

We develop and industrialize
sustainable, reliable and
affordable hydrogen-based
energy solutions



The Energy Observer Group

From an odyssey around the world to the development and industrialization of cutting edge hydrogen technologies

Energy Observer

The first hydrogen-powered, zero-emission vessel to be self-sufficient in energy, advocating and serving as a laboratory for ecological transition



Energy Observer Foundation

Bringing skills together, raising awareness of hydrogen's potential and promoting the UN 17 Sustainable Development Goals



Energy Observer Productions

Producing multimedia audiovisual content to inform and inspire all audiences



30 people

EODev

(Energy Observer Developments)

Designing, industrializing and commercializing sustainable, reliable and affordable hydrogen-based energy solutions



70 people

One mission

Accelerate the energy transition



About EODev



Created in
2019



70 people



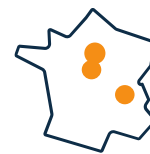
40 M€
raised



Patented
technology



Production
capacity of
600 units



3 sites in
France

Our shareholders



Our industrial partners



Industrial fuel
cell supplier



Development of
custom EPMS &
batteries



Assembly and
maintenance of
EODev products



Headquarter

Tour Sequana

Issy-les-Moulineaux (92)



Production facility

Eneria

Montlhéry (91)



Production facility

EVE System

Taluyers (69)

EODev solutions

Hydrogen-based power generation solutions



GEH2® for stationary applications



REXH2® for on-board applications

GEH2[®]

The hydrogen fuel cell
power generator



GEH2[®]: the hydrogen power generator

The GEH2 opens a new era for off-grid electricity production.

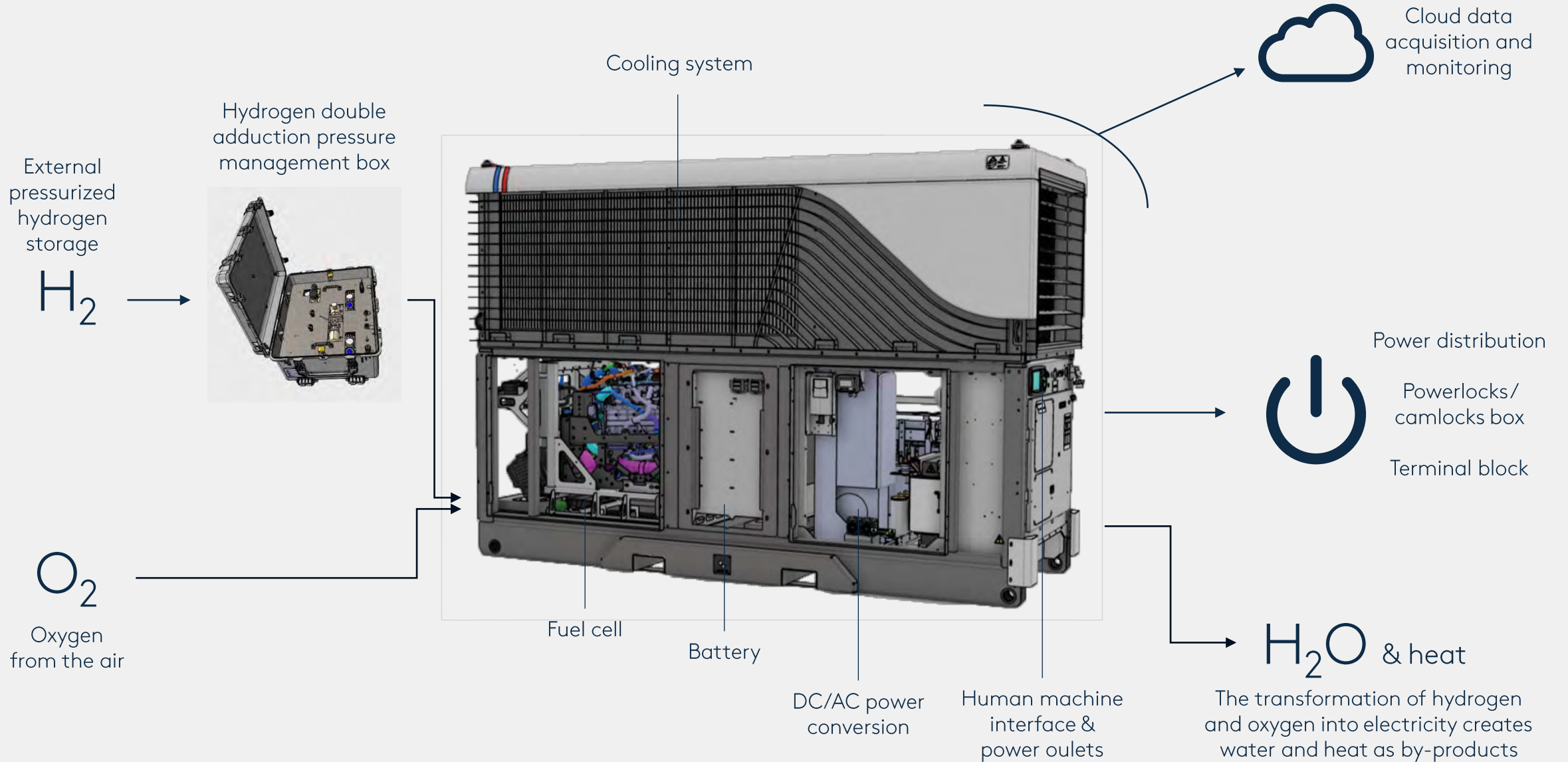
Spearheading the energy transition, the GEH2 produces electricity, water and heat, noiselessly and without CO₂ emissions or fine particles, from hydrogen and the oxygen naturally present in the air.

