

Energy Observer

Exploring positive energies



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What is Energy Observer ?

The Energy Observer project was born in 2013 from the commitment of Victorien Erussard, a master mariner. Aware that it is now vital to commit to the planet, he gathered around him a complementary team of sailors, scientists, engineers and reporters to create the first self-sufficient vessel capable of drawing its energy from nature whilst also preserving it.

The dream became a reality 4 years later, when the Energy Observer vessel was launched for the first time. Developed from a legendary multiple award-winning catamaran, Energy Observer is a laboratory for ecological transition

designed to push back the limits of zero-emission technologies. Hydrogen, solar, wind and water power, all the solutions are experimented with, tested and optimised here with a view to making clean energies a practical reality that is accessible to all.

Criss-crossing the oceans in a bid to get out and meet those who are coming up with sustainable solutions for the planet every day, Energy Observer has become a movement, a round the world Odyssey, where every stopover is an opportunity to learn, to understand and to share the different energies.

Energy Observer has received the High Patronage of Mr. Emmanuel Macron, President of the French Republic. French ambassador for the UN's sustainable development goals, supported by the Ministry for Ecological Transition, Unesco, the European Union, Irena and Ademe.



Our mission

Through a bold and inquisitive approach, Energy Observer is linking together worlds which all too often ignore one other: we are both explorers and entrepreneurs, sailors and engineers, idealists and realists. We think about change, we document it, we are a mouthpiece for green innovation among political decision-makers and manufacturers, whilst laying down a gauntlet for change by ensuring that we rank among today's movers and shakers.

The development of reliable, sustainable, noise-free, affordable energy solutions forms the nub of the challenges faced by our odyssey. We sail around the world, stopping off at a number of iconic cities along the way, where we get to meet the women and men who are devoting their energy to the creation of sustainable solutions for a more harmonious world. France's first ambassador for the 17 sustainable development goals set by the United Nations, our mission is to raise awareness amongst the widest possible audience about the challenges of ecological transition.

Innovations to accelerate energy transition

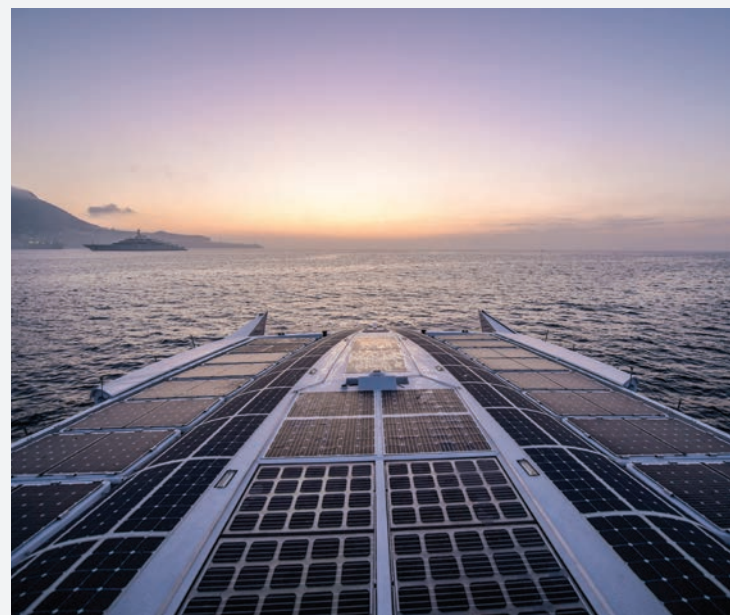
Energy Observer is a laboratory where engineers, researchers and scientists are developing innovations, which will make renewable energies a reality for all. With this in mind, we put to the test the latest, cutting-edge technologies in terms of hydrogen, batteries, solar and wind power and hydroelectricity production in the most demanding and at times hostile environment known to man: the ocean. These are tried-and-

tested technologies optimised over the course of a voyage spanning more than 30,000 nautical miles. The variety and diversity of renewable energies are central to resilient zero-carbon energy systems developed by our engineers with the support of our manufacturing partners. The development of reliable, sustainable, noise-free, affordable energy solutions forms the nub of the challenges faced by our odyssey.

