

Hydrogenious LOHC

JOINT PRESS RELEASE

CWP Global and Hydrogenious LOHC Technologies explore green hydrogen transport chain from Morocco to Europe in feasibility study

- > 15 GW AMUN project by CWP Global is base for model considerations, exploring a 500 tpd hydrogen transport chain to Europe via LOHC
- > LOHC solution by Hydrogenious has great potential for long distance hydrogen shipping as it can safely be handled in urban ports

Erlangen/Germany, 04 May 2023. The renewable energy development company CWP Global and the German pioneer for liquid organic hydrogen carriers (LOHC), Hydrogenious LOHC Technologies, have signed a memorandum of understanding (MoU) for a joint feasibility study in 2023 that will explore a 500 tons per day hydrogen transport chain from Morocco to Europe using Hydrogenious' proven LOHC technology.

The 15 GW AMUN project near the city of Tan Tan in Morocco will be explored as a starting point in the feasibility study. This project is focused on producing ammonia locally from green hydrogen, to support the decarbonization of fertilizer and maritime shipping, among others. In the interest of flexibility, safety and cost-efficiency, the partners have decided to also explore LOHC transport as an alternative allowing them to transport green hydrogen directly to Europe.

"We are very pleased to be partnering with Hydrogenious on this study that will serve to further explore the viability of LOHCs for long-distance shipping of green hydrogen, using our 15 GW AMUN project as a model. This marks another step in building the clean energy future we are working towards, by identifying the most efficient and cost-effective solutions to deploying green hydrogen and its derivatives in support of Net Zero by 2050 goals," says Guido Schumacher, Chief Technology Officer at CWP Global.

"CWP Global has a lot of experience in developing and implementing large-scale projects and we are very excited to be working with them," adds Dr Andreas Lehmann, Chief Strategy Officer at Hydrogenious LOHC Technologies. "Our collaboration on this feasibility study once again underlines the great strengths of our LOHC solution. As an option for storing and transporting hydrogen on an industrial scale, our LOHC technology has many advantages over other transport methods - particularly in terms of safety in urban areas or ports and the purity of the hydrogen achieved. We can also use the existing infrastructure for liquid fuels, further accelerating the development of the hydrogen value chain."

>> END OF PRESS RELEASE <<



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Additional Background information to the editor:

On the AMUN Project by CWP Global

With its Atlantic coastline ideal for wind and its vast inland deserts perfect for solar, Morocco has enormous potential for renewable energy production. In the first phase of the AMUN project near the city of Tan Tan, CWP Global plans to install 3 GW of wind and 3 GW of solar power to produce green hydrogen, which will then be used for local ammonia synthesis and might also be suitable for export via LOHC. A second phase of the project will add a further 9 GW of wind and solar generation capacity. CWP Global is working closely with local governments and host communities to ensure the project not only supports global decarbonisation but is sustainably developed and benefits the host region through providing clean energy, job creation, capacity building, among others.

On green ammonia and the LOHC technology by Hydrogenious

Green ammonia can play an essential part in decarbonizing local industry and local agriculture thanks to its potential applications both as feedstock and fertilizer. It is also discussed as a medium for exporting hydrogen across the globe. Shipping green ammonia can however present challenges, especially in urban areas, because of its hazard potential and the fact that it requires additional investment in infrastructure. Here LOHC solutions can play an important role, allowing companies like CWP Global to directly ship hydrogen over long distances.

The LOHC technology by Hydrogenious in particular allows for the safe and cost-efficient storage and transport of hydrogen with already existing infrastructure for liquid fuels. It is based on benzyl toluene (LOHC-BT) which has particularly positive properties as hydrogen carrier for handling in ports and urban environments, since LOHC-BT is a non-explosive, flame-retardant thermal oil with a lower hazard potential than diesel. It can be handled at ambient pressure and temperature and shows no hydrogen losses (e.g. boil-off), even over long distances or during long periods of time.

On the renewable energy strategy of CWP Global

CWP Global has an ambitious project pipeline that currently exceeds 170 GW of renewable energy capacity, to be converted into green hydrogen and its derivatives, including green ammonia. The company is working to scale up green hydrogen production in order to ensure the world is on track to meet Net Zero by 2050 targets. To achieve this, CWP Global is working closely with different partners and stakeholders across the entire green hydrogen value chain with a common goal of identifying the best solutions in terms of technology, financing, delivery, end-use and more.





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CWP_Global_Hydrogenious_LOHC_MoU_Signing.jpg

CWP Global and Hydrogenious LOHC Technologies agreed to a joint feasibility study. Signing the MoU: Dr Andreas Lehmann, Chief Strategy Officer at Hydrogenious LOHC Technologies (left) and Guido Schumacher, Chief Technology Officer at CWP Global (right) © Hydrogenious LOHC Technologies

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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 >200 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 CWP Global

CWP Global is a pioneer developer of innovative, large-scale renewable energy and green hydrogen hubs, with the mission to support the urgent decarbonization of key industries through the production and delivery of green molecules, while putting people and sustainability at the heart of all our projects.

CWP Global currently has eight projects in development across four continents: Africa, Australia, and North and South America, with aggregate power generation capacity of nearly 200 GW. Through a joint venture with Mercuria inked in 2021, the CWP Europe business unit is currently pursuing 6+GW of utility-scale, grid-connected wind, solar and battery storage projects across Southeast Europe.