Built around a fuel cell module from TOYOTA, the world's leading car manufacturer and hydrogen pioneer, the GEH2 is leading a rapidly growing global market.

The combined use of a fuel cell and a battery gives the GEH2 a great versatility, both for primary off-grid electricity supply and for backup or peak-shaving power applications.



How it works



ZERO-EMISSION POWER GENERATION FOR...



<https://www.youtube.com/watch?v=evSjVddK3I8>

Main benefits

Reliable and efficient with the latest generation of Toyota fuel cells and an electrical efficiency of over 50%.

Robust and modular due to its design on a stainless steel skid frame that can support the stacking of two GEH2

Optimized and silent cooling thanks to large exchange surfaces and a double ventilation system

Instant start and peak power management with a 44kWh LiFePO4 battery that can be discharged to twice its capacity

Made in France certification and assembly in the south of Paris by our qualified technicians

Simplified maintenance thanks to numerous aluminium doors mounted on bolts

Easy handling thanks to its anti-tilt fork pockets and its corner slinging rings

High quality power thanks to the sinus filter of the DC/AC conversion module

Connected at all times to your system for remote monitoring and diagnostics, but also to receive the latest software enhancements

Connected at all times to your system for remote monitoring and diagnostics, but also to receive the latest software enhancements

Advanced data display on an industrial LCD screen to track and control your GEH2 at your fingertips

On-board intelligence for an optimal system management and multiple connection possibilities with other generators or battery packs

Elegant and customizable design to proudly display your brand and show your engagement

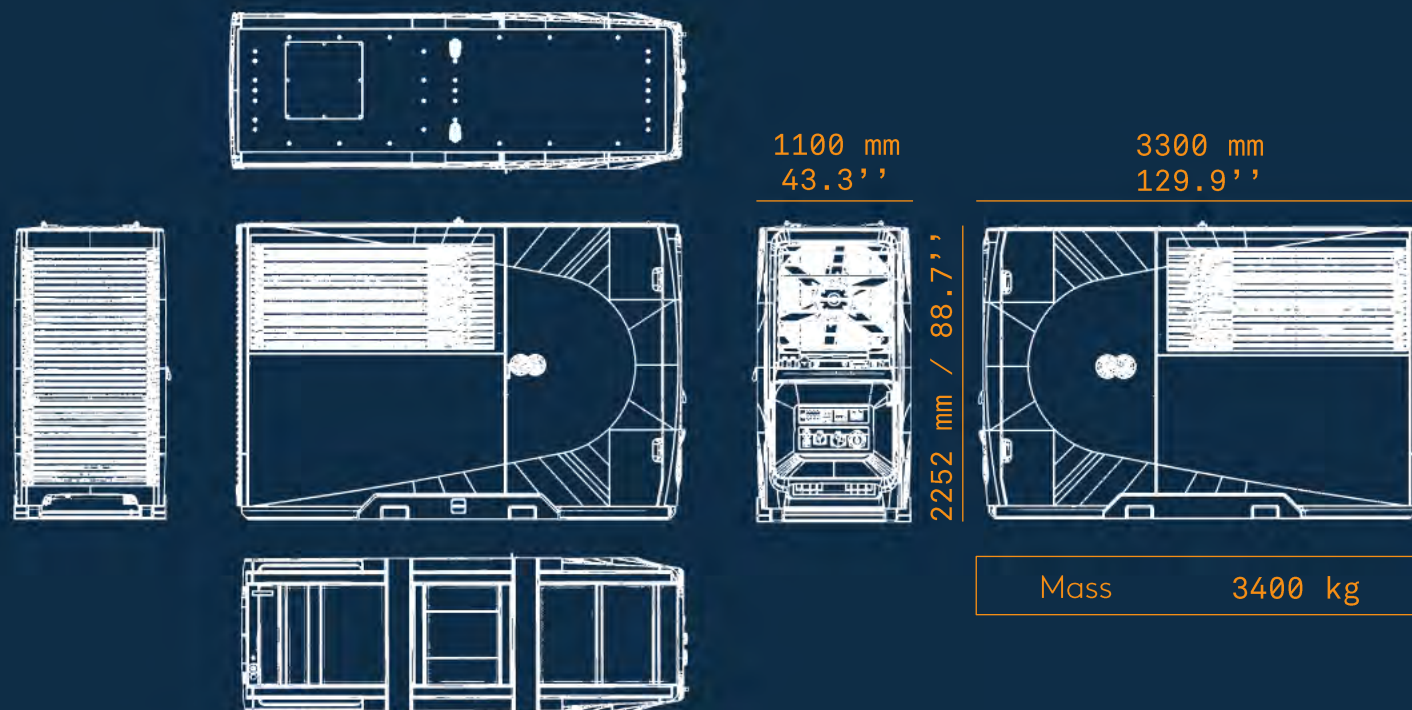
The GEH2 by the numbers

Performances

Power output – ESP ISO rating	110 kVA
Power output – PRP ISO rating	100 kVA
Voltage output	400 / 480V
Frequency output	50 – 60 Hz
Operating temperature	-15°C to 40°C
Protection index	IP 43

