

## Larsen & Toubro and H2Carrier AS sign MoU

### To develop floating green hydrogen and green ammonia projects Topsides to be fabricated in India

**Mumbai, Oslo, January 13, 2023:** Larsen & Toubro, an Indian multi-national engaged in EPC Projects, Hi-Tech Manufacturing, and Services, announced today the signing of a Memorandum of Understanding (MoU) with the Norway-based H2Carrier (H2C) to co-operate towards developing floating green ammonia projects for industrial-scale applications with an aim to decarbonise the global economy. H2C has proven expertise in developing and integrating Power-to-X (PtX) projects based on affordable, often stranded, non-commercial renewable power. Under the terms of the MoU, L&T will become a partner for EPCIC of the topsides for H2C's floating process plants.

H2C plans to build the P2XFloater™ hull at yards in Asia and L&T will design and fabricate the topside process and utility modules to produce Green Hydrogen & Green Ammonia, including Electrolysers, Nitrogen Generation plant, and Ammonia Synthesis unit. Installation of the topsides modules on the hull and its integration can be customised as per location preferences, i.e., can be carried out in India or in other geographies.

L&T has been a leader for decades in the Indian energy industry, manufacturing critical equipment and providing EPC services for the entire energy spectrum including oil and gas, thermal, renewables and nuclear power. The Company, leveraging its expertise in the energy sector, has now positioned itself to emerge as a green energy major. L&T has over four decades of experience in building large-scale hydrogen, ammonia, methanol, and derivative plants. Also, the company has an expertise in delivering comprehensive modular business solutions leveraging its substantial experience in undertaking large-scale modularisation works for various applications for onshore and offshore projects as well as power and offshore wind farms.

H2C is the designer and owner of the proprietary floating energy production and storage system P2XFloater™, an industrial scale floating green hydrogen and green ammonia facility. The concept is based on proven floating production, storage, and off-take technologies from the oil & gas industry in combination with an e-control system capable of balancing renewable electricity feedstock through a fully integrated electrolyser and Haber-Bosch system. H2C will build, own/lease and operate a fleet of P2XFloaters™. The company has developed the P2XFloater™ concept in close co-operation with leading maritime and process engineering companies in Norway, thus building on decades of experience and competence from the Oil & Gas sector, the Marine Industry, and the Offshore Wind Installation Industry. The P2XFloater™ has been awarded an AiP - Approval in Principle - by DNV.

**Mr. Subramanian Sarma, Whole-Time Director & Sr. Executive Vice President (Energy),** said that "To fast-track the progress towards the decarbonisation goals, out-of-the-box thinking and innovative solutions, are the need of the hour. In this regard, our partnership with H2Carrier is very timely and is expected to unleash synergies as we enjoy strong complementarities. We are delighted to collaborate with H2C on their unique and novel P2XFloater™ design and we strongly believe that L&T, with its globally recognised expertise in Ammonia & Hydrogen production as

well as vast experience in design & fabrication of complex process modules, is poised to be the ideal partner for H2C in this venture. "

**Mr. Mårten Lunde, CEO of H2C** stated as follows: "Our P2XFloater™ design represents a solution which addresses a number of concerns for renewable energy projects: costs, time, use of land and environmental footprint, lengthy planning and regulation processes etc. By teaming up with L&T, we have taken a significant step towards creating an optimal supply chain for delivering P2XFloaters™ on a large scale to projects anywhere in the world. We are excited by the markets' response to our P2XFloater™, and through the collaboration with L&T, we are confident of being able to establish a high and reliable production capacity to serve our global customers."

#### **About L&T:**

Larsen & Toubro is an Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing and Services. It operates in over 50 countries worldwide. A strong, customer-focused approach and the constant quest for top-class quality has enabled L&T to attain and sustain leadership in its major lines of business for eight decades.

#### **About H2Carrier:**

H2Carrier AS was established in 2019 based in Oslo, Norway by a core team comprising skills and experience from floating production of oil & gas, offshore wind installation and the renewables industry.

The company has developed its innovative P2XFloater™ design which enables off-grid production and thus enables remote renewable energy resources to be realized through production and storing of hydrogen and green ammonia with further transportation to the consumer markets.

The renewable source can be either hydro power, sun or wind- or a combination of these. Low-cost electricity is the single most important factor for the production of all zero carbon energies and globally, there are significant unused and non-commercial renewable resources which can be developed by the the P2XFloater™. A floating structure also has several other advantages compared to a land-based production facility for green ammonia with i.e., a terrain intervention which is insignificant in comparison.

H2Carrier is currently involved in energy generation projects in Scotland and Northern Norway. The demand for green ammonia internationally is rapidly increasing due to the industrial decarbonization. The maritime sector will provide further growth to this market as deep-sea vessels in particular, will convert zero carbon fuels.

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