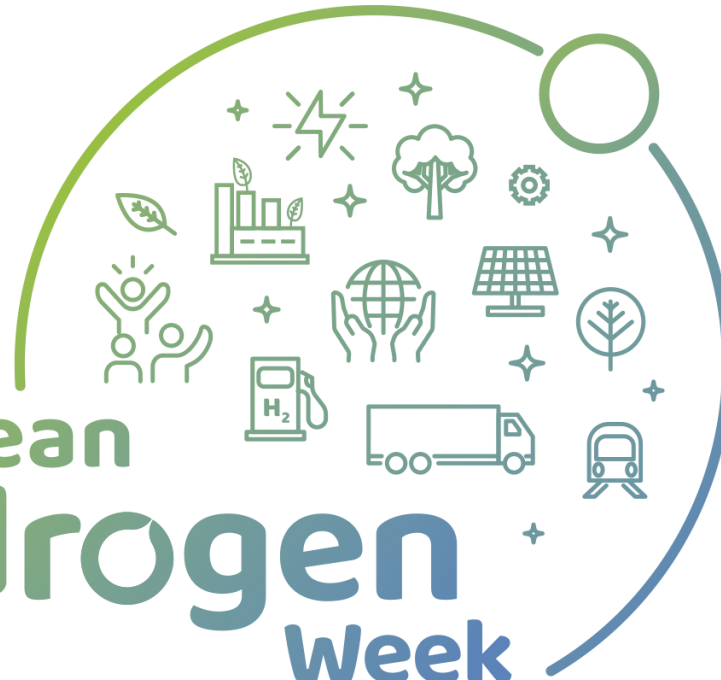


Green Hysland

Development of a H₂ ecosystem
on the island of Mallorca



European
Hydrogen
Week



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Co-funded by
the European Union

#EUResearchDays
#PRD2022
#CleanHydrogen

Project Overview

Call year: 2020

Call topic:
FCH-03-2-2020:
Decarbonising
islands using
renewable
energies and
hydrogen - H2
Islands

Project dates:
January 2021 - December 2025

Total project budget
(eligible costs):
20,498,255.00 €



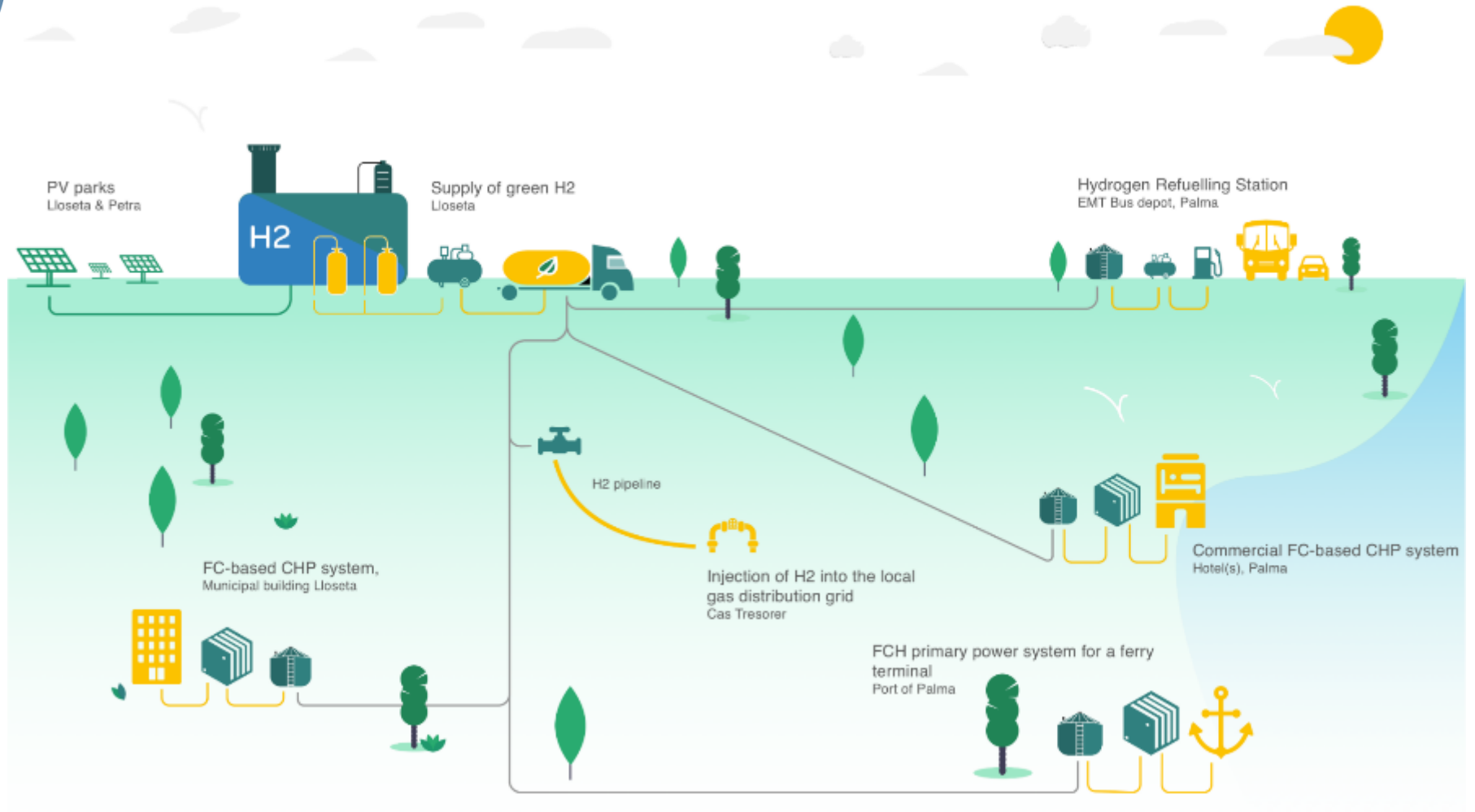
% stage of implementation
02/12/2021: 15%

