

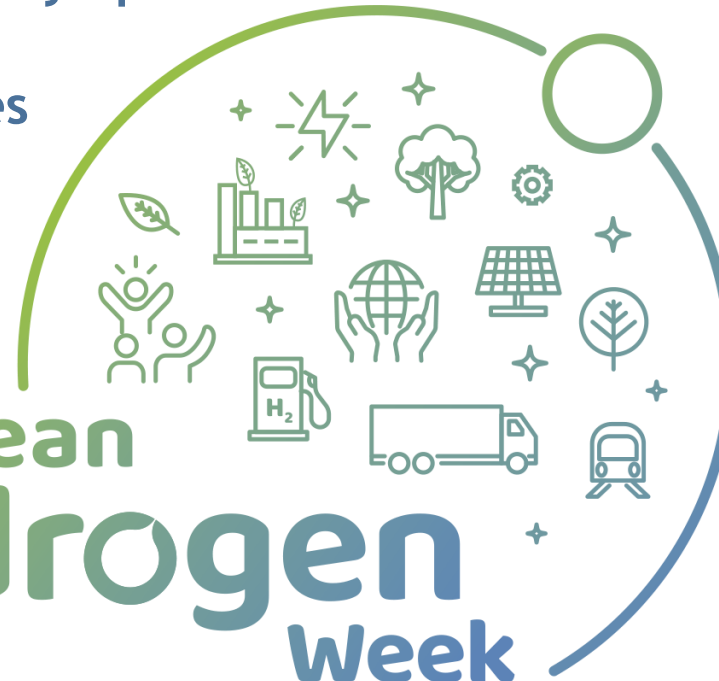
EVERYWH2ERE

Making hydrogen affordable to sustainably operate

Everywhere in European cities



European
Hydrogen
Week



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“Hydrogen EVERYWH2ERE: first results from transportable genset demonstrations”

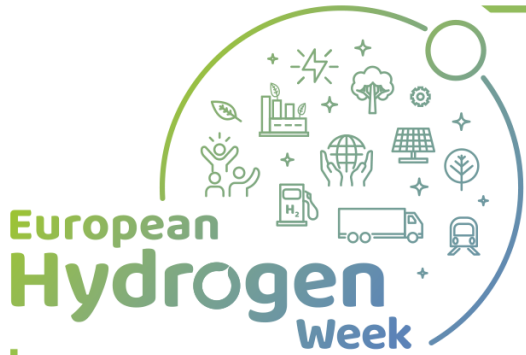


EUROPEAN PARTNERSHIP



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the European Union

#EUResearchDays
#PRD2022
#CleanHydrogen



Project Overview



- Call year: 2017
- Call topic: FCH-02-10-2017 Transportable FC gensets for temporary power supply in urban applications
- Project dates: 01/02/2018- 31-10-2023
- % stage of implementation 15/10/2022: 70 %
- Total project budget: 6.770.248,74 €
- Clean Hydrogen Partnership max. contribution: 4.999.945,76 €
- Partners: RINA CONSULTING, VTT, POWERCELL, GENPORT, MAHYTEC, FHA, DELTA1, ENVIPARK, ACCIONA, ICLEI, LINDE, THT CONTROL, FRIEM



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Project Summary

EVERYWHERE VISION



EVERYWH2ERE aims to demonstrate the reliability of using FC technologies in temporary power gensets replacing current state-of-the-art solutions mostly based on diesel engines, thus opening a niche but relevant market for FC technologies.

- 4x25 kW and 3x100 kW Gensets
- Easy to install
- Easy to transport
- Demonstration to market project!

Project Objectives

- 1) Capitalize EU FC industry expertise and close to market products in automotive/backup power communication sectors, towards the design of reliable, easy to use transportable FC gensets
- 2) Realization and demonstration of 7 PEMFC transportable gensets (4x25 kW and 3x100 kW) integrated with pressurized H₂ storage
- 3) Leverage demonstration campaign for the future techno-economical replicability of the FC gensets. Realization of a Logistic Decision Support tool
- 4) Demonstration of economic viability, safety and environmental sustainability of the novel solutions. Realization of replication feasibility studies and an E-Handbook for replication
- 5) Communication, dissemination and preparation of the future deployment of the new EVERYWH₂ERE gensets through public and private stakeholders engagement. Stakeholders and City Groups

Realization of EVERYWH2ERE Gensets to be demonstrated around Europe



Achievement to-date

PROJECT
START VALUE



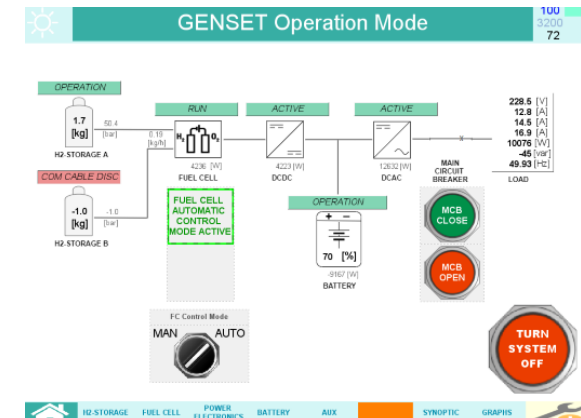
PROJECT
TARGET VALUE:
7

25%

50%

75%

- Manufacturing, commissioning, validation of the first **25kW** and **100kW Gensets** and **storage systems**



- New design for the next generation of Gensets
- Genset n.3 and n.4 under construction and expected to be completed by end of 2022

Several challenges have been faced, the most relevant was the Declaration of Conformity (DoC) to enable the use in public events

Got it!