Main components

Fuel cell brand	Toyota
Fuel cell type	PEM
Battery brand	EVE System
Battery type	LiFePO4
Battery capacity	44 kWh



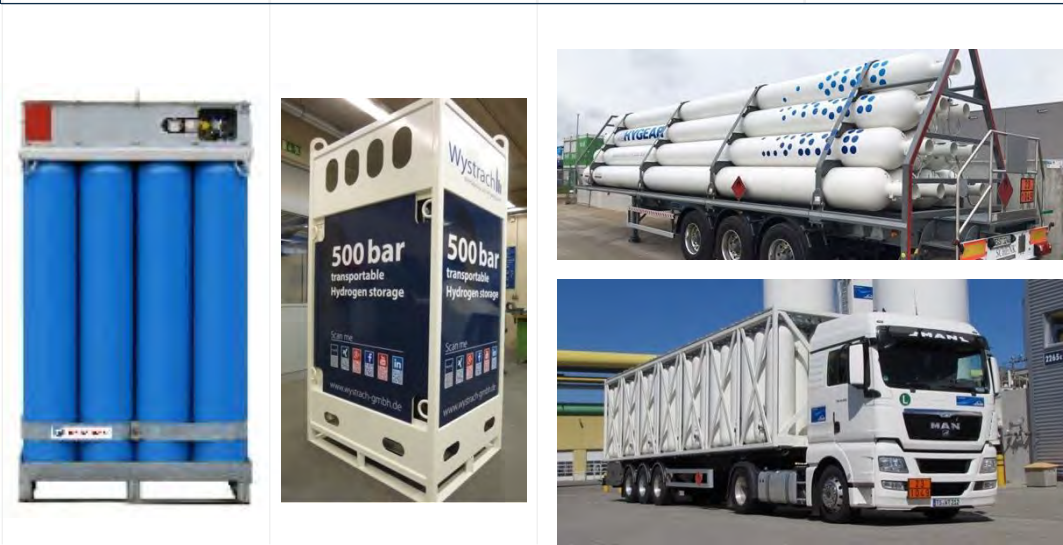
Environmental performances

GHG emissions (CO ₂)	0
Pollutant emissions (NO _x , PM)	0
Noise level at 1m 50Hz	XXX db (ongoing)
Noise level at 7m 50Hz	XXX db TBC (ongoing)
Volume of filtered air	XXX cbm TBC (ongoing)



Hydrogen specifications & packaging

Packaging type	Rack 200/300 bars	Rack 500 bars	Tube trailer 200/300 bars	Container 500 BARS
Hydrogen capacity	13/19kg	32kg	250/350kg	Up to 1'000kg
GEH2 running time at 80% load	4h30/6h30	10h30	80/110h	Over 300h



Hydrogen quality required

Characteristics		ISO14687 Grade D
Hydrogen fuel index		> 99.97%
Impurities	Total hydrocarbons (C ₁ basis)	< 2 ppm
	Water (H ₂ O)	< 5 ppm
	Oxygen (O ₂)	< 5 ppm
	He	< 300 ppm
	N ₂ , Ar	< 100 ppm
	Carbon dioxide (CO ₂)	< 2 ppm
	Carbon monoxide (CO)	< 0.2 ppm
	Total sulfur compounds	< 0.004 ppm
	Formaldehyde	< 0.01 ppm
	Formic acid	< 0.2 ppm
Ammonia		< 0.1 ppm
Total halogenated compounds		< 0.05 ppm

