

PRESS RELEASE

Newlight Completes RINA FAT for Hydrogen Retrofit on Two- and Four-Stroke Main Engines; Up Next: First Vessel Installation and HAT

San Francisco, CA - November 3, 2025, Newlight today announced the successful completion of Factory Acceptance Testing (FAT) for its hydrogen retrofit package for two- and four-stroke main engines that enable greater fuel efficiency and lower emissions – in a major step from prototype to ship installation.

The system allows existing diesel engines to operate on a blend of hydrogen and conventional fuel, reducing carbon emissions without the need to replace the entire engine.

Designed and built to the International Code of Safety for Ship Using Gases or Other Low-flashpoint Fuels Code (IGF Code) and validated to RINA Class Rules for hydrogen fueled ships, the RINA-approved FAT verified the package's safety layers, control and monitoring logic, electrical integration, and engine behavior under representative duty profiles.

From dock to deep sea, Newlight proved its performance on a four-stroke engine used as genset at a shore-based test and on a two-stroke engine used as main propulsion for a yacht on a sea trial. Greater fuel efficiency and lower emissions were demonstrated while retaining confident control of the engines through real-world sea conditions and load swings, up to full open-water passages. Newlight validated precise hydrogen-blend injection timing, rock-solid load tracking, and continuous thermal/emissions monitoring - plus seamless, instant changeover between conventional fuel and hydrogen to maintain smooth engine performance with no downtime.

Over a focused four-day FAT program, Newlight exercised the full operating sequence of the hydrogen injection system end-to-end, demonstrating predictable transitions of system states, layered safety in line with applicable regulations, and calm, proportional responses to any alerts. Emergency stops worked from both local and remote controls, and fire and leak detectors were verified to support a safe, easy-to-maintain installation.

In collaboration with lomarlabs, Lomar, and AURELIA, Newlight's solution is now ready for retrofit on a commercial vessel with all interfaces set, layouts optimized, and approved according to class rules.

With FAT complete, Newlight now moves into Harbor Acceptance Testing (HAT), which will be conducted under RINA's supervision, during commissioning of the first vessel.

Leadership and partner perspectives

Haran Cohen Hillel, Co-Founder & CEO, Newlight, said: "This milestone shows our hydrogen systems behave exactly as a ship operator expects - clear states, consistent responses, and conservative safety margins - with measurable efficiency gains. Users of the

system will immediately see less fuel per nautical mile and lower emissions without any downtime or sacrificing performance. We designed the system for engine rooms, and the package is ready to move from factory floor to the vessels.”

Evyatar Cohen, Co-Founder, Newlight, added: “What I’m most proud of is the discipline in the controls and safety stack. From the moment the system vents to the moment it injects, every step is validated, logged, and recoverable. Operators get straightforward modes, dependable changeover to conventional fuel, and a retrofit that drops into existing machinery without the need for any vessel modifications.”

Patrizio Di Francesco, North Europe Special Projects Manager, Principal Engineer, RINA, said: “Looking at the FAT results, I can confidently say that the solution is robust and safety-focused by design. Its detection, ventilation, segregation, and shutdown functions align well with the expectations outlined in the safety goals of the IGF code. The successful execution of this phase brings us closer to realizing fully integrated hydrogen systems that meet the stringent requirements of marine operations and international regulatory frameworks.”

Stylianos Papageorgiou, Managing Director, lomarlabs, added: “Newlight shows exactly why lomarlabs exists - bringing bold ideas onto ships - offering founders a fast-track to testing in real operating environments, to prove what works at sea. Our role is simple: we give founders access to expertise, experience and ships so that their technology can move at speed from whiteboard to shipboard.”

Raffaele Frontera, CEO, AURELIA, said: “Newlight’s technology stands out for its innovation and robustness. Our role has been engineering design integration—interfaces, layouts, routing, and commissioning plans that make the package ship-ready. This has been a united effort by a single team across companies, and the result shows.”

Why it matters

The maritime sector is moving to reduce emissions from existing fleets without sacrificing availability. By verifying the retrofit at factory level against the IGF Code and RINA Rules, Newlight gives shipowners a practical solution to adopt hydrogen-blend operation on existing in-service engines. The approach extends the life of the asset, avoids full powertrain replacement, and delivers immediate fuel savings and efficiency while fuel supply chains continue to develop. With HAT and the first installation imminent, Newlight is focused on repeatable integration: standard interfaces to main engines and auxiliaries, straightforward documentation, and commissioning playbooks that shorten time at the yard.

Newlight develops advanced hydrogen fuel solutions that enable the maritime industry to transition toward cleaner energy without the need for costly engine replacements. By leveraging hydrogen as a supplemental fuel, Newlight retrofits conventional diesel engines to enhance efficiency and significantly reduce emissions.

Founded with a mission to make sustainable shipping both economically viable and technically practical, Newlight collaborates with industry leaders to deploy scalable solutions that work within existing fleet operations. With a focus on real-world impact, the company is bridging the gap between today's fuel infrastructure and the long-term shift to zero-emission vessels. <https://www.newlight.blue/>

RINA, leading certification and engineering company, provides a wide range of services across the Energy, Marine, Infrastructure & Mobility, Certification, Industry and Real Estate sectors. In December 2023, alongside the majority shareholder Registro Italiano Navale, Fondo Italiano d'Investimento SGR entered the shareholding structure guiding a pool of co-investors. With revenues in 2024 of 915 million euros, over 6,600 employees and 200 offices in 70 countries worldwide, RINA is a member of key international organizations and an important contributor to the development of new legislative standards. www.rina.org

lomarlabs was formed specifically to address the development of forward-thinking and pioneering innovations in the shipping industry. Drawing on five decades of operational expertise through parent company Lomar, lomarlabs partners with startups and innovators to pilot and scale technologies that decarbonise, automate, and transform the global maritime industry.

lomarlabs' current portfolio of announced collaborations includes Alicia Bots, Bennu, Bluenose, Calcareia, CargoKite, Mythos AI, Newlight, Seabound and Turtle.

Lomar is a leading ship owner and ship management group with a diversified fleet of around 25 bulk carriers and chemical tankers. Lomar has nearly 50 years of industry expertise, its fleets having moved millions of tonnes of cargo annually.

In October 2022 Lomar continued to diversify with the acquisition of the Bremen-based Carl Büttner Holding GmbH, a 166-year-old shipowner and manager of oil product and chemical tankers, in a deal with an enterprise-value of close to US\$160 million. It has since been integrated into the Lomar group and operates as CB Tankers. The acquisition included CB Maritime in Rijeka, Croatia, a specialist crewing agency.

Lomar is a maritime subsidiary of Libra Group, a privately-owned global business group that includes 20 operating businesses predominantly focused on aerospace, renewable energy, maritime, real estate, hospitality, and diversified industries. With subsidiaries that own and operate assets in nearly 60 countries, the Group applies the strength of its global network and capabilities to deliver cross-sector insights and growth at scale.

For further information about Lomar visit: lomarshipping.com. To stay up-to-date, follow Lomar on LinkedIn. www.lomarlabs.com

AURELIA is a naval architecture and marine engineering company specializing in green technology design integration on board of ships. AURELIA delivers advanced retrofit and newbuild solutions that bring clean energy systems safely and effectively into maritime operations.

The company combines deep technical expertise with class and regulatory know-how to bridge innovation and real-world implementation. AURELIA supports shipowners, technology providers, and research consortia in deploying hydrogen, ammonia, biofuel, hybrid propulsion and WAPS systems - transforming existing fleets for a sustainable future.

www.aureliadesign.nl

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