Our resources are not unlimited. We cannot continue to overuse fossil fuels that have been stored for millions of years and whose combustion is harmful to our health and to the planet. On the contrary, we must cooperate with nature intelligently, just as we do with our vessel: we produce what we consume, we go at the speed that renewable energies allow us to reach. What we especially want to accelerate is the energy and environmental transition through the deployment of renewable energy sources and green hydrogen, which are key elements in tackling climate change.

Victorien Erussard

Chairman, captain and Founder of Energy Observer



Energy Observer in navigation during its France tour

© Energy Observer Productions - Antoine Drancey

A journey of exploring into the initiatives changing our world

The Energy Observer adventure is also a historic 7-year Odyssey to meet the pioneers who are innovating to save the planet by reinventing agriculture, energy, economy, mobility, and by finding solutions to protect biodiversity. Positive and concrete innovations that are already working and show that another world and another future is possible. As the first French ambassador of the 17 sustainable development goals set by the UN in 2015, we carry France's message on the need to preserve the planet everywhere in the world.

**SUSTAINABLE
DEVELOPMENT GOALS**

Energy Observer in Haiti © Energy Observer Productions - Fitzgerald Jeco

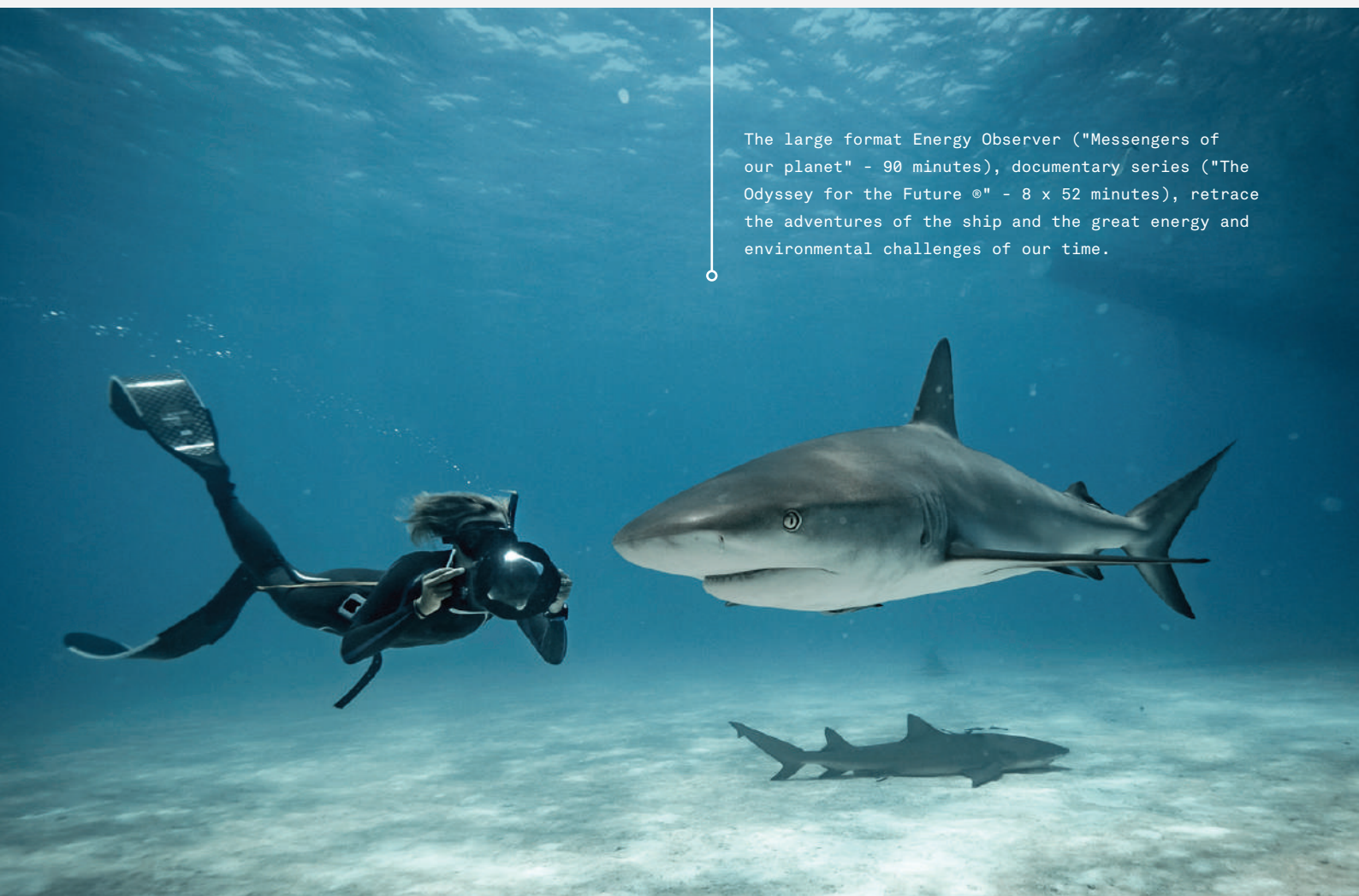


Raising awareness among all audiences

