

Press Release

NAAREA and EO Concept form a strategic partnership

3 October 2024 – Nanterre – NAAREA, a French trailblazer in innovative nuclear energy, has entered into a strategic partnership with EO Concept, a subsidiary of Energy Observer, with the aim of accelerating the development of and innovation in decarbonized energy chains that are breaking away from conventional modes of propulsion for heavy maritime applications. This collaboration aims to explore the promising possibilities that the XAMR® solution offers for producing hydrogen and/or low-emission electrofuels, with a particular focus on (though by no means limited to) maritime mobility.

NAAREA is a French company that is designing and developing an innovative and sustainable fourth-generation molten salt fast microreactor capable of producing electricity (40 MWe) and heat (80 MWe) by burning very long-lived nuclear waste recovered from spent fuel from traditional nuclear power plants. NAAREA's microreactors – the XAMR® – will be installed in close proximity to intensive energy consumers, primarily in industry, to provide them with a carbon-free and decentralized energy solution.

Energy Observer, first known as the name of the first zero-emission vessel – combining a mix of renewable energies and a hydrogen production chain using seawater – to sail around the world, is now a key innovator in the energy transition, particularly in the maritime sector. Energy Observer embodies the possibility of an ambitious, dynamic energy transition. In 2019, its founder, Victorien Erussard, created EODev, which has become a global leader in hydrogen power generators. In 2023, he launched EO Concept, with the primary goal of continuing the development of the Energy Observer 2 project, a 160-metre-long cargo ship powered by 4.8 MW fuel cell systems using liquid hydrogen.

With a shared vision for the decarbonized future of energy and for a just and responsible transition, NAAREA and EO Concept are joining forces in a partnership that aims to explore the opportunities for using NAAREA's XAMR® solution for producing hydrogen and/or low-carbon electrofuels, with a particular focus on maritime mobility. This partnership will also aim to evaluate the necessary conditions for ensuring competitive hydrogen and electrofuel production, while identifying the means of achieving these goals. Both partners are particularly interested in exploring the advantages of high-temperature hydrogen production, made possible by the XAMR®.

"We are very excited about collaborating with EO Concept through this strategic partnership. Together, we share the same vision of a clean energy future, where innovation plays a central role in meeting climate challenges", explained Jean-Luc Alexandre, Founder and CEO of NAAREA. "NAAREA's XAMR solution represents a breakthrough technology that, combined with Energy Observer's expertise in alternative fuels, will allow us to explore new avenues for producing hydrogen and electrofuels. This partnership embodies our shared ambition of proposing concrete, competitive and environmentally friendly solutions, and to actively contributing to achieving a just and responsible energy transition."

"We are looking forward to this collaboration with the company NAAREA. Together, we share a mutual commitment to implementing efficient solutions to meet real needs, in particular through energy ecosystems. The production of hydrogen through electrolysis and its liquefaction, in sufficient quantity and at a competitive cost on the target market, is a prerequisite for the deployment of our container ship Energy Observer 2. The XAMR represents a promising medium-term solution to round out the energy mix of tomorrow and reduce the greenhouse gas emissions from our modes of transport", stated Didier Bouix, General Manager of EO Concept.

About NAAREA:

NAAREA (Nuclear Abundant Affordable Resourceful Energy for All) was founded in 2020 by Jean-Luc Alexandre and Ivan Gavriloff to help meet the objectives of energy sovereignty, decarbonization and improving the energy mix. NAAREA is developing the XAMR®, a nuclear microreactor capable of producing electricity (40 megawatts electric) and high-temperature heat (80 megawatts thermal) by burning long-lived nuclear waste recovered from spent fuel from traditional nuclear power plants. The XAMR® is designed to be industrially mass-produced and installed in close proximity to consumers, namely in the mobility sector, electro-intensive industries and remote areas. NAAREA benefits from the support of the French Alternative Energies and Atomic Energy Commission (CEA) and French National Centre for Scientific Research (CNRS), as well as industry players such as Assystem, Dassault Systèmes, Orano and Jacobs. A carbon-free and non-intermittent energy source planned to be on the market by 2030, NAAREA's XAMR® is opening the way for sustainable and innovative nuclear energy that supports energy independence, increased resilience and the circular economy. NAAREA is a winner of the "Innovative Nuclear Reactors" call for proposals under the France 2030 investment plan and a beneficiary of the French Tech 2030 support programme.

Learn more at: www.naarea.fr

About EO Concept:

A subsidiary of Energy Observer, created in 2023, EO Concept is a research and development firm specializing in naval and port energy systems. EO Concept, a forerunner in low-carbon maritime solutions, is developing its ambitious and pioneering project Energy Observer 2, a feeder vessel propelled by liquid hydrogen. Designed to be the lowest carbon-emitting cargo ship in the world, this vessel represents a technological breakthrough.

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