

# Making Hydrogen affordable to sustainably operate EVERYWH2ERE in European Cities



## MISSION

Temporary diesel gensets are used everywhere in our cities (fairs, markets, construction sites, temporary events and concerts...) and non-road diesel engines account for 5-10% of fine-particle pollution in the urban environment. **Fuel cell (FC) can easily replace these technologies as a 0 noise and 0 emission solution for temporary energy generation.** The main objective of EVERYWH2ERE project is to demonstrate at TRL8 easy to transport “plug and play” FC gensets. Demonstration results will be capitalized for replication, business model, environmental and logistic analysis.



## PROJECT PARTNERS



FUEL CELLS AND HYDROGEN  
JOINT UNDERTAKING

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 779606. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe research



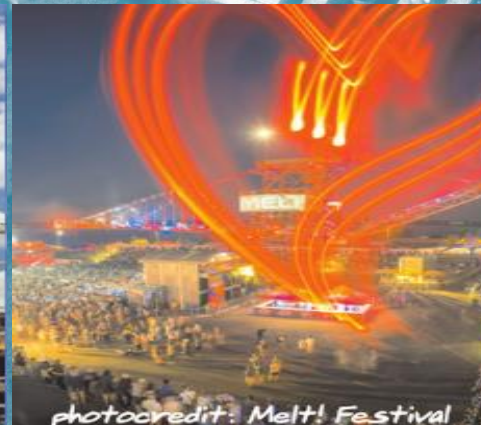
# FC GENSET DEMONSTRATION YOUR OPPORTUNITY TO TEST



## DEMONSTRATION WILL START in summer 2020

The prototypes (4x25 kW and 4x100 kW) will be tested in construction sites, music festivals and urban public events all around EU. These events will be important showcases to demonstrate FC potentials to a large audience in order to increase their social acceptance and public awareness. Public authorities and industrial stakeholders will be actively involved in dialogues and deployments to explore the upscaling of FC gensets in European cities.

**WE ARE SEARCHING FOR EVENTS TO INSTALL OUR GENSET!**



# WHY EVERYWH2ERE H2 GENSETS?



The market is currently served by internal combustion engines (fed by diesel, compressed natural gas, propane etc.) and batteries. In direct comparison:

	Fuel cell	Diesel	Battery
Reliability	+	+	+
Extended run time	++	++	--
Emissions	++	-	++
Noise	++	-	++
Efficiency	+	-	++
Ambient condition	+	+	-

## Why hydrogen gensets make sense?

- #zeroemission
- #zeronoise
- #fast start up
- #easy to connect and operate
- #low maintenance
- #efficiency above 50%
- #subzero start (-20°C)
- #reduced installation time
- #ATEX and normative compliancy



## GENSETS CHARACTERISTICS

- Two gensets sizes manufactured (25 kW and 100 kW)
- “Plug and Play”
- Transportable gensets
- Based on H<sub>2</sub> Fuel cell
- H<sub>2</sub> storage on tanks
- Tested and safe operation
- ATEX Containered Solution

### Two boxes solution:

- H<sub>2</sub> tanks @350 bar
- FCPS 10 ft ISO-container



# ANY COSTS INVOLVED?



*EVERYWH2ERE consortium  
covers high costs of  
deployment in comparison  
with diesel engines!*

**Testers will contribute  
via.....CONTRACTUAL  
ARRANGEMENTS  
AND  
MARKETING ASPECTS**

✓ **FULL RENTAL GENSET CONTRACT**

transport + installation + fuel (cost/day).

Contribute to the cost for the EVERYWH2ERE genset up to the same cost of a correspondent standard genset.

✓ **MID-RENTAL GENSET CONTRACT**

transport + installation (cost/day).

EVERYWH2ERE consortium covers gas supply costs.

