



ASX Announcement 20 June 2024
Hexagon Energy Materials Limited (ASX:HXG)

Hexagon completes financing round to fund WAH₂ Project pre-FEED

Hexagon Energy Materials Limited (ASX: HXG) ('Hexagon' or 'the Company') is delighted to announce that it has completed a funding round to take the Company to the FEED stage of its WAH₂ low-emissions ammonia project.

- A funding round of A\$1 million (A\$0.94 million net of fees) has been completed with funds to be received by 21 June 2024.
- To minimise dilution to existing shareholders, the funding is structured as a convertible note which references future share prices to allow Hexagon to achieve a higher effective issue price from any higher valuations after re-rating as announcements are made, whilst also guaranteeing a minimum conversion price of A\$0.02.
- The funding enables the Company to progress technical work, regulatory approvals and commercial negotiations with key service and offtake partners in readiness for WAH₂ Project FEED-entry (a gateway in the development of the project at which strategic partners have indicated that they would enter into agreements with the Company).
- It is contemplated that as part of those agreements, strategic partners would make a contribution to reimburse a portion of Pre-FEED costs.
- An additional, similarly structured, funding round of up to A\$0.75 million is being progressed so that it can be executed if necessary.

Hexagon's target remains WAH₂ FEED entry in Q3 2024. This will require the completion of planned technical work and finalisation and execution of conditional commercial agreements for key aspects of the project. Confidential negotiations continue with key input providers, potential off-takers and strategic partners.

Hexagon intends to have the key agreements in place to support the start of FEED in Q3 2024. Given the interdependency between the commercial agreements, their sequencing and timing will be determined as they progress.

Chairman Charles Whitfield commented:

"This funding clears the path for the Company to finalise its technical work to FEED which will in turn clear the final steps to the engagement with our strategic partners. The placement has been specifically structured with the help of a key investor so that the Company can benefit from any future uplift in the share price upon the achievement of key milestones.

After a substantial amount of work by our highly experienced team, the key jigsaw pieces are falling in to place. We expect to see an accelerating pattern of announcements as they are finalised. The management of Hexagon looks forward to carrying out a number of Town Hall meetings for investors over the coming months as well as providing further updates as elements of the project are progressed."

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1. Convertible Notes Key Terms

Key terms of the convertible notes are set out in Annexure 1. The notes have a maturity date of 18 months, are convertible into HXG shares at a 20% discount to the 30 day VWAP at the time of conversion subject to a \$0.02 floor price and may be converted by the holders, or redeemed by the Company, at any time.

2. Hexagon's WAH₂ Project

The WAH₂ project is Hexagon's flagship project and intends to supply low-emissions ammonia to the decarbonising powerhouse economies of the Asia Pacific, including Japan and South Korea. The project is well placed as Asia's energy transition drives an increasing demand for low emissions energy.

In April 2023, Hexagon was allocated land for the WAH₂ Project in the Maitland Strategic Industrial Area by the Western Australian Government.

In August 2023, Hexagon announced the completion of the WAH₂ Pre-Feasibility Study and based on the encouraging results commenced Pre-FEED studies.

a) Project Delivery

The WAH₂ pre-FEED technical work remains on-track to support FEED-entry in Q3 2024.

- Being led by Petrofac Asset Solutions Australia Ltd (Petrofac) as lead engineer and Topsoe A/S (Topsoe) as technology provider;
- Design basis has been set for the core process.
- Detailed engineering and vendor engagement are progressing to plan and will support refined capex planning.

In March 2024, Hexagon signed a Key Terms Agreement with the Water Corporation of Western Australia¹.

- Supports the removal of capital costs associated with a dedicated desalination plant and associated pipelines from the Base Case, partially offset by the capital and operating costs of water supply.
- Water supply without a desalination plant would reduce the project's power and fuel gas requirements and allow the scope of environmental and regulatory approvals to be significantly reduced and de-risked.

Other commercial discussions continue to progress, reducing uncertainty and suggesting improved economics relative to PFS Base Case².

- Confidential commercial discussions have progressed with potential gas suppliers, CCS service providers, infrastructure owners and ammonia customers.
- Insights gained from these discussions, including confidential indicative pricing from third parties for several key aspects of the project, have reduced uncertainty and have tended to come in under PFS Base Case assumptions, providing opportunities to improve project economics.
- An economic update will be provided by Hexagon prior to FEED-entry once the ongoing confidential commercial discussions are completed.

In May 2024, Hexagon signed a Memorandum of Understanding with Oceania Marine Energy³.

¹ HXG ASX announcement 'WAH₂ Project – Water Supply Key Terms Agreement' dated 11 March 2024.

² HXG ASX 'WAH₂ Project Pre-Feasibility Study' updated announcement dated 2 August 2023.

³ HXG ASX announcement 'WAH₂ Project – Ammonia Bunkering Memorandum of Understanding' dated 13 May 2024.

- Investigating the potential to establish a low-emissions ammonia bunkering business that would offer market diversity, require no additional capital expenditure and would be complementary to Hexagon's primary objective of exporting low-emissions ammonia from WAH₂ to help decarbonise power generation in Asia.
- Has the potential to be a valuable, additional, domestic market for WAH₂ that plays an important role in helping to decarbonise Australia's iron ore exports.

Continued focus on WAH₂ regulatory approvals.

- Australasian Environmental Solutions (AES) retained to lead environmental approvals;
- Requirements for baseline environmental and heritage surveys have been defined and a request for proposals issued; and
- The Terms of the Option to Lease for the land allocated to Hexagon for the WAH₂ Project have been agreed in-principle with DevelopmentWA and final approvals are pending.

b) Market Developments

The market for low-emissions ammonia is strengthening and uncertainty is reducing.