FCH JU max. contribution:
9,999,999.50 €

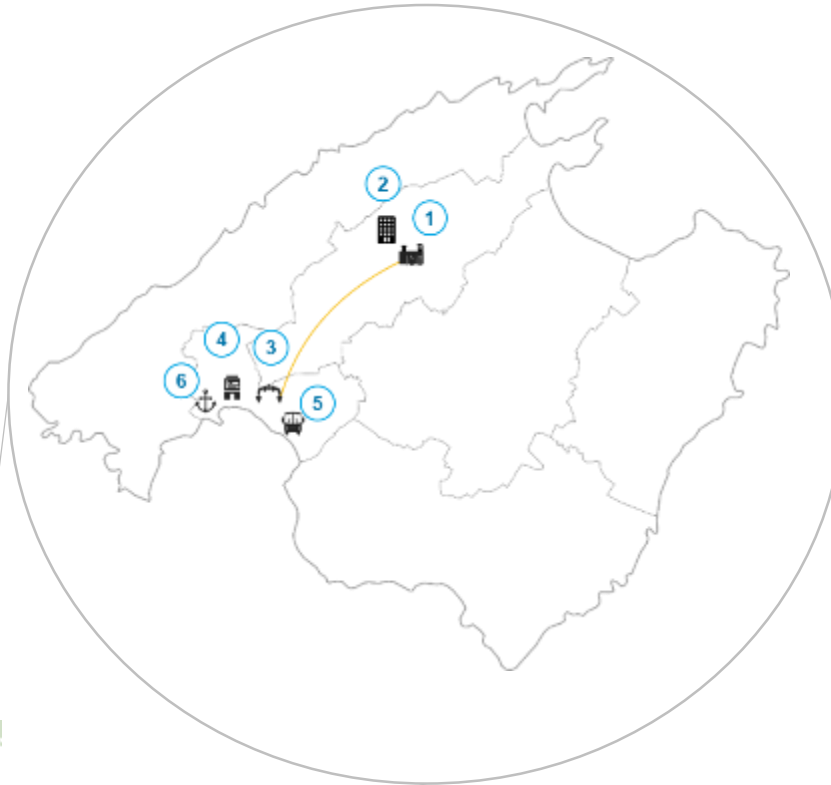
Other financial contribution:

- Partners' own resources 10,498,255.5 €
- IDAE's grant 2,456,620 € for the PV plants

