

JOINT PRESS RELEASE

Evos, Hydrogenious LOHC Technologies and Port of Amsterdam to jointly develop large-scale hydrogen import facilities in the port of Amsterdam

- **LOHC technology offers great potential for the safe transport and storage of green hydrogen, by making use of existing infrastructure in the port**
- **Storage, handling and dehydrogenation facilities based on Liquid Organic Hydrogen Carrier (LOHC) technology are expected to be operational before 2028**
- **MoU follows earlier initiatives by all three parties, including as founding members of the H2A platform**

Amsterdam/Netherlands, Erlangen/Germany, 25 October 2022.

Tank storage company Evos, LOHC market-leading pioneer Hydrogenious and Port of Amsterdam announced a new dimension to their collaboration during European Hydrogen Week. The three partners have signed a Memorandum of Understanding (MoU), ratifying their intention to jointly realize large-scale import facilities for hydrogen at the port of Amsterdam. The facilities will comprise a LOHC dehydrogenation plant with a final release capacity of up to 100-500 tonnes of hydrogen per day as well as related storage and handling facilities. All three parties are founding members of the H2A platform, a platform that focuses on the development of supply chains for green hydrogen imports through the port of Amsterdam.

The realization of a LOHC import terminal and a plant for the continuous, large-scale release of hydrogen are important additions to other planned activities in the port. Such activities include the development of the regional and national backbone and various planned projects for hydrogen production in the North Sea Canal Area. The next phase of this initiative will focus on exploring the spatial, infrastructural, and financial requirements to establish the terminal over the next years. The objective is to have the first plants for delivery of hydrogen to local off-takers in operation before 2028, with the potential of further upscale. In total, the handled LOHC volumes will be at least 1 million tons per annum.

Following a completed feasibility study on different liquid hydrogen carriers, Evos, Hydrogenious and Port of Amsterdam are now taking this next step in putting Hydrogenious' unique LOHC technology into action. This study confirmed that LOHC technology is a compelling solution for use in the port of Amsterdam, compatible with the existing infrastructure. The Evos Amsterdam terminals need only relatively minor modifications to store and distribute LOHC in the port and beyond.

The liquid organic hydrogen carrier used by Hydrogenious, thermal oil benzyl toluene (LOHC-BT), is already well-established in the industry as a heat transfer medium and has ideal properties for safe handling in ports. Due to its characteristics as a flame retardant and non-explosive carrier with a high volumetric energy density, benzyl toluene can be handled like a fossil liquid fuel within existing infrastructure, at ambient pressure and temperature. After dehydrogenation, it can be reused many hundreds of times to bind hydrogen.

By making use of existing nautical infrastructure in the port, Hydrogenious' LOHC technology offers a compelling, cost-effective, and safe solution, with only minor modifications needed to enable storage at Evos Amsterdam. This unique project is therefore a key step in the development



of pan-European hydrogen value chains connected to the port of Amsterdam. As such, it contributes to accelerating the decarbonization of European industries.

Statements

Port of Amsterdam, Koen Overtoom, CEO Port of Amsterdam:

“The location of the port of Amsterdam and the companies operating here and in the wider North Sea Canal Area, make our port ideally suited for such a terminal and plant. This region also offers large potential for offtake, with our connection to Schiphol Airport and the presence of large industrial clusters. Additionally, we collaborate with Duisport to facilitate the distribution of hydrogen to the German and European hinterland, further increasing the offtake potential. We are thrilled about this new, key step, which will strengthen the position of the port of Amsterdam as a hydrogen hub, for import, storage, trans-shipment and distribution to the wider hinterland.”

Hydrogenious LOHC, Dr Daniel Teichmann, founder and CEO:

“In order to realize Europe’s ambitious plans to import 10 Mio. tons of hydrogen already in 2030, we need to make use of existing infrastructure. Therefore, the H2A consortium has focused on LOHC technology that can rely on existing oil handling and storage capacities and significantly reduces potential risks of handling molecular hydrogen or other derivatives. For a port and industrial region like the Port of Amsterdam, that is located very closely to the city, this is of paramount importance. The build-up of LOHC-based supply chains will also facilitate the transport of hydrogen to the ‘hinterland’ and to Germany. Besides the development of import projects, H2A will also provide political and regulatory support to technology companies and project developers at the location, as well as structured access to funding.”

