TH2ICINO
Towards Hydrogen Integrated Economies in Northern Italy
Varese, Italy
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Project Overview

Call year: 2022
Call topic: Small-scale H2V HORIZON-JTI-CLEANH2-2022-06-02

Project dates: [September 2023 - August 2027]
Total project budget: [18506850 €]

% stage of implementation 01/11/2023: [4 %]
Clean Hydrogen Partnership max. contribution: [7446920 €]
Other financial contribution: [11059930 €]

TH2ICINO
Overall Hydrogen Valley Concept

- Airport-centered Hydrogen Valley: Malpensa airport
- 5MW PEM Electrolyzer
- Transport via Truck
- Integration with the HRS available in the territory
- Mobility and Energy, considering some ground applications in airport context
- Master Planning Tool (MPT) to be used for expansion and replication within Italy and the EU
Project Timeline

Hydrogen Ecosystem

- Design
- Modules’ Development
- Integration and Deployment

Implementation

Running and Monitoring

SEPTEMBER 2023
AUGUST 2024
AUGUST 2025
AUGUST 2026
AUGUST 2027
Project governance

The governance of the valley include a partners and interested parties:

- City of Busto Arsizio (IT) orchestrates and promotes the territory for new hydrogen projects and have facilitate the discussion between stakeholder and off-taker.
- Confindustria Varese is a territorial association of industrials
- LHYFE (FR) will build, own and operate, the production plant and deliver hydrogen to the customers.
- SEA will test hydrogen solutions in the airport context.
Project financing and funding

Other Partners Contribution 1.1 M€

Lhyfe

Clean Hydrogen Partnership

7.4 M€

10 M€
Replication activities

The Master Planning Tool (MPT) will be built on top of Artelys Crystal Super Grid (ACSG), a solution dedicated to the modelling and simulation of energy systems at different geographical scales, which allows to carry out techno-economic analyses related to numerous issues such as security of supply, market design, the impacts of energy/climate policies or cost-benefit analyses of production, transport, and storage infrastructure projects.
Replication activities
Synergies With Other Projects And Programmes

Interactions with projects funded under EU programmes

- **OLGA**: hOListic Green Airport (Horizon 2020): Develop a hydrogen hub at Malpensa Airport, with a 700kW electrolyzer and a HRS. TH2ICINO leverages on this primary infrastructure at the airport for landside refuelling operations.

Interactions with projects funded under National programmes

- **StazionidiRifornimenopnrr** (NextGenerationEU): recently funded HRS for heavy-duty mobility at Malpensa Airport. (External Stakeholder)
Developing skills and training people to handle hydrogen in an airport context is essential for the successful deployment of TH2ICINO. Airport personnel need to be trained on a variety of topics, including **Hydrogen use in Airport**, which also lacks from a clear regulatory framework.

- **Hydrogen safety**: This includes understanding the properties of hydrogen, the hazards associated with hydrogen handling, and the safety procedures that need to be followed.
- **Hydrogen refueling operations**: This includes understanding the different types of hydrogen refueling equipment and how to safely refuel hydrogen-powered vehicles.
- **Hydrogen maintenance and repair**: This includes understanding the different components of hydrogen systems and how to maintain and repair them safely.

**TH2ICINO** is showcasing **retrofitting** of special vehicles used in the airport. Towards the end of the project, a series of webinars will be held with the Tech providers aimed at developing the base skills needed for hydrogen retrofitting for locals interested in performed or provide the service.
Communication and dissemination