

# FEED Milestone Achieved for LCO<sub>2</sub> Tank through DNV Approval Process

## Highlights

- **Major FEED milestone achieved:** detailed engineering package for the proprietary YP-Provaris LCO<sub>2</sub> tank completed and submitted to DNV, advancing the design toward Approval in Principle (AiP) and General Approval for Ship Application (GASA).
- **DNV design review targeted for completion August 2026**, following engagement through 2025/26 to support the tank's approval pathway.
- **Engineered as a Type C equivalent maritime tank**, targeting IGC Code-equivalent safety and performance for large-scale LCO<sub>2</sub> transport and storage.
- **Final stage of FEED underway**, including material and welding procedure testing to support DNV's continuing GASA review.
- **Selected by Yinson Production for CCS supply chain development**, expanding potential applications across FSUUs, LCO<sub>2</sub> carriers and terminal storage, and positioning the tank for a large-scale commercial opportunity.

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OSLO: Provaris Energy Ltd (ASX:PV1, **Provaris** or the **Company**) is pleased to announce completion of a key FEED milestone for its proprietary low pressure YP-Provaris LCO<sub>2</sub> tank, with the detailed engineering package submitted to DNV to support a General Approval for Ship Application (GASA) approval process.

The FEED program completion and associated approvals sought will de-risk Provaris' strategy to commercialise its cargo containment solution within the developing maritime transport and storage of CO<sub>2</sub> market, with global CCS investment is forecast by DNV to approach ~US\$80bn by 2030<sup>1</sup>.

With a design capacity of 25,000 cbm the YP-Provaris LCO<sub>2</sub> tank seeks to overcome the limitations of alternative Type C tanks and includes the detailed structural design of a proprietary sandwich type structure engineered in accordance with the IGC Code.

**Provaris Chief Technical Officer, Per Roed, said:** "Completion of the FEED engineering package for a GASA review level is an important technical milestone for Provaris and reflects the extensive structural design work undertaken by our team and Yinson.

*We believe the engineering package completed for the YP-Provaris LCO<sub>2</sub> tank goes well beyond the scope normally associated with an AiP, giving shipowners, shipyards and CCS project participants greater confidence in the maturity, safety basis and practical application of our low-pressure LCO<sub>2</sub> containment solution."*

**DNV Maritime's Business Development Director CO<sub>2</sub> Shipping E. Mathias Sørhaug, commented:** "We're pleased to be involved in qualifying an entirely new way of storing pressurised CO<sub>2</sub>. A substantial amount of calculation and documentation work has gone into this, and there's a clear plan in place towards qualification for first application. DNV look forward to continuing the good collaboration moving forward""

## Extensive Detailed Engineering to Support a GASA Approval

DNV has worked with Provaris throughout the design and engineering phases in 2025-26 to ensure that the detailed structural design addresses the requirements of the IGC Code with equivalent levels of safety and performance.

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<sup>1</sup> DNV (2025): Energy Transition Outlook: CCS to 2050

The engineering package is intended to deliver comprehensive level of design definition, structural substantiation and technical documentation to support a GASA-level class review and future vessel application.

By pursuing a higher level of engineering definition during FEED and GASA approval for the LCO<sub>2</sub> tank, Provaris aims to reduce technical risk in later project stages and provide shipowners, yards and project partners with a clearer basis for vessel integration, fabrication planning and future commercial deployment.

### Testing of Material Selection and Welding Specification

A final stage of the FEED includes a test program for the selected materials and welding procedure specifications. Testing of the fabricated elements will validate the strength and fatigue calculations in the structural model, with completion during August 2026. Results will feed into the review process by DNV.

In addition, sample sections of the tank design will be produced to demonstrate proprietary design elements of the tank can be fabricated with robotic mounting and laser-welding. Fabrication will take place at Provaris' Robotic Facility located in Norway.

### The YP-Provaris LCO<sub>2</sub> Tank – Engineered as a Type C Equivalent for Offshore and Maritime Markets

The YP-Provaris LCO<sub>2</sub> tank design is intended to provide a scalable marine containment solution for transport of liquefied carbon dioxide as part of emerging carbon capture and storage supply chains.

The design capacity of 25,000 cbm seeks to overcome the limitations of alternative Type C tanks up to 7,000 cbm in capacity. **Large-scale CO<sub>2</sub> storage solutions have the potential to materially improve efficiency and reduce cost per tonne relative to existing market offerings.**

The design basis reflects the intended maritime application of an independent tank system to be installed and operated without a secondary barrier. The design applies a sandwich construction approach and has been engineered as a tank for shipboard installation, targeting equivalent safety outcomes to conventional Type C containment systems under the IGC Code.

Structural modelling and engineering verification have therefore been undertaken to demonstrate that the probability of structural failure through the primary barrier is extremely low and can be neglected, consistent with the safety intent of a Type C tank under the IGC Code.