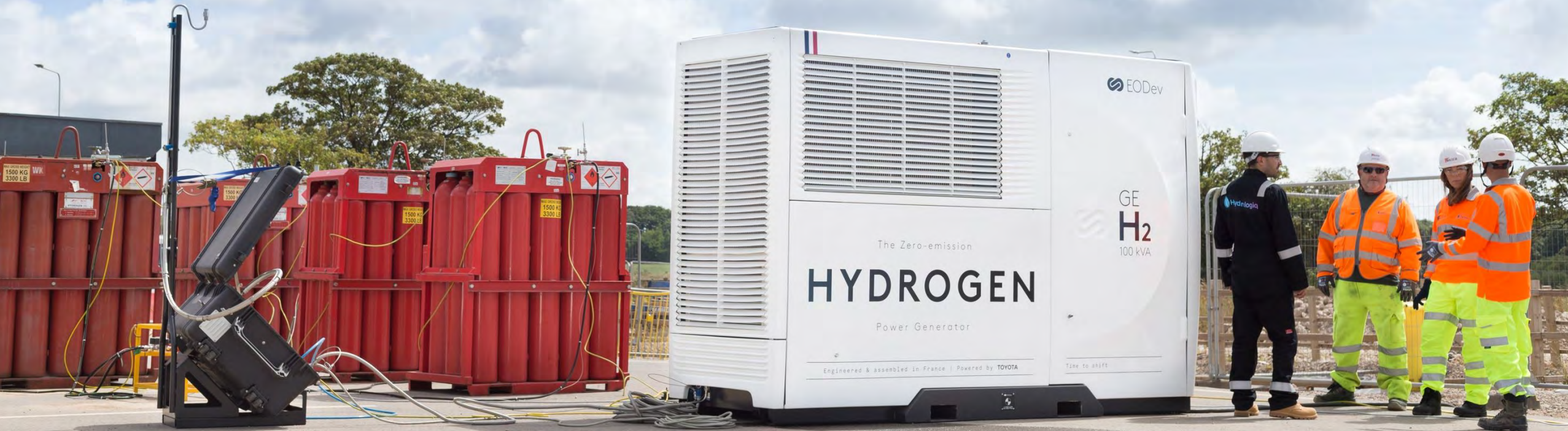
Main markets



Events



Construction sites



Grid operations



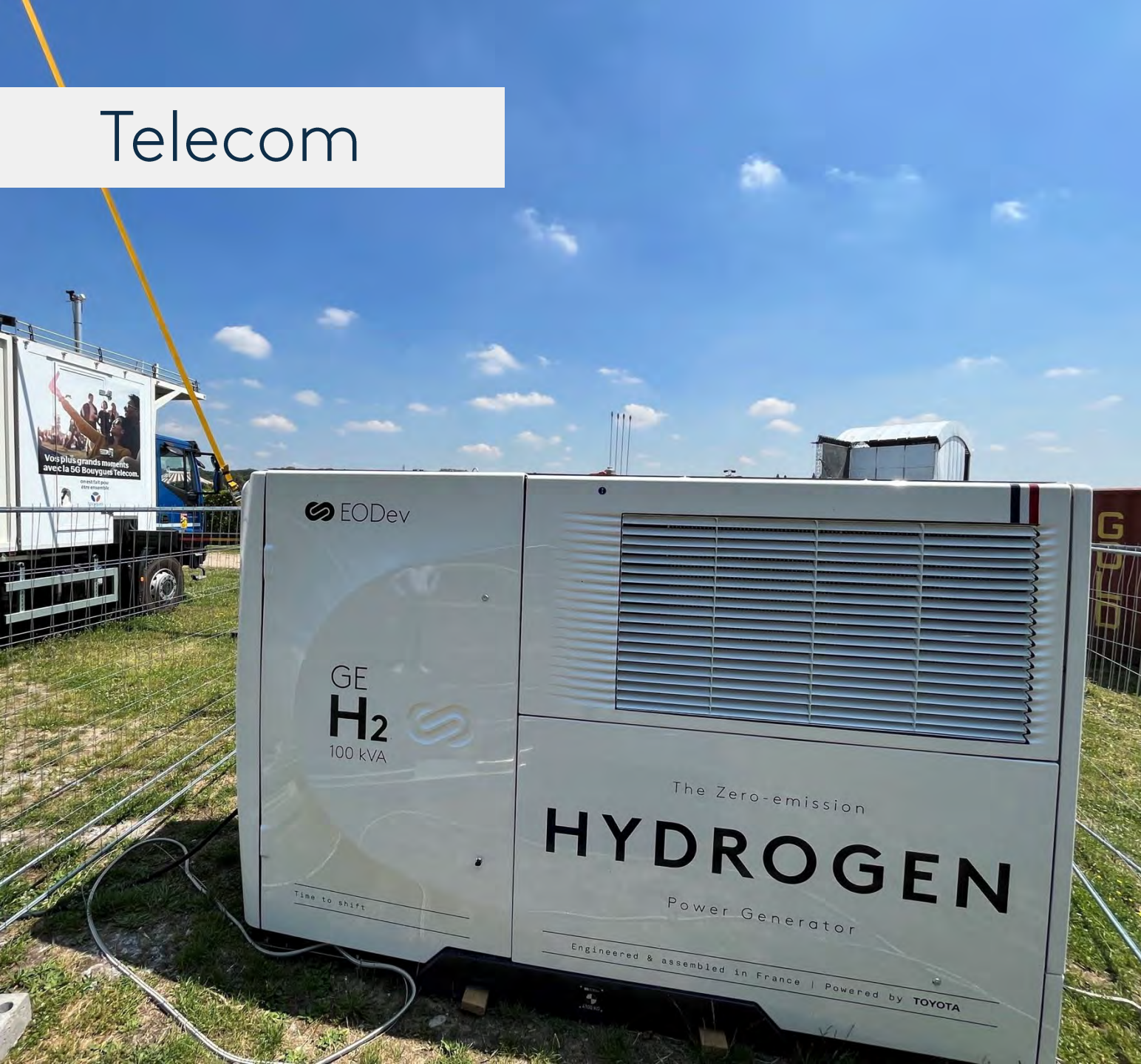
EV Charging



Film shooting



Telecom



Back-up



Tell your story

The acquisition of an EODev GEH2 is not just about buying a power generator, its is a value statement and the expression of your environmental strategy.