Evos Amsterdam, Ramon Ernst, Managing Director:

“We are very excited about this next step. We have been building and supporting the H2A platform from the beginning, working with our partners on green hydrogen imports via the port of Amsterdam. We see a promising future in LOHC technology as it is intrinsically safe and fits with the port’s existing logistic infrastructure. We operate two large tank terminals that are perfectly suited for the storage and handling of LOHC. We are delighted to have teamed up with two exceptionally strong partners and look forward to working on concrete next steps.”

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PR_H2A_MoU_01_(c)Port of Amsterdam

The H2A founding Members signing the MoU for jointly developing a large-scale hydrogen import facility for the handling of LOHC in the port of Amsterdam: (from left to right) Dr. Daniel Teichmann (Hydrogenious LOHC Technologies), Koen Overtoom (Port of Amsterdam), Ramon Ernst (Evos Amsterdam). © Port of Amsterdam



About EVOS

Evos is a leading liquid energy and chemicals storage company. It operates a network of leading tank terminals in strategic locations across Europe, with a combined storage capacity of 6.3 million cbm. The terminals are located in the Netherlands (Amsterdam (2x), Rotterdam, Terneuzen), Belgium (Ghent), Germany (Hamburg), Malta and Spain (Algeciras). Evos was founded in 2019 and is owned by investment funds managed by Igneo Infrastructure Partners, a long-term oriented infrastructure asset manager. Evos has a total headcount of 720 employees. For more information, visit www.evos.eu.

About Hydrogenious LOHC

Hydrogenious LOHC adds the missing link to high-performing hydrogen value chains globally. Based on its proprietary and proven Liquid Organic Hydrogen Carrier (LOHC) technology with benzyl toluene as carrier medium, Hydrogenious LOHC allows for superior, flexible hydrogen supply to consumers in industry and mobility across the globe, utilizing conventional liquid-fuel infrastructure. Founded in 2013, the portfolio of the market-leading pioneer and its joint venture companies today includes stationary and mobile (on-board) LOHC-based applications: Hydrogenious LOHC Technologies, headquartered in Erlangen/Germany, offers – within an EPC partnership with Bilfinger – (de-)hydrogenation turnkey plants, Operation & Maintenance and LOHC logistics services – ensuring safe, easy and efficient hydrogen storage, transport and distribution. Hydrogenious LOHC Emirates, based in the United Arab Emirates and a joint venture with Emirates Specialized Contracting & Oilfield Services (ESCO), acts as the regional spearhead in the Middle East since the end of 2021. Hydrogenious LOHC Maritime, established in 2021 jointly with Østensjø Group and located in Norway, develops an emission-free onboard propulsion system with a promising LOHC/fuel cell solution for the global shipping industry. With its >180 staff members and investors AP Ventures, Royal Vopak, Winkelmann Group, Mitsubishi Corporation, Covestro, JERA Americas, Temasek, Hyundai Motor Company, Chevron Technology Ventures and Pavilion Capital, Hydrogenious LOHC is a major enabler and accelerator for the energy transition. www.hydrogenious.net | www.hydrogenious-emirates.ae | www.hydrogenious-maritime.net

About Port of Amsterdam

Port of Amsterdam aims to be a leading European seaport at the forefront of the transition to a sustainable society. The port is a logistics hub for international and national trade flows, as well as local urban distribution. The port focuses on growth of bio- and synthetic fuels, hydrogen activities, circular industry and manufacturing. Western Europe's fourth port delivers added value by employing 68,000 people at port and port-related companies. By innovating, the port is working towards a smoother and more transparent shipping process and reduced CO2 emissions from port and shipping. Port of Amsterdam is working intensively with clients and partners to make the port operate faster, smarter and cleaner. So a little better every day. www.portofamsterdam.com

Media contacts

Evos

Bart van der Meer, Technical Business Development Manager

Bart.van.der.meer@evos.eu

Hydrogenious LOHC

Birka Friedrich, Head of Marketing and Corporate Communications

birka.friedrich@hydrogenious.net



Frank Erik Walter, Global Media Relations & PR
frank.walter@hydrogenious.net

Port of Amsterdam

Anja, de Kiewit, press officer at Port of Amsterdam
Anja.de.kiewit@portofamsterdam.com