



# ATENA

FUTURE TECHNOLOGY

*SCHEMA PROGETTO*

*Titolo:*

Implementing Fuel Cells and Hydrogen Technologies in Ports

*Acronimo:*

H2Ports

*Ente Finanziatore:*

EU FCH JTI

*Call:*

2018 CALL FOR PROPOSALS H2020-JTI-FCH-2018-1 (TOPIC: FCH-03-1-2018 Developing Fuel Cell applications for port/harbour ecosystems - RIA)

*Coordinatore:*

Fundacion Valencia Port

*Partner:*

Ballard Power System Europe AS, Autoridad Portuaria de Valencia, Centro nacional de Experimentacion de Tecnologias de Hidrogeno y Pilas de Combustibles Consorcio, Mediterranean Shipping Company Terminal Valencia, Hyster-Yale Nederland BV, Grimaldi Euromed spa, Atena scarl, Enagas,

*Durata prevista:*

Data inizio: 01/01/2019

Data Fine: 31/12/2022

*Budget:*

	Totale	Atena	Parthenope
Budget Progetto	3.999.948	676.900	75.000
Agevolazione	3.999.948	676.900	75.000

*Stato:*

Finanziato e in corso

*Obiettivi:*

Hydrogen is an energy carrier with great potential for clean, efficient power in transport applications. Hydrogen can be obtained from different sources, which in combination with fuel cells it can improve energy efficiency especially when hydrogen is produced by renewable energy sources. The action proposed tries to introduce hydrogen as an alternative fuel in the port industry. The H2Ports project is an Action aligned with the needs and objectives of the European Commission and the port industry.

The aim is to provide efficient solutions to facilitate a fast evolution from a fossil fuel based industry towards a low carbon and zero-emission sector. Hydrogen has been proved in other logistics and transportation sectors as a



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solution to power machinery and vehicles, therefore the action proposes different pilots to bridge the gap between prototypes and pre-commercial products:

- The first prototype will comprise a reach stacker powered with hydrogen and tested under a real life trial, in a Port Container Terminal.
- The second prototype will comprise a yard tractor equipped with a set of fuel cells. The design will enable the tractor to perform different operations like container horizontal transport or ro-ro loading/unloading operations.
- The third prototype will comprise a mobile Hydrogen supply station, which will provide the needed fuel under the appropriate thermodynamic conditions for guaranteeing the continuous working cycles of the abovementioned equipment.

The H2Ports project would also have a transversal objective that consists on developing a sustainable hydrogen supply chain at the port, coordinating all actors involved: customers, hydrogen producers, suppliers, etc.

The expected results of the project are to test and validate hydrogen-powered solutions in the port-maritime industry, with the aim of having applicable and real solutions without affecting to port operations while producing zero local emissions.