We can offer a variety of services to help you spread the word about your step in the zero emission era.

GEH2 personalization

Joint demonstration

Handover ceremony

Video production

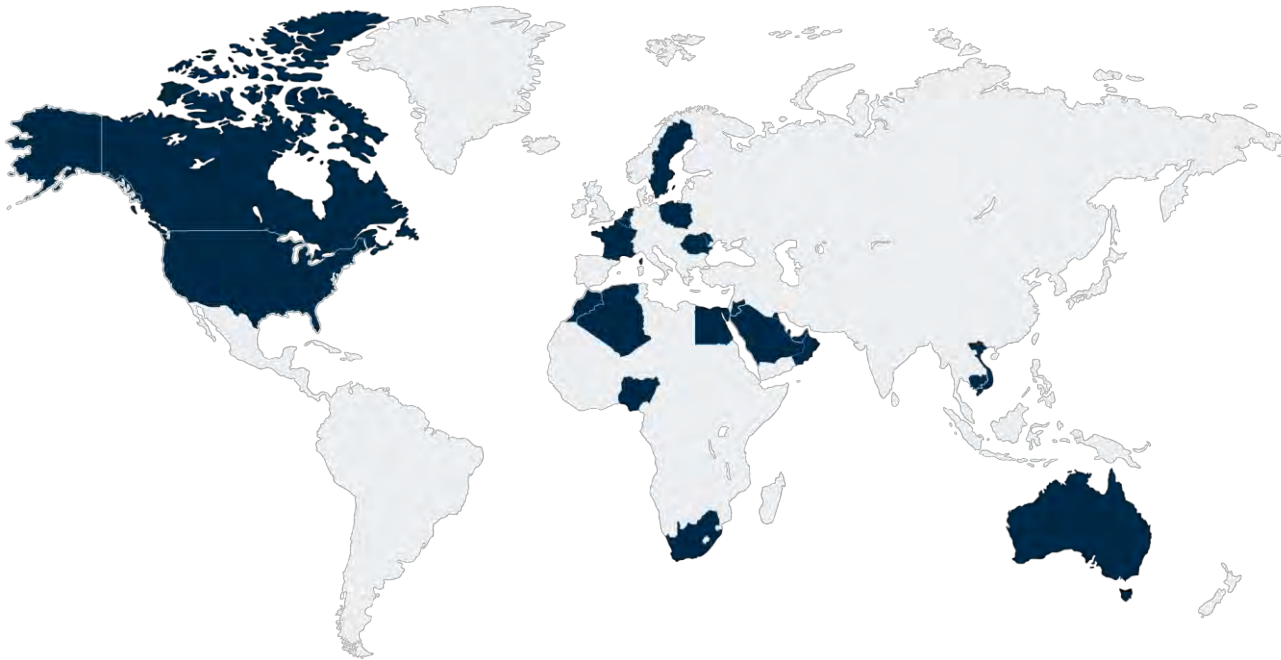
Press release

Social media activation



A network of dealers worldwide

GEH2®



Australia

Blue Diamond - www.bluedm.com.au

Atlantic Canada (New Brunswick, Nova Scotia & Prince Edward Island)

Aspin Kemp & Associates - www.aka-group.com

Bahrain, Cambodia, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, South Africa, United Arab Emirates, Vietnam

Octopian

France, Belgium, Luxembourg, Poland, Romania, Moldavia & Algeria

Eneria - www.eneria.fr

Netherlands

Genpower - www.genpower.nl

Nigeria

Buserve LTD - www.buserveltd.com

Saudi Arabia

Al Jeri Group

Sweden

Nilsson Energy - www.nilssonenergy.com

United States of America & Canada

Generac Power Systems - www.generac.com

REXH2[®]

The on-board hydrogen
fuel cell power generator



REXH2[®]: the onboard hydrogen power generator

The REXH2 is an onboard hydrogen fuel cell system designed to power the propulsion or the hotel load of all types of boat quietly, without vibrations, CO2 emissions or fine particles.

Reliable

Running exclusively on hydrogen, the REXH2 is equipped with the latest generation of fuel cell from our partner Toyota, giving it an exceptional reliability and a record life span. It was tested in the harshest conditions around the world on Energy Observer.

Efficient

The REXH2 is both efficient at sea, with an electrical efficiency exceeding 50% regardless of the load, and at the harbor thanks to the quick hydrogen refueling. It combines the carbon neutrality of batteries with the convenience of diesel.