Green Hysland concept



Green Hysland - Site Locations



- 1 Green hydrogen production plant at Lloseta
 - 2 Fuel cell in a public building in Lloseta
 - 3 H2/GN blending station at Cas Tresorer & injection point to NG grid
 - 4 Fuel cell at hotel in Palma
 - 5 HRS at EMT de Mallorca
 - 6 Fuel Cell at the maritime station in Palma Port
- Hydrogen pipeline



Project Progress/Actions - PV plants



Achievement to-date

Lloseta PV Plant
Petra PV Plant



Operation
Operation

25%

50%

75%

Lloseta PV Plant

Peak power: 8.56 MWp
Nr. of PV modules: 15,848
Planned energisation date: 27/12/2021



Petra PV Plant

Peak power: 5.85 MWp
Nr. of PV modules: 10,836
Planned energisation date: 21/02/2022



Project Progress/Actions - H2 Production Plant

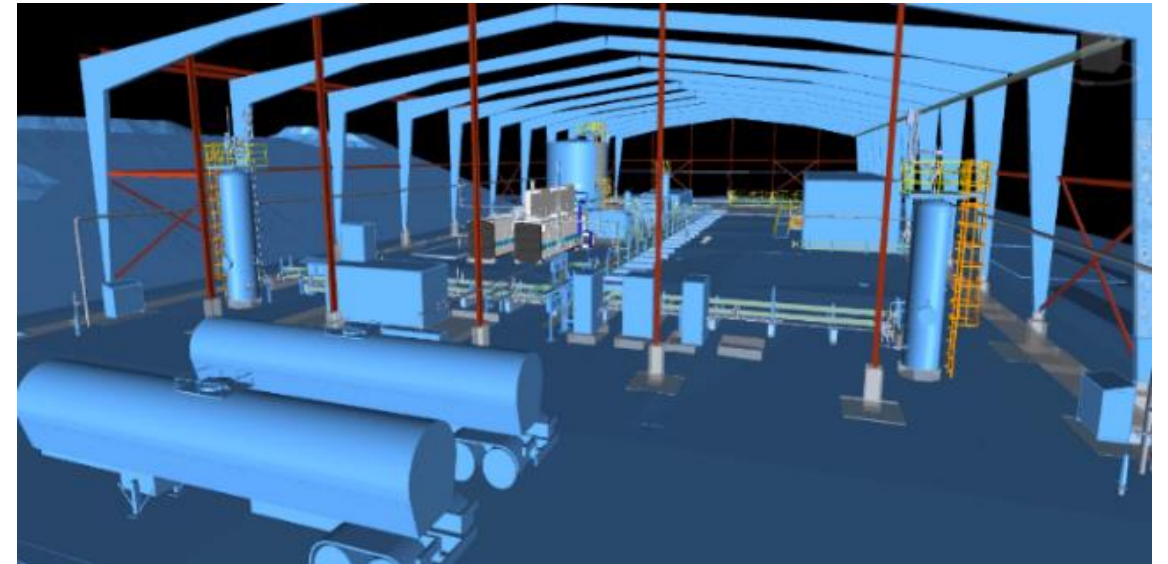


Inauguration of the H2 production plant on 14 March 2022.

25%

50%

75%



Project Progress/Actions - Fuel cell buses



Achievement to-date

Buses at EMT
Palma



Operation



- Buses procured: 5 x 12m Urbino buses from Solaris
- Planned delivery in Q1 2023
- H2 storage: 5 tanks with total of 37.5 kg of H2
- 70kW HDv8 Ballard Fuel cell
- 1 pack of LTO batteries: 30.4 kWh



Project Progress/Actions - Others



Achievement to-date

HRS
Pipeline & grid inj
Tube trailers

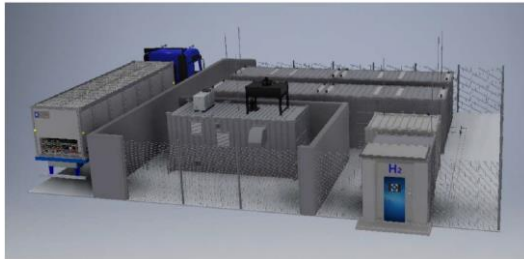


25%

50%

75%

Operation
Operation
Operation



- HRS procured: start of operation expected Q3 2023
- Dual use (350 and 700bar)
- Interim solution planned for fuelling buses
- Most permits obtained: start of construction expected end of 2022
- Start of operation expected Q1-2 2023
- Design for injection point finalised
- Tube trailers designed
- 1 built / 1 in construction

