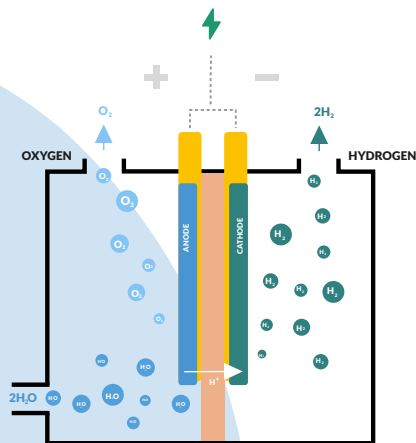


# What is H<sub>2</sub> ?

Hydrogen is the simplest and most abundant element on earth. It is usually combined with other elements such as water, coal, biomass or natural gas. It is an energetic vector, able to store and deliver energy when needed.

In GREEN HYSLAND, clean hydrogen will be produced by using renewable energy sources via electrolysis - the process of using electricity to split water into hydrogen and oxygen. The green hydrogen will be used in multiple applications on the island of Mallorca. It will play a key role in the decarbonization of all sectors, paving the way to reach a zero emission economy in Mallorca.



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#GREENHYSLAND



## GREEN HYSLAND

Deployment of a Hydrogen Ecosystem  
on the Island of Mallorca

[greenhysland.eu](http://greenhysland.eu)

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grant Agreement No 101007201. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation programme, Hydrogen Europe and Hydrogen Europe Research.

This document reflects only the author's view and the JU is not responsible for any use that may be made of the information it contains.



[greenhysland.eu](http://greenhysland.eu)

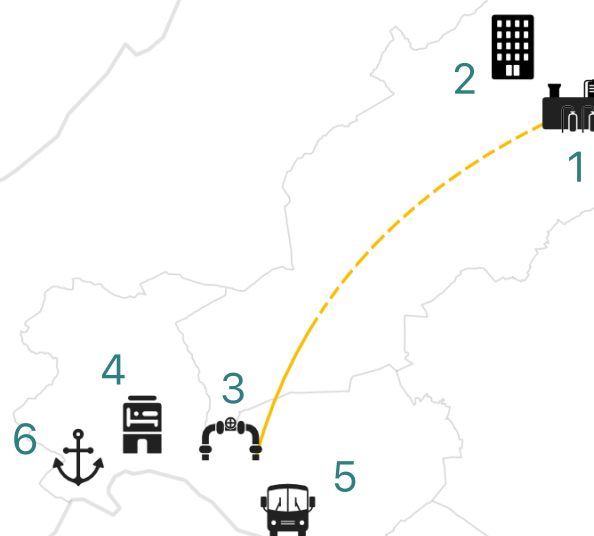
GREEN HYSLAND will deploy a Hydrogen (H<sub>2</sub>) ecosystem in the island of Mallorca, turning the island into Europe's first green H<sub>2</sub> hub in Southern Europe. This will be achieved by producing and delivering green hydrogen from solar energy to cover the island's energy demand: transport, industry, energy sectors and generation of heat and power for commercial and public buildings. Green hydrogen will be injected into the island's gas network to decarbonize the gas supply.

The project will also deliver a roadmap towards 2050 that compiles a long-term vision for the development of a widespread H<sub>2</sub> economy in Mallorca and the Balearic Region, in line with the environmental objectives set for 2050.

Replication experiences and business models are foreseen in five other EU islands (Madeira - PT, Tenerife - ES, Achill- IE, Greek Islands and Ameland - NL) and beyond (Chile and Morocco). These will provide Europe with a blueprint for decarbonization of island economies, showing how green H<sub>2</sub> can concretely contribute to the energy transition and the 2050 net zero targets.

The following Fuel Cells and Hydrogen (FCH) end-user applications will be delivered in Mallorca:

- 1 Green Hydrogen production using renewable energy (PV) in Lloseta;
- 2 Fuel Cells-based Combined Heat & Power (CHP) system at municipal building in Lloseta;
- 3 Injection of H<sub>2</sub> into the local gas distribution grid in Cas Tresorer;
- 4 Commercial FC-based CHP system in at least one hotel in the municipality of Palma;
- 5 Hydrogen Refuelling Station (HRS) at EMT bus depot in Palma to supply H<sub>2</sub> buses and light vehicles with green hydrogen;
- 6 FC-based CHP system for electricity and heat supply for a ferry terminal at the port of Palma;



## Paving the way for a zero emission society

Due to their isolation and lack of infrastructure, European islands often suffer from high energy dependency. In this context, hydrogen offers a compelling solution to harness the full power of locally produced renewable energy and increase self-sufficiency through energy storage.

GREEN HYSLAND offers a technological solution to accelerate the energy transition and help reshape a new society model. The development a H<sub>2</sub> ecosystem will create green local jobs and offer reskilling for industry workers, boosting the island's sustainable and economic development through innovation.

The project has full political and financial support through the Regional Government of the Balearic Islands and the National Government of Spain. Like in Mallorca, the GREEN HYSLAND concept can be replicated in other territories, being integrated and fully aligned with their existing climate and energy plan.

Make your island a lighthouse of Europe's decarbonization with GREEN HYSLAND!