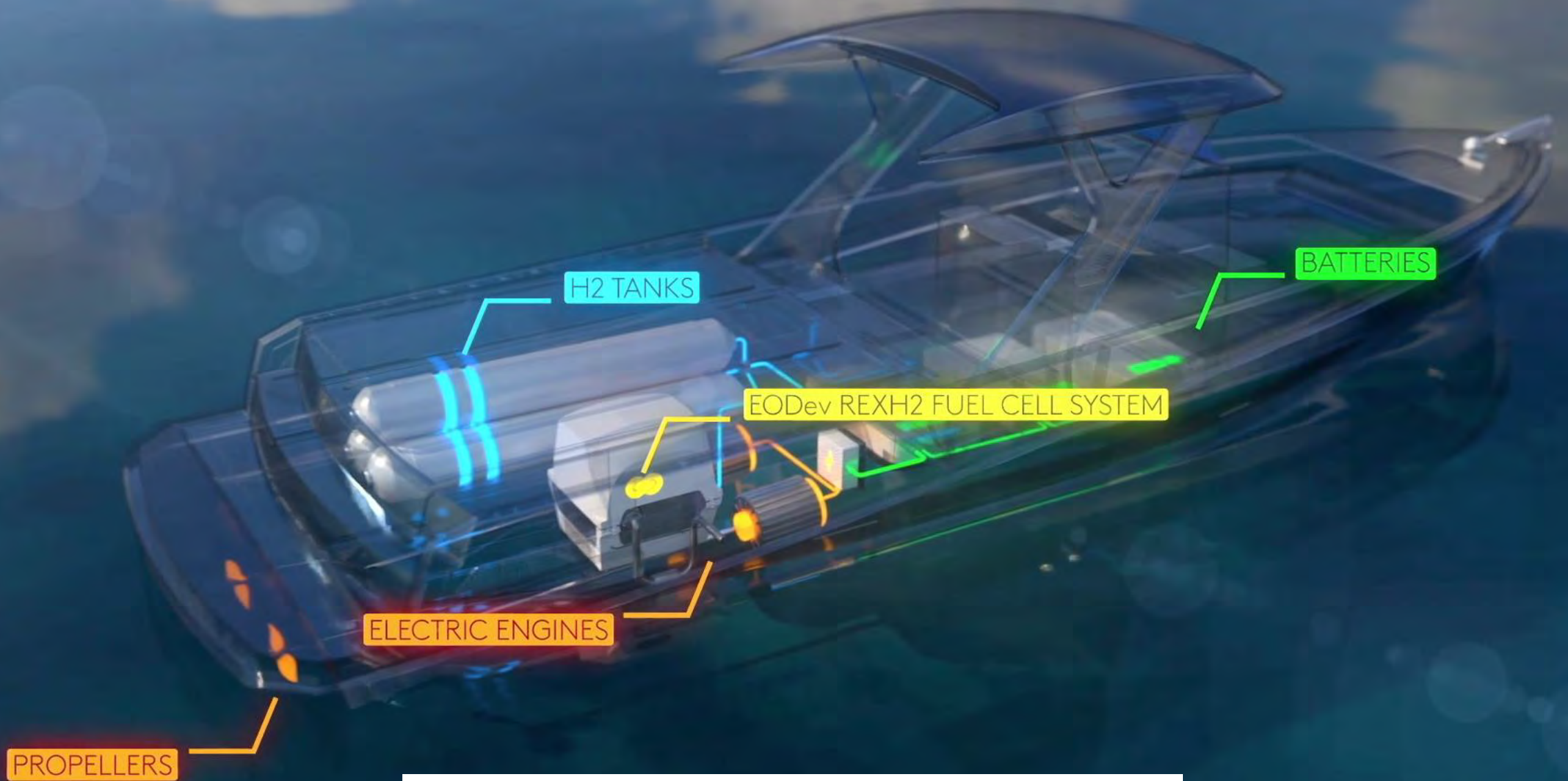
Plug & play

The REXH2 can be fitted into all types of boats, from cargo vessels to passenger shuttles to barges to professional boats and small and large pleasure vessels.