At each stopover, we meet women and men who are carrying out local and replicable projects. "Energy Observer Solutions" is the showcase for this ecosystem of committed players around the world, thanks to short films broadcast freely on a platform dedicated. The Ministry of Ecological Transition, Ademe, the International Association of Universities, Unesco and the SDSN support us in identifying pioneers and solutions around the world.

Diving with sharks in the Bahamas © Energy Observer Productions - Fitzgerald Jegó

The large format Energy Observer ("Messengers of our planet" - 90 minutes), documentary series ("The Odyssey for the Future ©" - 8 x 52 minutes), retrace the adventures of the ship and the great energy and environmental challenges of our time.





The Energy Observer village during Route du Rhum © Energy Observer Productions - Antoine Drancey

Furthermore, at each major stopover of our odyssey, we are deploying an open-access exhibition village designed to raise awareness among all audiences of the challenges of the energy and ecological transition. Families, students, elected officials and local industrial decision-makers, all are invited to dive into the Energy Observer adventure of playful and immersive way. This travelling exhibition welcomes each year nearly 100,000 people.

The ecological transition must be seen as the promise of a better world. Through this unique Odyssey, we want to make people dream in order to raise awareness, we want to prove that man can live in harmony with nature and that the fight against global warming can pave the way to a new economic boom.

