Key milestones validate Provaris' leading position in the scaling of the hydrogen for Europe

Highlights:

- **Prototype Fabrication Initiated:** The commencement of fabrication for the H2Neo prototype tank signifies a major step forward in our innovative hydrogen storage solutions.
- **On Target for Mid-2024 Completion:** We are on schedule for the completion of fabrication and testing by mid-2024, reaffirming Provaris' position as a pioneer in cost-effective hydrogen storage and bulk-scale transportation.
- **Securing Class Approval:** Successful testing will lead to the receipt of Class Approval for the H2Neo carrier, a world-first achievement in bulk-scale hydrogen transportation.
- New Early Revenue Opportunity: This milestone also unlocks an early revenue stream with the production and sale of smaller-scale hydrogen tanks in Norway from late 2024, catering to a wide range of applications including maritime bunkering and industrial storage.
- **Optimization for Efficiency:** Our design optimization program for the full-scale H2Neo containment tank has identified the potential for a remarkable 30% weight reduction, promising lower build cost, enhanced propulsion efficiency, reduced fuel consumption, and lower emissions.
- **Increased Flexibility for Shipyards:** This weight reduction not only improves performance but also provides shipyards with increased flexibility in integration methods, ensuring smoother final assembly.
- **Growing End User Interest:** The momentum and maturity of our offering continues to build with the signing of a **third non-binding Memorandum of Understanding** with a prominent international energy company, underlining growing interest from European utilities in our compressed hydrogen solutions.

SYDNEY: Provaris Energy Ltd (ASX.PV1) (Provaris or **the Company)** is pleased to announce the completion of all pre-production activities and the commencement of fabrication for the H2Neo prototype tank, using advanced automation and robotic laser-welding in Norway.

The Company's Prototype Tank and final Class Approval program are on track for completion in the June 2024 quarter. This milestone marks a significant step forward in showcasing the safety and performance benefits of Provaris' proprietary tank design, which utilizes carbon steel plates and an inner liner.

Provaris' CTO, Per Roed, expresses confidence in the ability to deliver high-quality hydrogen tanks economically, signaling potential transformation in industrial and transportation applications with a focus on safety and cost-effectiveness.

"Another major milestone achieved and super exciting to having now moved from production design to the construction phase of our first hydrogen tank. After significant design and testing of materials and welds, and an extended period defining and optimizing the robotic production cell, we will now be able to validate our unique design work through fabrication of our first tank and testing. We are very confident the tank will perform according to specifications.

For the hydrogen industry to scale, there is a need for high quality carbon steel hydrogen tanks that focuses on safety in operation, whilst delivering a low-cost and energy efficient storage solution. Final approvals will radically advance the opportunities available to Provaris for the immediate need for industrial storage and the supply and transport of gaseous hydrogen."

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PROVARIS



Prototype scale compressed hydrogen tank a world first.

Provaris achieves a groundbreaking milestone with the fabrication and testing commencement of the world's first prototype scale compressed hydrogen tank. Awarded to Prodtex AS and partnered with SINTEF, Norway's top research organization, the project is set to revolutionize hydrogen storage and transportation.

Upon successful testing by mid-2024, final Class Approvals from marine classification societies DNV and ABS will be obtained, marking a significant milestone and accelerating the development of hydrogen value chains in collaboration with major energy and trading companies across Europe.

Fabricated at Prodtex's facility in Fiskå, Norway, the prototype tank showcases Provaris' proprietary design, utilizing layered carbon steel and a stainless-steel liner. With dimensions of approximately 2.5m diameter and 9m length, it boasts a capacity for 650 kg of hydrogen at a design pressure of 250 barg. Testing will confirm the full-scale tank design will safely store hydrogen through a set of fatigue and over pressurization tests representative of 25 years of operations.



Provaris secures funding support from the Research Council of Norway under the SkatteFUNN R&D tax credit scheme, further validating its innovative approach to hydrogen technology.

Energy Companies increasingly evaluating Provaris' competitive supply chain for the delivery of gaseous hydrogen with a third non-binding MOU with a prominent international energy company.