100 kW Genset - January 2022

25 kW Genset - October 2022



Demonstration activities

Construction site - March 2022 - July 2022



Features of the demo

- Location: San Sebastian (Spain)
- Acciona construction site
- Ground extension: **82.000 m²**
- Construction Project Cost: **41 M€**
- **17 buildings**
- Built Surface = **35.344 m²**
- **8 tower cranes**
- Crane n° 7 fed by the **100 kW EVERYWH2ERE FCPS**
- The crane can load up to **7.600 Kgs.**
- Maximum nominal power **68,6 kW**

Demonstration activities

Construction site - March 2022 - July 2022



KPIs of the demo

- Demo has extended over a period of **122 natural days**
- **86 working days** in such period
- **67 days** EVERYWH2ERE genset has been available for operation.
- **533 hours** of effective operation of the EVERYWH2ERE genset
- **935 kWh** supplied to construction site
- Consumption: **247 kg of H₂**.

Demonstration activities

MotorLand MotoGP- September 2022

Features of the demo

- Motorland circuit in Aragon
- **Moto GP** race
- From 14th of September to 17th of September 2022
- The giant screen installed in front of the main grandstand was powered by the **100 kW EVERYWH2ERE** genset



Demonstration activities

HESE - Hydrogen Energy Summit&Expo 12th-14th October 2022

Features of the demo

- Temporary event
- First official demo of the 25 kW **EVERYWH2ERE** genset after the DoC
- During the 3 days the genset powered the led panel “Hydrogen EVERYWH2ERE”, screens, heaters, Laptops etc.



Demonstration activities

Port of Tenerife - October/November 2022

Features of the demo

- The **100 kW EVERYWH2ERE** genset was shipped to Port of Tenerife
- The location prepared for the genset is only 20 meters (aprox.) from the berth (port basin)
- About 3 weeks of demonstrations



Awards

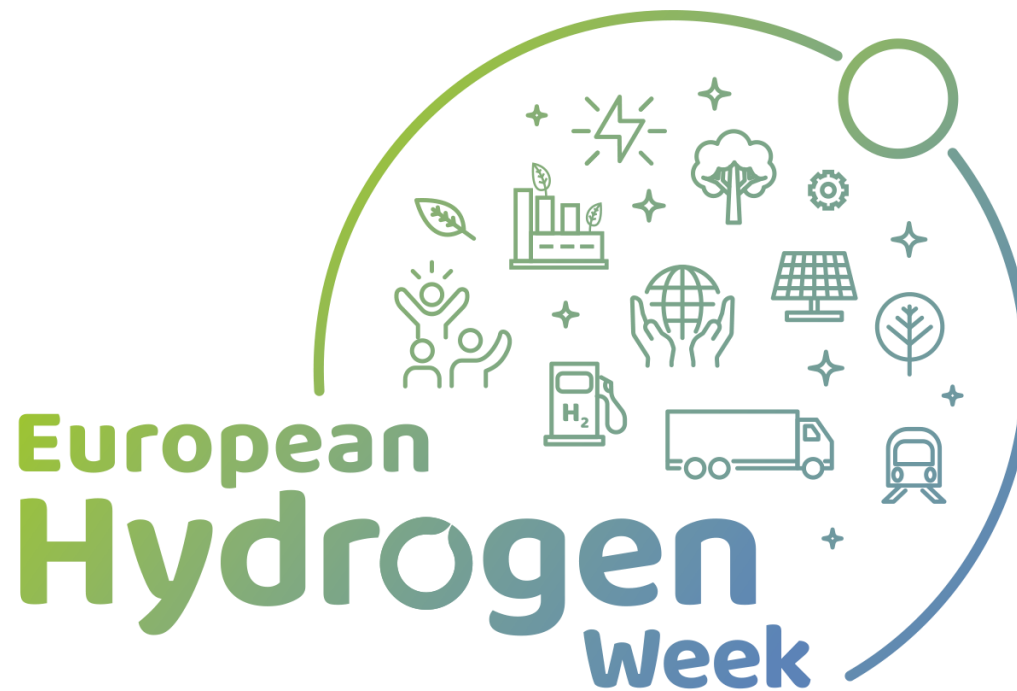


2020



2021

Thank you for your attention!



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