# REGIONS & CITIES INTEREST GROUP



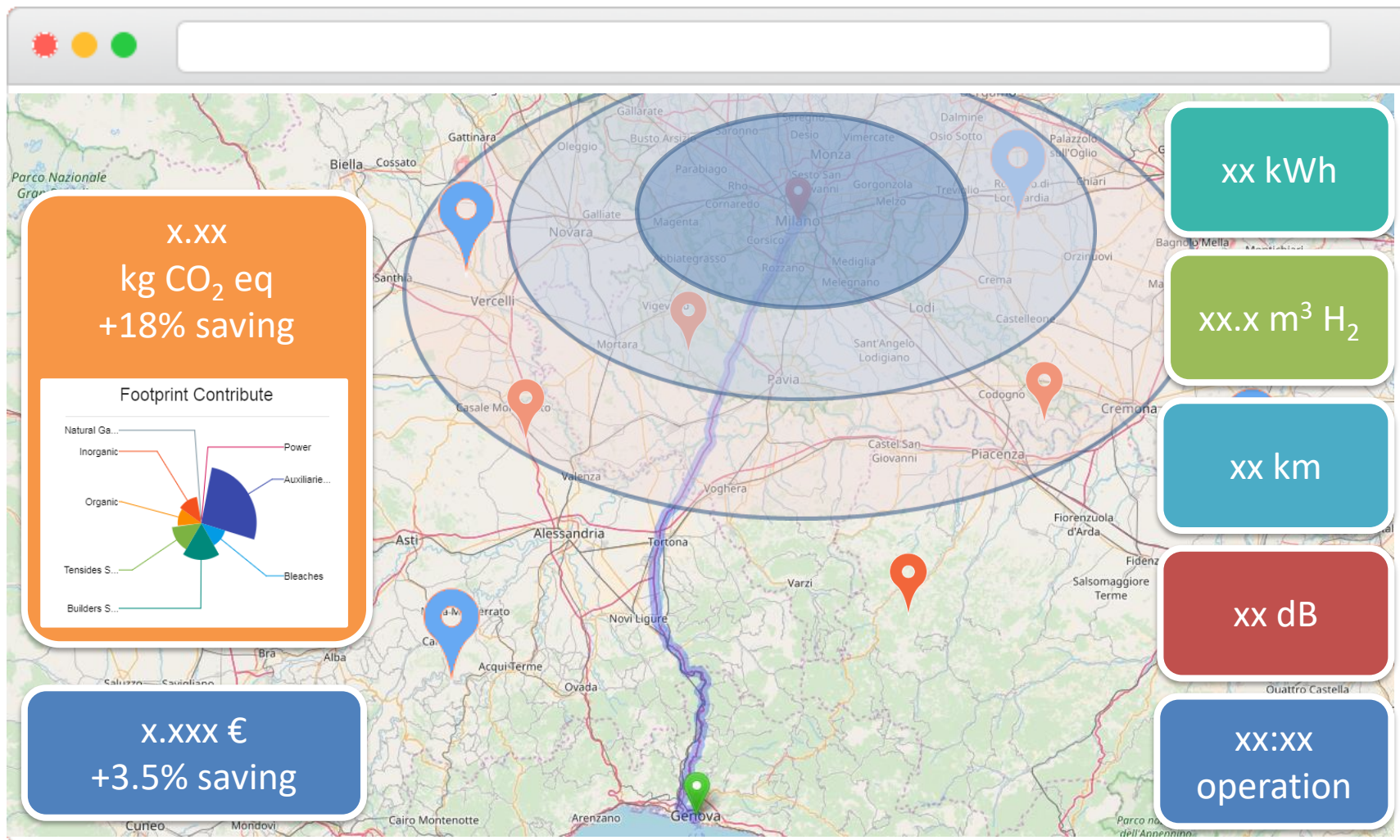
...and you need **EVERYWH2ERE!**

- Take part in a pan-European demonstration campaign
  - Host hydrogen gensets in your cities
  - Set up a H2-corner and reach out to your citizens
- Contribute to and benefit from the [Logistic and Environmental Decision Support Tool](#)
  - Prove that it makes business and environmental sense!





# Support Tool – Easy and Effective!



# REGIONS & CITIES INTEREST GROUP



- ✓ **Subscribe to our Regions & Cities newsletter** to receive in-depth coverage on how fellow regions and cities make use of hydrogen gensets in their temporary events
- ✓ **Use opportunities to directly exchange and cooperate with other cities and region** on innovative policies for zero emissions, zero noise construction sites and other temporary events
- ✓ **Receive feasible and effective policy recommendations** to support your zero-emission targets



# HOW TO BENEFIT FROM EVERYWH2ERE



STEP I: GET IN TOUCH WITH US!

[www.everywh2ere.eu](http://www.everywh2ere.eu)

Follow us on Twitter, FB, YouTube, LinkedIn



@everywh2ere



@everywh2ere



@everywh2ere



Everywh2ere  
Project

STEP II: JOIN THE REGIONS & CITIES INTEREST GROUP

Fill in our Expression of Interest

STEP III: HOST A DEMONSTRATION!

Sign a letter of engagement and host a demonstration



*Be among the first cities to promote a society powered by Fuel Cells! A unique opportunity to promote your Sustainable Energy and Climate Action Plan and green identity!*

**PLEASE CONTACT US TO JOIN EVERYWH2ERE!**

# TECHNIAL SPECIFICATIONS



SPECIFICS	25 kW GENSET	100 kW GENSET
Rated kVA	25	100
Electric out	230/400 Vac 50Hz	230/400 Vac
DC net out at max cont power	234 A ; 153 V (from the stack)	450 A/300 V
Voltage Regulation Method	Off grid inverter	Off grid inverter
Fuel	Pure Hydrogen (10 bar)	Pure Hydrogen (10 bar)
Fuel Cell System @POWERCELL	PCS MS-25 SuSy, S2 stack with 264 cells	PCS MS-100 SuSy, S3 stack with 455 cells
Maximum Gross Weight of the FCS container/part (kg)	Ca. 1800	Ca. 1800
Dimensions L x W x H (mm) of the FCS container/part	10ft container (3050 x 2440 x 2590), about half of space occupied by FCS	10ft container (3050 x 2440 x 2590), about half of space occupied by FCS

H2 STORAGE SPECIFICS@MAYTECH and LINDE integration	25 kW GENSET	100 kW GENSET
Number of tanks in the system	3	9
Total volume of the tank	660L (3 x 220L)	1980 L (9x220 L)
Mass of H2 stored (at 350bar)	15,6kg (3 x 5,2kg) at 15°C	
Maximum refilling pressure	525bar	
Temperature of use	-20°C to +65°C	
Certification	TPED	
Dimensions (single tank)	L 2200mm / diam 488 at the largest	

# Contact us:

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[@Everywh2ere](#)



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