Victorien Erussard

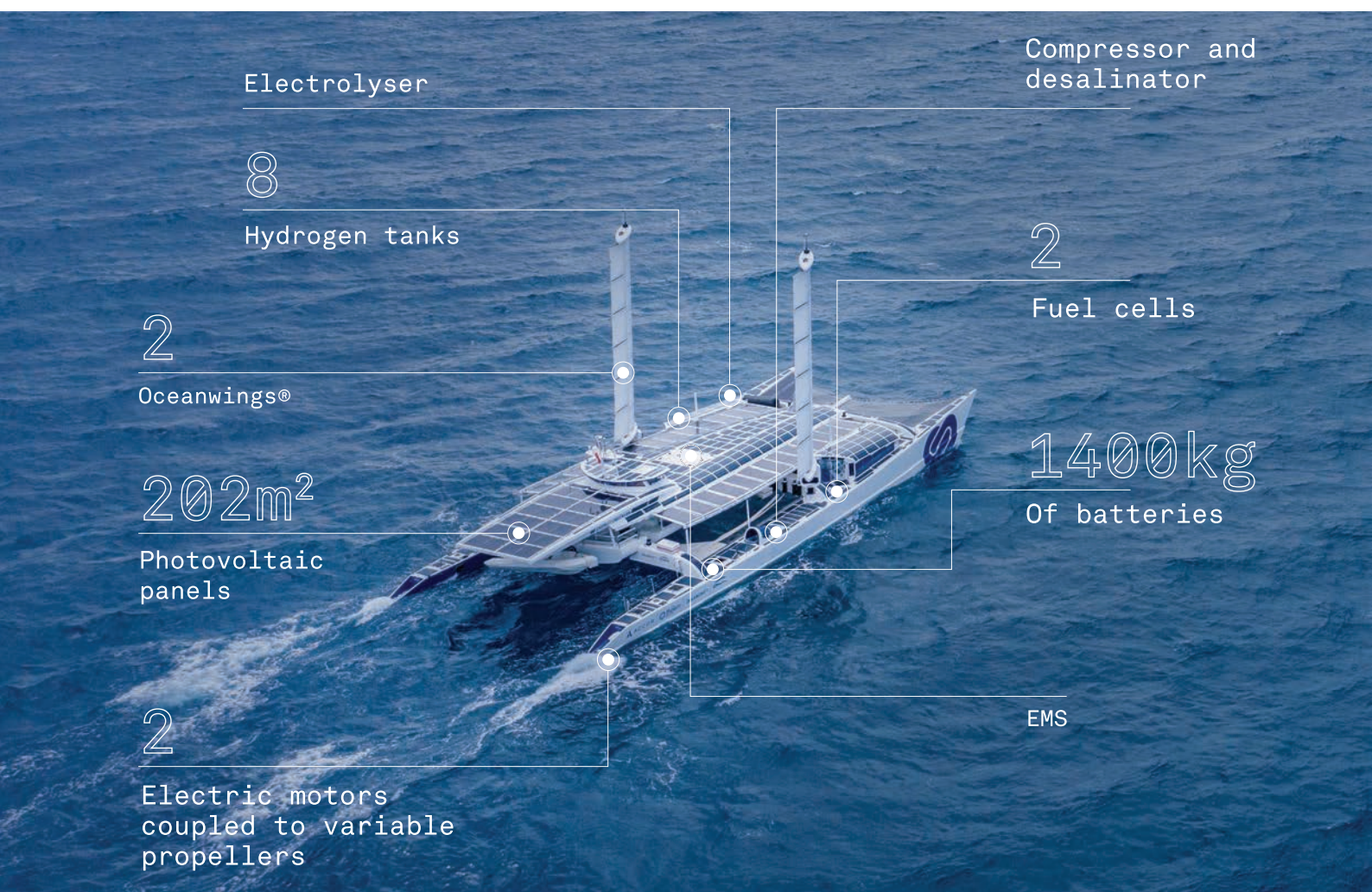
Chairman, captain and Founder of Energy Observer



Presentation of Energy Observer in a school in Tangier © Energy Observer Productions - Arthur Boquet

Our vessel, a floating energy transition laboratory

At the outset, Energy Observer is the name of a boat, self-sufficient in energy, with zero emissions, zero fine particles, zero noise, as well as being a symbol of our awareness raising and our ambitions at the service of ecological transition.



We designed her to prove that entirely decarbonised, decentralised and digitised energy is possible, that such a virtuous circle is achievable. Her on-board technologies, combining multiple sources – solar, wind and hydro power – and forms of storage, batteries and above all hydrogen, prefigure tomorrow's intelligent energy networks (smart grid), which can be reproduced on a grand scale, everywhere and for everyone.

Victorien Erussard,
Chairman, captain and founder of Energy Observer

Hydrogen, the keystone of the Energy Observer system

To date, hydrogen is the best ally of the renewable energies. The most abundant chemical element in the universe, light and with an energy density three times higher than traditional fuels, it allows the storage of surplus renewable energy and makes it possible to offset their intermittency. If Energy Observer stored its energy only with traditional batteries, it would weigh twice as much!

The 62kg of hydrogen stored on board Energy Observer provide 1MWh of electricity, which is equivalent to the average electricity consumption (including electric heating) of a 4-person