Green Hysland - Key figures



Avoided carbon footprint: more than **21,000 tpy**



New **direct and indirect employment ecosystem** associated to **hydrogen**



Development of a **sustainable large-scale island-based H2 hub** in Mallorca



Development **a long-term roadmap** to lay the path for a local & regional based economy towards 2050



Scalability and Replicability



Estimated **investment** ≈ 50 M€

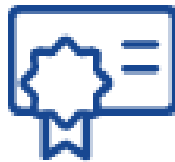
Exploitation Plan/Expected Impact

Exploitation (not exhaustive)

Creation of a new company to commercialize H2



Creation of a regional roadmap



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Impact

Ability to commercialize H2 through a proper commercial structure with committed partners to jump start a regional H2 economy

Sets the basis for future exploitation and scale-up at regional level to achieve energy transition and socio-economic goals

Synergies with other Projects and Programmes

Green Hysland's "H₂ Island Hub"




National co-funding enabling increased project scope - more fuel cell buses


Risks, Challenges and Lessons Learned



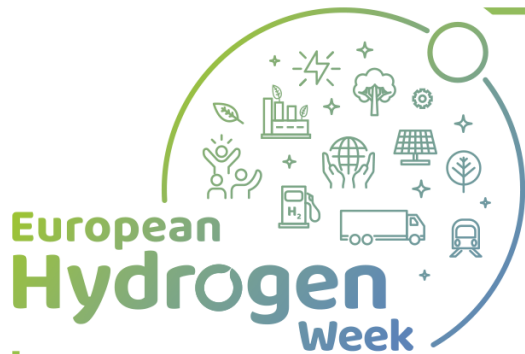
Permitting
and
Regulations



Awareness
Difficult to
engage with
public, offtakers



Reliability
Optimize system
design
Due diligence on
OEMs



Green Hysland consortium



GREEN HYSLAND

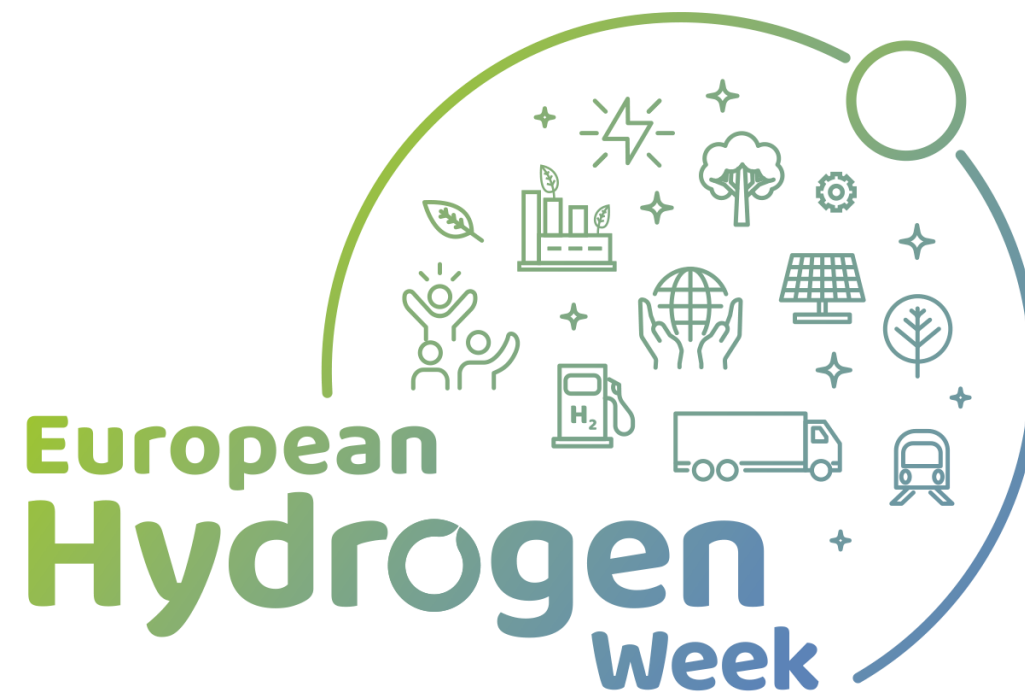


BALEARIA



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