Modular

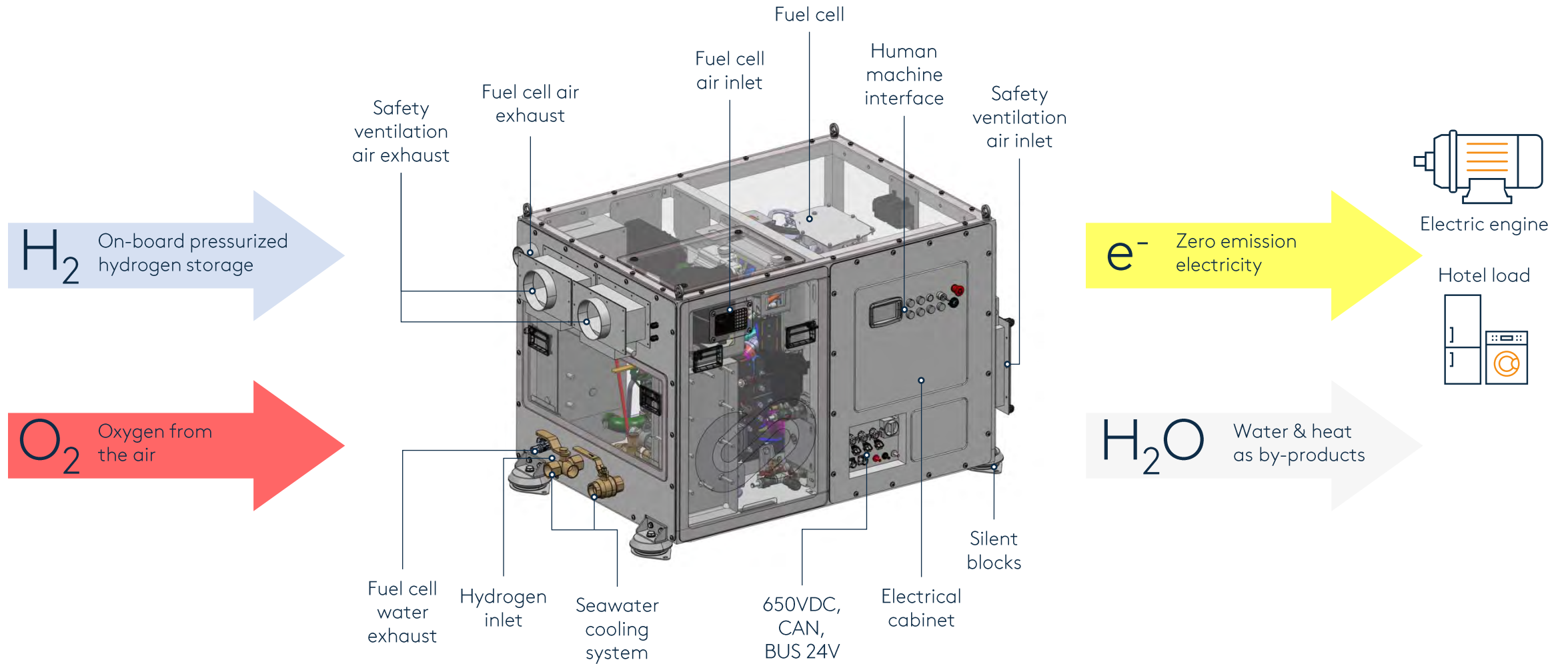
REXH2 units can be stacked but also combined with batteries to meet power requirements in MW and optimal efficiency. This flexibility in the implementation makes of the REXH2 the ideal vector for tailor-made hydrogen solutions for propulsion and the supply of carbon-free energy at sea.





<https://youtu.be/aEfvm461rf8>

How it works



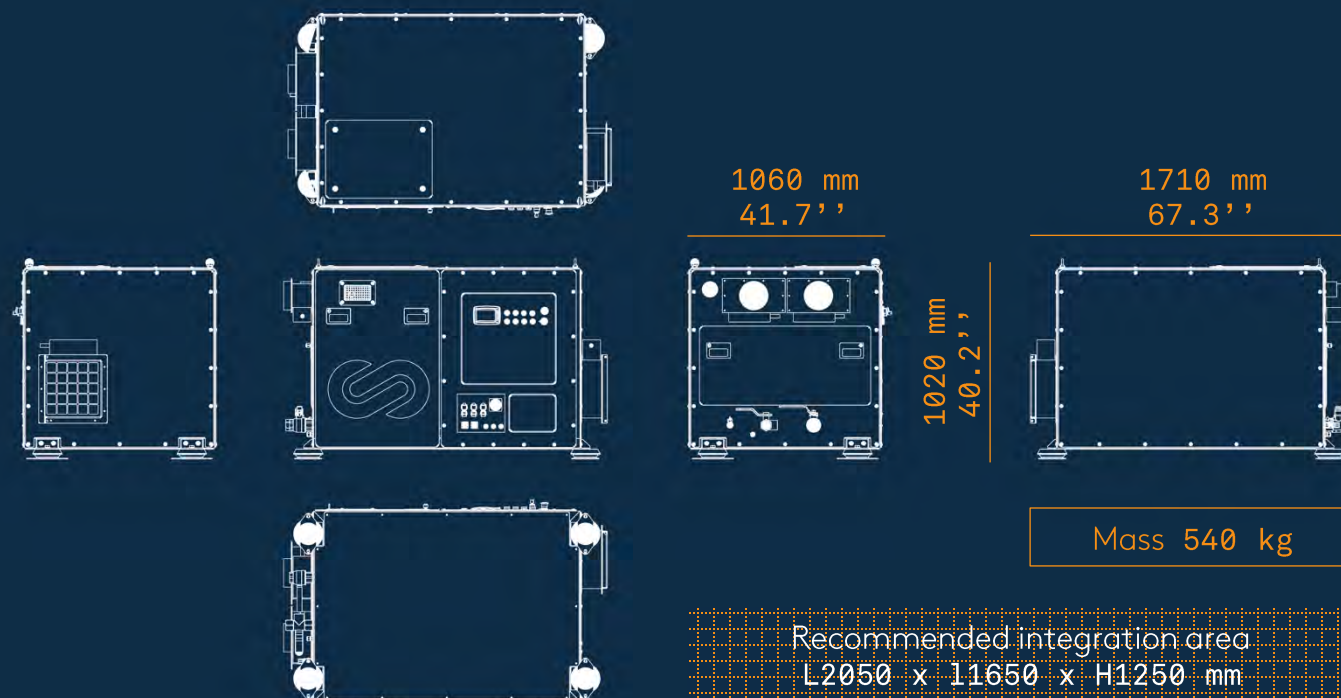
The REXH2 by the numbers

Performances

Power output	70 kW
Voltage output	600-725 VDC
Hydrogen consumption	4.6 kg /h
Water production	50 l/h
GHG emissions (CO2)	0
Polluants emissions (NOx, PM)	0
Noise level at 1m 50H	Ongoing test
Communication & monitoring	CAN, NMEA, Wifi, 4/5G

