOCATION

France

### CATEGORY

Mobility (MOB)

### SECTOR

Maritime

### AMOUNT OF INNOVATION FUND GRANT

EUR 40,000,000

### EXPECTED GHG EMISSIONS AVOIDANCE

104,089 tonnes CO<sub>2</sub> equivalent

### STARTING DATE

01 April, 2025

### FINANCIAL CLOSE DATE

30 September, 2026

### ENTRY INTO OPERATION DATE

31 March, 2030

### CALL NAME

InnovFund-2023-NZT

\* Calculated vs. the [2021-2025 ETS benchmark](#) of 6.84 tCO<sub>2</sub>e/tH<sub>2</sub>, not taking into account additional carbon abatement due to substitution effects in the H<sub>2</sub> end use application, i.e. conservative estimate.

within the range of 2 megawatts (MW) combined with Batteries Energy Storage System (BESS) and the integration of new energy pathways like liquid hydrogen and solar power. The project offers an efficient vessel design with a good balance of aerodynamic and hydrodynamic forces that is efficient in all hybrid navigation modes.

The project supports France's national low-carbon strategy and the European Renewable Energy Directive, promoting sustainable fuel use and encouraging new regulations for innovative maritime technologies.

Swap2Zero will generate significant economic spin-offs, creating more than 300 direct jobs. In addition, it is estimated that up to 1 650 indirect jobs could be created in related sectors, such as suppliers and support services. By building the vessel in Europe using predominantly local technologies, the project will help strengthen regional skills and develop value chains for the shipping and renewable fuels sectors. There is a strong scalability potential for various typologies of vessels, which will reduce adoption costs. The project's high visibility could encourage the widespread deployment of its technology.

## | Participants

|                                                                                                                       |        |
|-----------------------------------------------------------------------------------------------------------------------|--------|
| ARVAG                                                                                                                 | France |
| COMPAGNIE DU PONANT                                                                                                   | France |
| BUREAU VERITAS MARINE & OFFSHORE REGISTRE<br>INTERNATIONAL DE CLASSIFICATION DE NAVIRES ET DE<br>PLATEFORMES OFFSHORE | France |

Additional information on the [EU Funding and Tenders Portal](#).