RH_2IWER

RENEWABLE HYDROGEN FOR INLAND WATERWAY EMISSION REDUCTION

Project ID	101101358
PRR 2025	Pillar 3 - H_2 End Uses - Transport
Call Topic	HORIZON-JTI-CLEANH$_2$-2022-03-05
Project Total Costs	20 531 971.50
Clean H_2 JU Max. Contribution	14 998 541.38
Project Period	01-03-2023 - 31-08-2027
Coordinator Beneficiary	TEKNOLOGIAN TUTKIMUSKESKUS VTT OY, FI
Beneficiaries	MTS DUISBURG GMBH, H2BOAT SRL, VERENIGDE TANKREDERIJ B.V., SOGESTION, AIR LIQUIDE BV, FUTURE PROOF SHIPPING BV, L'AIR LIQUIDE BELGE, DFDS AS, STICHTING PROJECTEN BINNENVAART, Compagnie Fluviale de Transport, THEO POUW BV, BALLARD POWER SYSTEMS EUROPE AS, NEDSTACK FUEL CELL TECHNOLOGY BV, L AIR LIQUIDE SA, UNIVERSITA DEGLI STUDI DI GENOVA

http://rh2iwer.eu/

PROJECT AND GENERAL OBJECTIVES

RH_2IWER aims to create a solid basis for the acceleration of hydrogen fuel cell powered vessels in inland waterway shipping by demonstrating six commercially operated vessels. These vessels are of varying lengths and types; 86 m, 110 m and 135 m; and container, bulk and tanker vessels with installed power ranging from 0.6 MW to around 2 MW. RH_2IWER will also work to standardise containerised fuel cell and hydrogen solutions. Through demonstration, standardisation work and multilevel analyses, combined with vigorous dissemination and communication measures, RH_2IWER will create a basis on which the shipping industry can significantly reduce its environmental footprint and remove emissions from its entire fleet in the future.

NON-QUANTITATIVE OBJECTIVES

- Demonstration of the use of inland waterway vessels powered by hydrogen fuel cells.
- Accelerated adoption by facilitating cooperation and exploiting synergies within the European maritime sector.
- Promotion of the acceptance of inland waterway vessels powered by hydrogen fuel cells as a viable zero emission solution.
- Increase the impact of inland waterway transport on decarbonisation.

PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

RH_2IWER partners have been working to develop the demonstration vessels' general design as well as the business cases. Partners have also started to work on standardised fuel cell and hydrogen storage containers in order to alleviate the risks for shipowners in the future when adopting these technologies.

FUTURE STEPS AND PLANS

Moving forward in the project, the hydrogen and fuel cell systems on board of the vessels will be designed in more detail and subsequently the vessels will be built or retrofitted and their use will be demonstrated.

PROJECT TARGETS

Target source	Parameter	Unit	Target	Target achieved?
Project's own objectives	H_2andFC vessels demonstrated	Number	6	⚙
	Maritime FCH lifetime	hours	40 000	
	Safety, PNR/RCS workshops	Number/ year	1	✓

Clean Hydrogen Partnership
Co-funded by the European Union