Technology

Fuel cell brand	Toyota
Fuel cell type	PEM
Hydrogen pressure inlet	9-16 bars



Operating environment

Ambient air temperature	-15°C to 40°C
Ventilation air flow requirement	8000 Nl/m
Seawater temperature and flow requirement	Up to 32°C at 200 l/m
IP classification	IP 52 (IP 56 in option)

Rank 1 suppliers origin

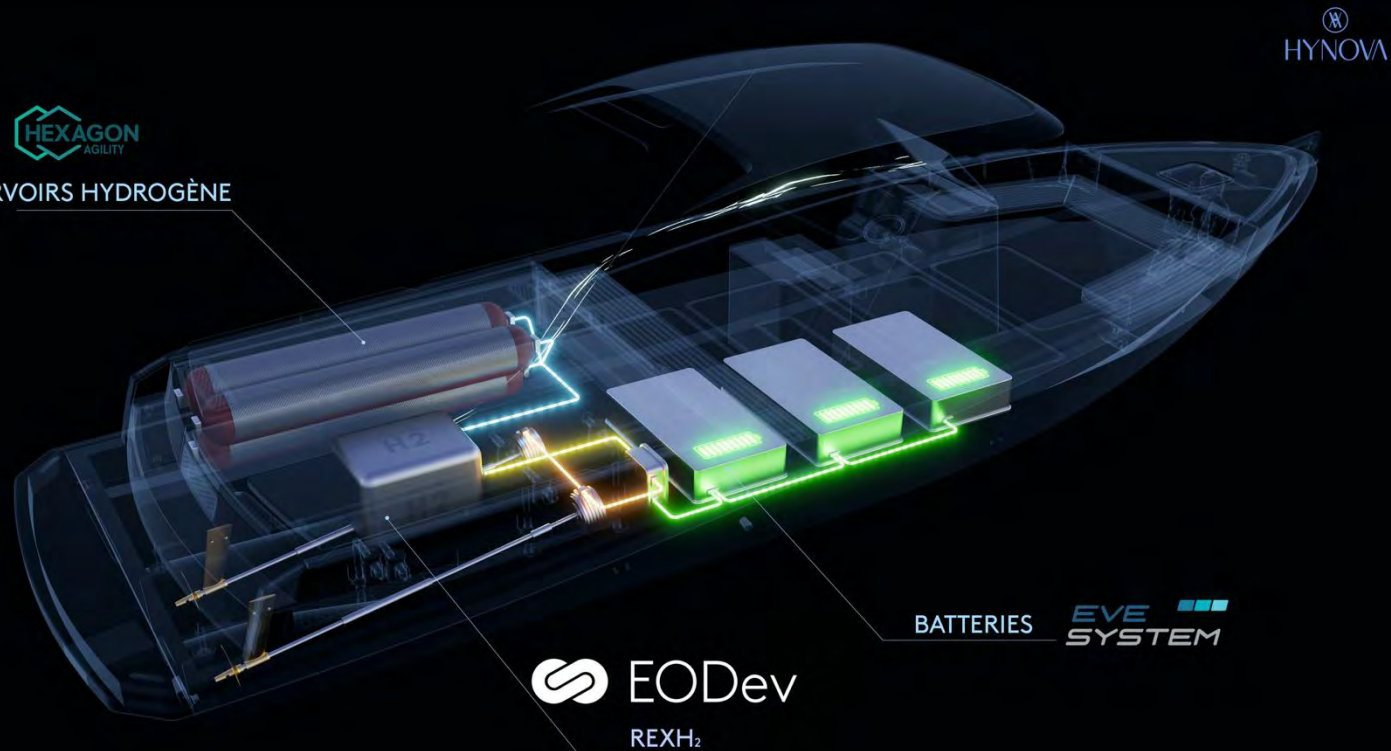


Launch of HYNNOVA 40

May 2021 – French Riviera



HEXAGON
AGILITY
RÉSERVOIRS HYDROGÈNE



Fountaine Pajot Samana 59

2023



HYNOVA 48

2023



America's Cup tender with Bluegame

2023



LPMA Bastia

2024



Energy Observer 2

2025



A network of dealers worldwide

REXH2®



France, Belgium, Luxembourg, Poland, Romania, Moldavia, Algeria

Eneria - www.eneria.fr

United States of America, Canada

Aspin Kemp & Associates - www.aka-group.com

Our references





www.eo.dev
contact@eo.dev