### Commercial Relevance – Maritime and Offshore Solutions Key to Unlocking Scale

Global CCS investment is forecast by DNV to approach **~US\$80bn by 2030**, with carbon transport infrastructure emerging as a critical enabler of scale. Within this build-out, **marine and offshore solutions will play a material role**, acting as the flexible backbone for cross-border CO<sub>2</sub> transport and storage. Norway is already a leader in the sector through the USD 2.8 B investment for the full Longship CCS value chain now in operation.

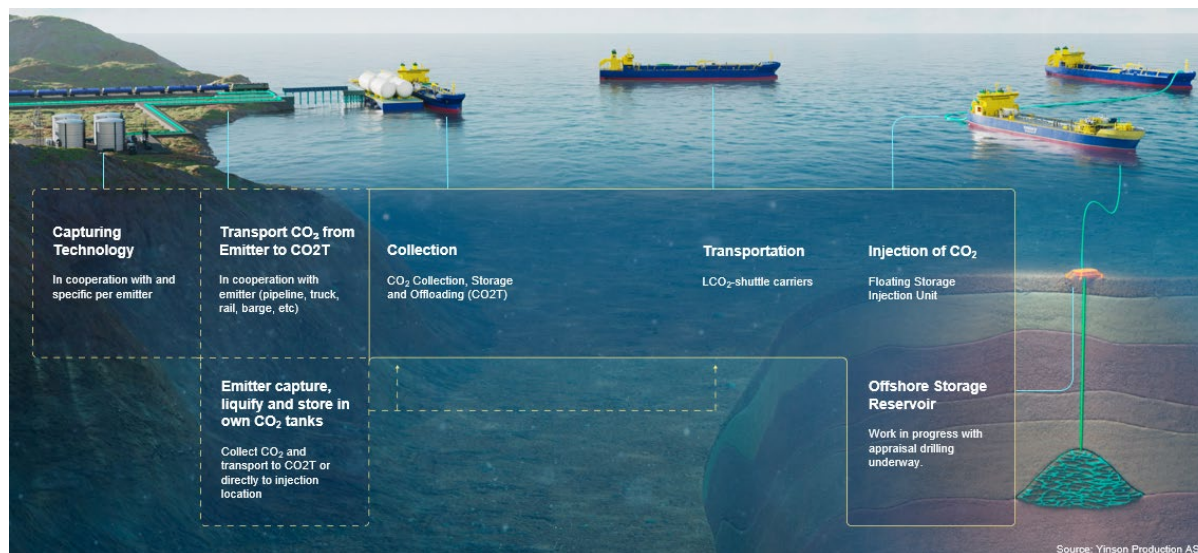
Large-scale CCS supply chains will require material expansion in marine transport and offshore storage infrastructure over the coming decade. The ability to reduce cost per tonne of CO<sub>2</sub> transported and stored is expected to become increasingly important as CCS projects move toward final investment decisions and commercial execution.

The development work with Yinson highlights the YP-Provaris LCO<sub>2</sub> tank configurations have the potential to:

- Improve **transport and storage efficiency per tonne of LCO<sub>2</sub>**.
- Reduce **unit costs through scale**.
- Enhance overall **project economics** for large CCS developments requiring storage, maritime transportation and offshore storage and injection solutions.

Refer to Provaris' announcement made on 25 May 2026 outlining the Yinson's Concept Selection of the Provaris tank for Yinson's CCS supply chain development project in Norway extending the commercial applications to include FSIU, CO<sub>2</sub> carriers and terminal storage.

### Illustration of Yinson's large scale CCS Supply Chain infrastructure suitable for <10 Mtpa of LCO<sub>2</sub>, including FSIU, carriers and terminal storage



(Source: Yinson Production)

### Ongoing Development Pathway and Target Timeline for 2026

Scheduled development activities for the YP-Provaris LCO<sub>2</sub> tank include:

- Testing program utilising Provaris' laser welding and robotic facility located at Fiskå, Norway. Results to support the completion of approvals process.
- GASA approval to validate the combination of a new tank design, robotic manufacturing and material performance meets compliance with IGC codes for Type C equivalent tanks.
- Integration into Yinson's FSIU FEED activities and ongoing development of LCO<sub>2</sub> carrier and terminal storage designs.
- Development of a proposed joint venture company ("JV Co") between Yinson and Provaris for execution readiness and align the monetisation of LCO<sub>2</sub> tank licence fees with project FID milestones.

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

To review this Announcement or submit Q&A please visit the **Provaris InvestorHub** [here](#)


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## About Provaris Energy

Provaris Energy Ltd (ASX: PV1) is advancing innovative Compressed Hydrogen (H<sub>2</sub>) and Carbon Dioxide (CO<sub>2</sub>) storage and transport solutions through proprietary tank designs for storage maritime gas carriers, and integrated supply chain development. Focused on simplicity, efficiency and scalability, Provaris enables regional supply chains that support the global energy transition. [www.provaris.energy](http://www.provaris.energy)

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