



Press release

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CMA CGM becomes partner to the Jupiter 1000 project, France's first industrial demonstrator of hydrogen and e-methane's production, piloted by GRTgaz

- **Converting renewable electricity into hydrogen and e-methane to foster the development of low-carbon solutions.**
- **Sharing expertise and R&D to facilitate the development of energy sources of the future.**
- **Lessons learned from Jupiter 1000 should open the way for the large-scale production of low-carbon e-methane for the CMA CGM Group's ships.**

The CMA CGM Group, a global leader in sea, land, air and logistics solutions, is joining the partners of the Jupiter 1000 industrial demonstrator project piloted by GRTgaz in Fos-sur-Mer. This innovative installation aims to produce green hydrogen from renewable power and also e-methane, a synthetic gas using this hydrogen and CO₂ captured from the industrial process. Through its participation in the project, CMA CGM aims to further accelerate the pace of its fleet's transition to new very low-carbon fuel sources.

Jupiter 1000: a key challenge for the development of low-carbon solutions

With Jupiter 1000, GRTgaz intends to provide solutions to the challenge of decarbonizing gas networks and the intermittent nature of renewable energies. The idea is to convert a portion of renewable power, at times when it is abundant, into low-carbon energy (hydrogen and e-methane) so it can be stored on a large scale and for lengthy periods.

Following a study phase, administrative authorizations, then building permits, the first electrolyzer (producing hydrogen from water and renewable power) injected hydrogen into GRTgaz's gas transmission network in February 2020. A second electrolyzer, employing a different technology from the previous one, successfully entered service at the beginning of November 2021.

Beyond producing hydrogen, Jupiter 1000 also recycles CO₂ by converting it into synthetic gas. The CO₂ produced by the boiler at Asco Industrie, a steelmaking plant located nearby, is captured at the foot of the chimney stack by equipment developed by Leroux&Lotz. The CO₂ is then piped to the Jupiter 1000 site. Rather than being discharged into the atmosphere, the CO₂ is recycled with hydrogen in a methanation unit installed by Khimod. The syngas produced can be used instead of fossil fuel gas and employed freely across all transport and distribution networks. The hydrogen methanation facilities are due to be commissioned in June 2022.

A project with global reach integrated with the local ecosystem and built on expertise sharing

The Jupiter 1000 demonstrator project, which is perfectly integrated with the local ecosystem, benefits from the expertise of several partners. Compagnie Nationale du Rhône generates the renewable power, RTE handles the power transmission, McPhy supplies the electrolyzers, Leroux&Lotz captures and stores the CO₂, Khimod handles the methanation process, CEA-Liten is piloting the trials, GRTgaz and Teréga supply the green gas to the conventional gas network and the Port of Marseille houses the project. CMA CGM will bring to the Jupiter 1000 project its expertise in shipping and logistics, as well as guidance and fresh insights from its perspective on customer needs.

Jupiter 1000 is a project that has regularly attracted visits from international delegations since it was commissioned (Netherlands, Germany, Spain, Quebec, California, etc.).

A key milestone in efforts to find alternatives to hydrocarbons

The CMA CGM Group is committed to the energy transition and has set itself the goal of Net zero carbon emissions by 2050. In pursuit of this goal, the Group is focusing on low-carbon fuels to power its ships. By providing access to the results of its green hydrogen production, methanation and CO₂ capture, Jupiter 1000 will enable CMA CGM to accelerate development of the production sector for synthetic methane, a key fuel for the decarbonization of its operations.

CMA CGM already has 28 “e-methane ready” dual-fuel, LNG-powered containerships and will have a total of 44 vessels of this type in service by the end of 2024. Liquefied Natural Gas (LNG) reduces sulfur oxide emissions by 99%, fine particle emissions by 91% and nitrogen oxide emissions by 92%. That makes a significant contribution to improve air quality. Thanks to the dual-fuel gas-powered technology developed by CMA CGM, which currently runs on LNG, bioLNG and synthetic methane can already be used by its ships.

Christine Cabau Woehrel, Executive Vice-President of the CMA CGM Group, in charge of Industrial Assets and Operations, commented: *“The Jupiter 1000 project is of great interest to the CMA CGM Group as part of our efforts to find very low-carbon new fuel sources. To help us meet our Net Zero target by 2050, we are resolutely committed to searching for and industrializing innovative non-fossil fuel gas solutions, with biomethane and synthetic methane. The Jupiter 1000 project will give us access to one of the first demonstrator projects of the kind. Moreover, it is located at Fos-sur-Mer, where we recently completed our first LNG bunkering operations. We intend to support the potential emergence of a whole new industry.”*

Thierry Trouvé, Chief Executive Officer of GRTgaz, added: *“I’m delighted the Jupiter 1000 consortium is bringing in new expertise. The interest shown by the likes of CMA CGM, a world leader in shipping and logistics, represents a major endorsement of the renewable and low-carbon gas industry’s credibility and of its efforts to rise to the challenges posed by the energy transition. CMA CGM, which has a clear vision for the future of the shipping industry, will help us to scale up the industrial performance of the technologies we are trialing.”*

Further information and videos about the project and its aims are available at www.jupiter1000.eu

About CMA CGM

Led by Rodolphe Saadé, the CMA CGM Group, a global leader in sea, land, air and logistics solutions, serves more than 420 ports around the world on five continents. Backed by a fleet of 566 vessels, in 2021 the Group transported 22 million TEU (twenty-foot equivalent units) containers. With its subsidiary CEVA Logistics, a world leader in logistics, which transports 474,000 tons of air freight and more than 21 million tons of land freight each year, and its air freight division CMA CGM AIR CARGO, the CMA CGM Group is continually innovating to offer its customers a complete and increasingly efficient range of new shipping, land, air and logistics solutions.

Committed to the energy transition in shipping, and a pioneer in the use of alternative fuels, the CMA CGM Group has set a target to become Net Zero Carbon by 2050.

Through the CMA CGM Foundation, every year the Group helps thousands of children through its actions to promote education for all and equal opportunity. The CMA CGM Foundation also acts in humanitarian crises that require an emergency response by mobilizing the Group’s shipping and logistics expertise to bring humanitarian supplies around the world.

Present in 160 countries through its network of more than 400 offices and 750 warehouses, the Group employs more than 130,000 people worldwide, including 2,900 in Marseilles where its head office is located.

Learn more at cmacgm-group.com

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About GRTgaz

GRTgaz is one of the largest European gas transmission system operator, boasting 32,500 km of pipelines and 640 TWh of gas transported. The business employs 3000 staff and achieved a turnover of nearly 2.2 billion euros in 2020. GRTgaz has a mission statement that runs: “Together, we make possible an energy future that is safe, affordable and climate neutral”. An innovative business undergoing profound transformation to adapt its network to the new ecological and digital challenges, GRTgaz is committed to a 100% carbon neutral gas mix in France by 2050. It supports the hydrogen and renewable gas (biomethane and gas from solid and liquid waste) industries. GRTgaz carries out public service missions to guarantee security of supply to its 945 customers (shippers, distributors, industry, power stations and biomethane producers). With its subsidiaries Elengy, the European leader in methane tanker terminals, and GRTgaz Deutschland, operator of the German MEGAL transport grid, GRTgaz plays a key role on the European stage. The business exports its expertise internationally, particularly those services developed by its research centre, RICE.

You can find us at <https://www.grtgaz.com> and on Twitter.

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