

# Compressed Hydrogen Export Feasibility Study Public Sharing Report

## HIGHLIGHTS:

- **The Western Australian Government has released the Compressed Hydrogen Export Feasibility Study Public Sharing Report (the Study).**
- **The Study scope analysed the compression and export of 200,000 tonnes per annum of green hydrogen from the proposed HyEnergy<sup>®</sup> hydrogen production facility located in the Gascoyne region, and includes compression facilities, an outgoing pipeline to an offshore loading terminal, a fleet of Provaris' proprietary H2Neo 26,000 m<sup>3</sup> GH2 Carriers, and an import terminal in Singapore.**
- **The Study indicates that a compressed hydrogen export supply chain is a technically and commercially feasible method for the offshore loading and export of green hydrogen, with an average delivery rate of over 98% of the target annual throughput.**
- **Provaris will continue to support the HyEnergy<sup>®</sup> Project to incorporate the Study outcomes into the project's prefeasibility study.**

**SYDNEY: Provaris Energy Ltd (ASX.PV1, Provaris, or the Company)** is pleased to announce the completion and release by the Western Australian Government of the **Compressed Hydrogen Export Feasibility Study Public Sharing Report (the Study)**. First announced in September 2021, the Study received funding from the Renewable Hydrogen Fund as part of the Western Australian Government's Renewable Hydrogen Strategy.

The completion of the Study workstreams was undertaken during 2022 and indicates that a compressed hydrogen export supply chain is a technically and commercially feasible method for exporting green hydrogen from projects such as the HyEnergy project (**HyEnergy<sup>®</sup>**) in Western Australia's Gascoyne Region to nominated Asia Pacific markets. HyEnergy<sup>®</sup> is a proposed green hydrogen production project being jointly developed by Province Resources Ltd (ASX:PRL) and Total Eren.

The Study scope analysed the compression and export of 200,000 tonnes per annum of green hydrogen from the proposed HyEnergy<sup>®</sup> hydrogen production facility to Singapore, and includes:

- compression facilities;
- an outgoing pipeline to an offshore loading terminal;
- a fleet of Provaris' proprietary H2Neo 26,000 m<sup>3</sup> GH2 Carriers; and
- an import terminal in Singapore.

**Martin Carolan, Provaris Managing Director and CEO commented:** *"We thank the WA Government for their support and financial assistance through the WA Hydrogen Fund 2. Compression is a proven, safe, and reliable method of storing and transporting hydrogen onshore. Outcomes of this Study continues to demonstrate a compressed hydrogen supply chain for marine storage and transport solution can accelerate the development of greenfield hydrogen export projects with the flexibility to also cater to offshore loading requirements and variable renewable energy production profiles.*

*We look forward to the next stage of development for the HyEnergy<sup>®</sup> project and incorporating the outcomes of this Study into the project's pre-feasibility study."*



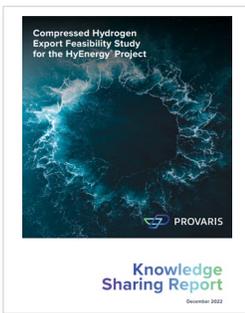
The Study demonstrated the use of an offshore loading solution for compressed hydrogen can accelerate the development of greenfield hydrogen export projects with minimal technical barriers and smaller environmental footprints. A proposed offshore loading terminal will utilise a Single Anchor Loading (SAL) for loading of GH2 carriers. The design of the SAL is by APL NOV, who has delivered and commissioned similar technologies to the offshore oil and gas industry for over 30 years. The proprietary system provides high operability limits, allowing connection and loading to take place at a significant wave height of 3.5 m.

An initial hazard identification and environmental impact identification assessment was undertaken and indicates there are no significant constraints that should prevent the Study from progressing into the next stage of design and development.

Cost estimates developed from the technical workstreams were consolidated into a commercial model to evaluate the levelised cost of hydrogen (LCOH). The modelling indicates the LCOH for compression, pipeline, loading and unloading terminal, fleet of Provaris' H2Neo carriers and delivery to Singapore is USD 2.48 per kg (*NOTE: this figure excludes the cost of the hydrogen based on annualised production of 200,000 tonnes*).

Optimisation activities have been identified to further mature the Study outcomes, including the use of Provaris' larger-scale 120,000 m3 H2Max carrier which is expected improve the LCOH for transport.

The Study was supported by a consortium of specialist consultants selected by Provaris including: WSP, Oropesa, APL NOV, Environmental Resources Management (ERM), Turner & Townsend, Paaras Marine Solutions, and GHD.



**The Compressed Hydrogen Export Feasibility Study Public Sharing Report is made available by the WA Government. [Read the full report here.](#)**

**This Study received funding from the Renewable Hydrogen Fund as part of the Western Australian Government's Renewable Hydrogen Strategy.**

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**This announcement has been authorised for release by the Managing Director of Provaris Energy Ltd.**

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**About Provaris Energy**

Provaris Energy Ltd (ASX: PV1) is the leading developer of integrated compressed hydrogen projects for export to regional markets. Our purpose is to develop green hydrogen supply chains that are simple and efficient to enable the global transport of hydrogen.

Provaris is developing a portfolio of integrated green hydrogen projects, leveraging our innovative compressed hydrogen GH2 Carrier with a focus on value creation through innovative development that aligns with our business model of simplicity and efficiency.

The choice to support all development phases of a project is in line with Provaris' strategic desire to develop and invest in profitable hydrogen projects across the value chain, with a measured risk profile, and to retain an equity position of these assets over the long term.