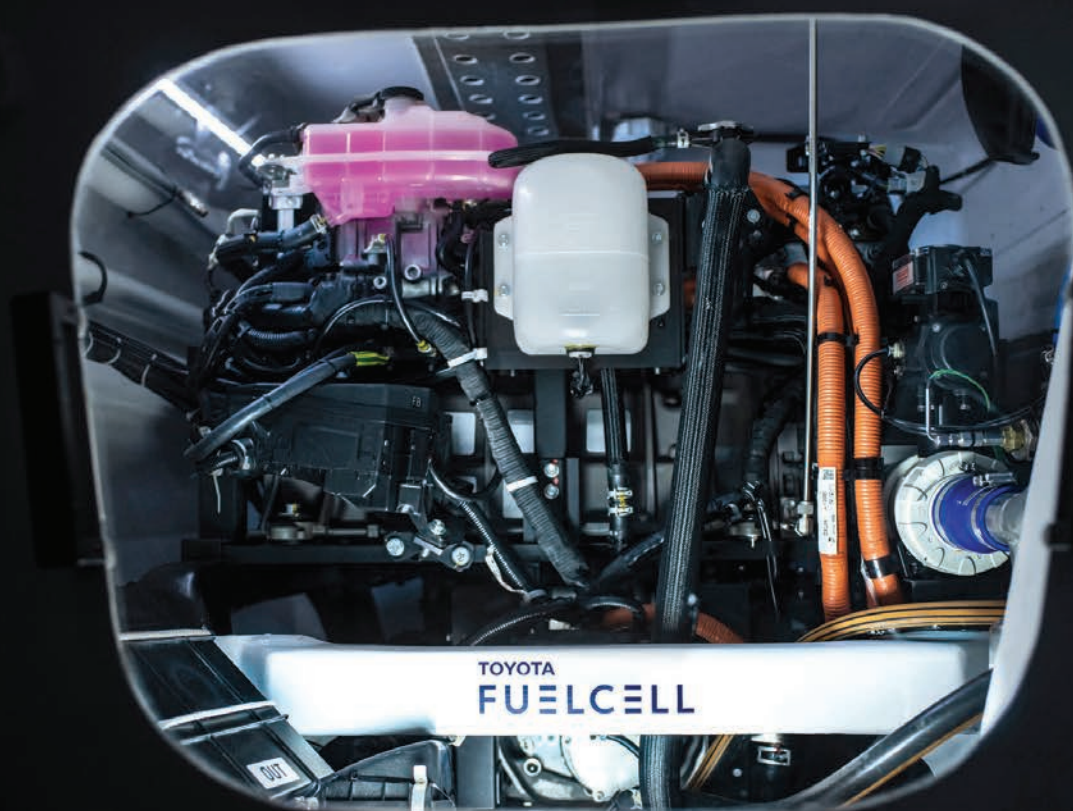
household for a month and 10 days*.

While maritime and land mobility meet ever-increasing demands for power, speed and reliability, hydrogen is currently the only energy carrier that offers a credible alternative to fossil fuels without impacting the environment.

By testing an energy system based on a mix of renewable energies and hydrogen produced on board our ship, we are paving the way for multiple land and maritime applications that can be replicated at the level of a user, a neighborhood or even an entire city.

*This example is based on a household living in a home spanning around 140m² at an altitude of 1,000m with a heat pump system.

The RexH₂® developed by Energy Observer Developments and Toyota © Energy Observer Productions - Francine Kreiss



A team of passionate people

Sailors, engineers, reporters, we are about fifty passionate actors around the Energy Observer project. Several types of professional backgrounds have forged a unique, close-knit team with solid convictions and objectives to move the lines and accelerate the energy transition.

Aboard the boat, skippers and bosuns guide the expedition embarked on by this extraordinary vessel; mechanics, technicians and engineers ensure the on-board systems perform well, whilst the reporters and cameramen document the stopovers and share Energy Observer's encounters with advocates for change.

Over time, the Energy Observer project has become a genuine advocate for change by creating its own research and development firm, EODev (Energy Observer Developments). Its objective? To use these years of navigational expertise and the knowledge acquired by its engineers to design, assemble and distribute zero-emission energy systems on an industrial scale. Where the vessel is testing these technologies in extreme conditions, EODev is responsible for rolling them out on a grand scale, thus making them accessible to all.





Embark with us!

Energy Observer shares live content on the social networks: logbooks, decryption of ecosystems by a scientist or biologist, making of, technical functioning of the boat a way of immersing oneself in the the crew's daily routine!



#EnergyObserver

www.energy-observer.org ↗