- There is increasing recognition of the importance of low-emissions ammonia to Japan's and South Korea's energy transitions by independent institutions⁴;
- The Japanese Government has introduced an additional target for the import of low-emissions hydrogen/ammonia of 12 MTPA H₂e by 2040⁵ – if half of this was ammonia, it would equate to ~30 MTPA of ammonia; and
- Demonstration of commercial-scale co-firing of ammonia in Japan's Hekinan power plant commenced on 1 April 2024⁶.

Japan has confirmed its definition of low-emissions ammonia. Hexagon's WAH₂ project would clearly exceed those expectations.

- Japan's updated Basic Hydrogen Strategy⁴ sets a low-emissions benchmark of 0.84 kg CO₂e/kg NH₃. The WAH₂ PFS Base Case⁷ has an expected emissions intensity of approximately one quarter of this (0.2 kg CO₂e/kg NH₃).

Costs for electrolysis-based ('green') low-emissions ammonia are increasing, strengthening the competitive position of Hexagon's WAH₂ Project as a planned early mover.

- The cost of producing electrolysis-based 'renewable hydrogen' was assessed in December 2023 to be US\$4.5 – 6.5 /kg, an increase of between 30% and 65% over previous estimates⁸. This reflects the increasing costs of renewable energy, rising interest rates, and supply chain constraints; and
- This implies a cost of electrolysis-based ammonia of at least US\$800⁹ /T NH₃ - which is significantly greater than the WAH₂ PFS Base Case⁶ cost of production of US\$552 /T NH₃ (and target of US\$500 /T NH₃).

Hexagon's target remains WAH₂ FEED entry in Q3 2024. This will require the completion of planned technical work and finalisation and execution of conditional commercial agreements for key aspects of the project. Confidential negotiations continue with key input providers, potential off-takers and strategic partners.

⁴The Oxford Institute for Energy Studies, November 2023, Issue 138, 'The role of clean hydrogen/ammonia in Japan's energy transition', H Gordenker.

⁵Japan's Basic Hydrogen Strategy, June 2023, Ministerial Council on Renewable Energy, Hydrogen and Related Issues.

⁶JERA press release 1 April 2024 'Start of Demonstration Testing of Fuel Ammonia Substitution at JERA's Hekinan Thermal Power Station'.

⁷HXG ASX 'WAH₂ Project Pre-Feasibility Study' updated announcement dated 2 August 2023.

⁸Hydrogen Insights December 2023, Hydrogen Council and McKinsey & Company.

⁹~180 kg hydrogen is required to manufacture 1T ammonia (180*4.5 = 810). Excludes other costs of conversion.



Authorisation

This announcement has been authorised by the Board of Directors.

About Hexagon Energy Materials Limited

Hexagon Energy Materials Limited (ASX: HXG) is an Australian company focused on *Future Energy* project development and *Future Energy* materials exploration and project development.

Hexagon is developing a business to deliver decarbonised Hydrogen into export and domestic markets at scale, via its WAH₂ Project. The Company plans to use renewable energy to the greatest extent practicable.

To learn more please visit: www.hxgenenergymaterials.com.au

FOR FURTHER INFORMATION,

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Annexure 1: Key Terms of the Convertible Notes

Investor:	Professional and sophisticated investors, via InvestorLink as the convertible note agent.
Issue Amount:	A\$1,000,000 (A\$0.94 million net of agency fees).
Issue Price:	Face value of \$100,000 per Convertible Note.
Interest Rate:	12% per annum.
Maturity Date:	The Convertible Notes have a term of 18 months (unless the Convertible Notes have been converted or redeemed earlier).
Use of funds:	Progression of pre-FEED studies for the WAH ₂ Project.
Placement capacity:	Existing ASX Listing Rule 7.1 capacity.
Conversion Price:	<p>The Convertible Notes are convertible into fully paid ordinary shares at a conversion price equal to the greater of:</p> <p>(i) a twenty percent (20%) discount to the thirty (30) day volume weighted average price (VWAP) immediately preceding the date that:</p> <p style="padding-left: 40px;">A. an Investor provides the Company with a Notice of Conversion; or</p> <p style="padding-left: 40px;">B. the Company provides the Investor with a Notice of Redemption; and</p> <p>(ii) the Floor Price, being \$0.02 per Share.</p>
Conversion Terms:	<p>(i) Each Convertible Note may be converted or redeemed, subject to the below:</p> <p style="padding-left: 40px;">A. <i>At an Investor's election</i>: Convertible Notes may be converted into fully paid ordinary shares at the Conversion Price at any time before the Maturity Date by an Investor providing a written conversion notice (Notice of Conversion) to the Company; or</p> <p style="padding-left: 40px;">B. <i>At the Company's election</i>: Convertible Notes may be redeemed at any time before the Maturity Date by the Company providing a notice of redemption (Notice of Redemption) to an Investor. The Investor may elect to convert at that time otherwise the relevant Convertible Notes will be redeemed.</p> <p>(ii) With respect to a conversion at an Investor's election, the conversion rights are as follows:</p> <p style="padding-left: 40px;">A. forty percent (40%) of the Face Value will be convertible at the Floor Price; and</p> <p style="padding-left: 40px;">B. the balance (plus, any accrued interest) at the Conversion Price.</p>
Anti-dilution:	Any conversion rights will be subject to proportional adjustment in the event of a share split, consolidation or similar event prior to a conversion or redemption taking place.
Quotation, transfer and variation:	<p>(i) The Convertible Notes will not be quoted on ASX and are only transferable in certain circumstances where approved by the Company.</p> <p>(ii) The Convertible Notes cannot be varied or amended without written agreement of the Investor and the Company.</p>