Provaris continues to attract increased attention from major energy players as they assess various hydrogen import options and supply sources for key ports in Northern Europe, with plans to connect to the future core hydrogen gas network.

In line with this objective, this month, Provaris has entered a **third non-binding Memorandum of Understanding** with a prominent international energy company. Together, they will assess Provaris' complete hydrogen delivery chain, which includes Provaris' proprietary and innovative H2Neo carriers and H2Leo barge solutions designed for regional gaseous hydrogen delivery. Joint investigations are scheduled for 2024, with any definitive project agreements to be appraised upon completion.

The growing interest in Provaris' hydrogen delivery value chain, leveraging proprietary technology for compressed hydrogen storage and marine transportation, stems from the flexibility and simplicity of the unloading infrastructure, suitable for various locations. Moreover, utilizing regional supply sources results in lower delivered costs when compared to other long-range bulk carrier alternatives, further enhancing the attractiveness of Provaris' solution.

Provaris' Managing Director and CEO, Martin Carolan, commented: "We are thrilled to begin fabricating and testing our prototype-scale tank, poised to be the largest high-pressure hydrogen tank made of steel globally. This achievement, in Norway, strategically located for the EU's growing demand for affordable storage and marine transport solutions, is significant. Our technical development program and supply chain economics have attracted the attention of major energy providers in Europe and Germany.

With our third MOU, we're exploring how compressed hydrogen can contribute to the large import requirement of Northwest European ports. Our goal remains to offer the most cost-effective compressed hydrogen supply for regional volumes, aligning with market demand and funding schemes to reduce investment risks."



BMWK | ¹ Includes forecast demand for H2 derivatives such as ammonia, methanol, tic fuels and other sustainable fuels.
h = 1 Tonne H2





Design optimization of the full-scale H2Neo carrier and containment tanks results in material CAPEX and OPEX Savings.

The optimized design of the full-scale H2Neo carrier and containment tanks delivers substantial CAPEX and OPEX savings. By employing updated construction methods and material selection, including carbon steel and stainless liner plates, we have achieved a remarkable 30% reduction in weight.

This reduction allows for further optimization of speed, power, and fuel consumption, translating to significant fuel savings and emission reductions. Additionally, the lighter cargo tanks offer flexibility during installation, increasing competition among shipbuilders and potentially reducing costs for buyers. Moreover, the final tank design boasts an 8% increase in storage capacity to 450 tonnes, with potential further upsides based on trading patterns and operational practices.

Illustration of Provaris' H2Neo Compressed Hydrogen Carrier with twin hydrogen storage tanks at design pressure of 250 barg





This announcement has been authorised for release by the Board of Provaris Energy Ltd

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About Provaris Energy

For more information: <u>www.provaris.energy</u>

Provaris Energy Ltd (ASX: PV1) is an Australian public company developing a portfolio of integrated green hydrogen projects for the regional trade of Asia and Europe, leveraging our innovative compressed hydrogen bulk storage and carrier. Our focus on value creation through innovative development that aligns with our business model of simple and efficiency hydrogen production and transport can establish an early-mover advantage for regional maritime trade of hydrogen and unlock a world of potential. In August 2022 Provaris Norway AS was established to advance the development of regional hydrogen supply in Europe.



Disclaimer: This announcement may contain forward looking statements concerning projected costs, approval timelines, construction timelines, earnings, revenue, growth, outlook or other matters ("Projections"). You should not place undue reliance on any Projections, which are based only on current expectations and the information available to Provaris. The expectations reflected in such Projections are currently considered by Provaris to be reasonable, but they may be affected by a range of variables that could cause actual results or trends to differ materially, including but not limited to: price and currency fluctuations, the ability to obtain reliable hydrogen supply, the ability to locate markets for hydrogen, fluctuations in energy and hydrogen prices, project site latent conditions, approvals and cost estimates, development progress, operating results, legislative, fiscal and regulatory developments, and economic and financial markets conditions, including availability of financing. Provaris undertakes no obligation to update any Projections for events or circumstances that occur subsequent to the date of this announcement or to keep current any of the information provided, except to the extent required by law. You should consult your own advisors as to legal, tax, financial and related matters and conduct your own investigations, enquiries and analysis concerning

