



PRESS RELEASE

World's First Methanol-Fuelled Towboat To Launch In 2023

- *M/V Hydrogen One is being developed by [Maritime Partners](#) in cooperation with ship design from [Elliott Bay Design Group](#) and hardware from e1 Marine and ABB*
- *M/V Hydrogen One will be built using proven, efficient technologies that are commercially available today*
- *M/V Hydrogen One will be IMO 2030 compliant, meet the USCG's Subchapter M requirements, and have an operational range of 550 miles before refuelling*

Vancouver, 29 November 2021 – Maritime Partners in cooperation with Elliott Bay Design Group, e1 Marine, and ABB, today announces that the M/V Hydrogen One, the world's first methanol-fuelled towboat, will join Maritime Partners' fleet and become available for charter in 2023 to meet the pressing demand for sustainable towboat operations.

Decarbonising the towboat sector poses substantial challenges, particularly due to towboats' inherent size, space, and weight limitations. Batteries are only suitable if you operate on fixed routes and can recharge daily, and a towboat's limited storage capacity restricts the use of pressurised or cryogenically stored gases as fuels. There are also very few dockside facilities to load such marine fuels, which severely constrains a vessel's range and functionality.

M/V Hydrogen One will be IMO 2030 compliant, and meet all requirements of the US Coast Guard's Subchapter M regulations. The ship has been designed by Elliott Bay Design Group using proven, efficient technology throughout, from ABB's electrical power distribution and automation¹ to e1 Marine's methanol-to-hydrogen fuel cell², and it will be able to perform at standard operational speeds for up to 550 miles before it needs to refuel.

Methanol is a common towboat cargo, and it is available in 88 of the world's top 100 ports. This availability enables you to refuel safely almost anywhere without the need for costly diversions. The M/V Hydrogen One's use of e1 Marine's reformer technology generates hydrogen from methanol on-demand, which also makes it considerably safer than transferring and storing hydrogen directly, and the ship's crew will require minimal additional training to use the technology.

Austin Sperry, Co-Founder and Chief Operating Officer at Maritime Partners commented, "Shipowners have been understandably reluctant to commit to low carbon fuels until the infrastructure is available to refuel their vessels. The M/V Hydrogen One solves that problem by using methanol, which is safe and readily available worldwide. When the M/V Hydrogen One joins our fleet of 1,600 vessels, it will not only provide excellent emissions reduction capabilities but highly functional, reliable, and cost-effective operations."

Dave Lee at ABB Marine & Ports, commented, "The US towboat market is one of the most traditional in the world, so it's important to recognise what this represents: the first step in a shift from diesel electric to methanol electric, and a major advancement towards zero emissions. Governed by ABB's power management and distribution technology, the system consumes methanol fuel on-demand. This philosophy is much more efficient than a traditional towboat, where you need both main engines as well as a generator online at all times. Through this design and our technology we're enabling not only huge operational and cost efficiencies, but making the most environmentally friendly mode of transport even more sustainable."

¹ ABB will be providing the electrical propulsion plant for the vessel. This includes ABB Onboard DC Grid™, Z-drives, transformers, fuel cells, and the Power and Energy Management System.

² The e1 Marine hydrogen generator solution is cost-effective today because it consumes 35% less energy than diesel-generators, and even while running on standard methanol the hydrogen generator / fuel cell set produces zero particulates, zero NOX, zero SOX emissions, and 28% less CO2 than a diesel generator. It is currently available in power outputs ranging from 50KW to 2 MW.



Robert Schluter, Managing Director at e1 Marine, commented, “Converting methanol to hydrogen reduces the CO2 output and our reformer technology eliminates the complexities of direct fuelling and storage of gas marine fuels. By producing hydrogen at the point of consumption from a mixture of methanol and water, e1 Marine’s system enables the safe, efficient, and economic use of hydrogen as a marine fuel. The technology is ideal for anything that requires continuous power over extended periods, including work boats and medium-range passenger vessels, or to provide backup power in ports and harbours.”

Mike Complita, Principal and Vice President of Strategic Expansion at Elliott Bay Design Group, commented, “M/V Hydrogen One is the model for what is likely to be the only practical and commercially available technology that will enable smaller vessels to run for multiple days on a single fuel load and without the need for dedicated refuelling facilities. Our naval architects have optimised the balance between reformers, fuel cells and batteries to maximise range and power while minimising operational costs. This design and the technologies it uses can be easily scaled to suit any vessel with a similar need to operate on variable routes with multiple-day transit times, and further enhances Elliott Bay Design Group’s market-leading expertise in this growing sector.”

ENDS

About ABB

ABB is the leading provider of electrical power distribution and automation for the marine industry. ABB products and systems deliver better energy efficiency, better use of space, effective automation, greater safety and improved comfort. From space-saving to connectivity and automation, ABB leads the way in marine.

About e1 Marine

e1 Marine is a global renewable energy company with a vision to drive positive change through the development and delivery of innovative technology supporting the use of hydrogen as a fuel for the international maritime markets.

e1 Marine is wholly and equally owned by the triumvirate of [Element 1](#), the leading methanol-to-hydrogen technology company; [Ardmore Shipping Corporation](#), an independent owner and operator of mid-size product and chemical tanker vessels; and [Maritime Partners](#), a tailored leasing solution provider to the maritime industry.

For further information, visit <https://www.e1marine.com>. Follow e1 Marine on LinkedIn and Twitter.

About Elliott Bay Design Group

Elliott Bay Design Group offers naval architecture, marine engineering, electrical engineering, and production support services to owners, operators, and shipyards across the USA. Our dedicated team brings a focus on service and professionalism to every project. We are passionate about our work and committed to our clients’ success.

About Maritime Partners

Founded in 2015 by Bick Brooks and Austin Sperry, Maritime Partners has quickly become the leader in maritime financing solutions serving the domestic Jones Act trade and beyond. With a fleet of 1,600 vessels, Maritime Partners offers inland bareboat charters and flexible lending options throughout the world.