

Desk Note: Hexagon Energy Materials (ASX:HXG)

The Compelling Case for a Leading Clean Ammonia Project

Hexagon Energy Materials Limited (ASX:HXG) is an Australian company developing a business to deliver decarbonised hydrogen (as clean ammonia) into export and domestic markets at scale, via its WAH₂ Project, located near Karratha in the Pilbara Region of Western Australia.

Need to Know - What is Clean Ammonia?

Ammonia (NH₃), which does not emit CO₂ when burned, is forecast to become a next-generation fuel as it contains properties ideally suited for the hydrogen economy. Clean ammonia can be produced by reforming natural gas using existing proven technology and sequestering the carbon in long-term geological storage. Ammonia does not require cooling to extreme temperatures, and has a higher energy density than liquid hydrogen, making it more efficient, safer to transport and store, plus has extensive global supply chains and infrastructure already in place for the fertiliser ammonia markets.

Power Generation to Drive Demand for Clean Ammonia

Clean ammonia is expected to play a key role in decarbonising two hard-to-abate sectors being Coal Fired Power Generation and Bulk Shipping, both very large markets expected to drive strong demand for clean ammonia. Japan has recently conducted successful trials of co-firing ammonia in coal-fired power stations as part of its efforts to meet committed emissions reduction targets. The Japanese Government has allocated US\$60B of funds earmarked to establish international low-emissions hydrogen and ammonia supply chains.

Clean Ammonia Leading to De-carbonise Bulk Shipping

Clean ammonia is forecast to be a dominant alternative fuel for the maritime industry, due to its expected cost advantage per unit and ability to eliminate emissions of CO₂. The first ammonia dual-fuelled bulk carriers are currently under construction for Eastern Pacific Shipping and are expected to be on the water in 2026. The iron ore trade between WA and Asia is the largest tonnage trade route globally and a priority target for decarbonisation. The number of ammonia dual-fuelled iron ore bulk carriers on this route is expected to ramp-up from 2028, aligning nicely to the WAH₂ Project timing.

WAH₂ Project - the Right Time, Location, People & Partners

Hexagon's WAH₂ Project is considered the most advanced clean ammonia export project in Australia. Target FID is end of CY2025 and first production end CY2028. Hexagon has secured a site for the Project in the Maitland Strategic Industrial Area, located only 39km South of Dampier Port. With this location the WAH₂ Project is the only clean ammonia Project in Australia proximal to a deepwater port and two mature CCS projects. Finally, in our view it is the world-class team behind Hexagon that provides confidence that this opportunity is significant and real. The team has a proven track record of building and leading major energy businesses. With an extensive rolodex of contacts into APAC energy markets they are in our view best placed to read the demand signals for clean ammonia and unlock significant value for HXG shareholders with the Company Market Cap currently only A\$11M.

Preliminary Feasibility Study & Economics

Hexagon released the results of a PFS on the WAH₂ project in August 2023. This study documented a Phase 1 Base Case producing 600,000 T/a of clean ammonia with a CAPEX requirement of A\$1.6B and revenue from 2028 of \$450M pa with net cash flow after tax of A\$200M pa. Pre-FEED CAPEX estimates are likely to be lower as water and infrastructure agreements support removal of a desalination plant and pipelines from project scope.

News Flow, Potential Catalysts & Our View

Hexagon recently announced a gas supply indication agreement with O&G major Chevron Australia. We expect a strong flow of more material news in the next six months relating to CCS and CO₂ pipeline agreements, sales offtake and strategic partners, updated project economics, and entering FEED. In our view, the current HXG valuation ascribes close to zero value for the WAH₂ Project which we think is an opportunity as the exceptional team continues to de-risk the project and define a clear pathway to funding and building the WAH₂ project.

Summary (ASX:HXG)

12-month rating	Not Rated
Target Price (A\$ps)	Not Rated
Share Price (A\$ps)	0.022

Trading data & key metrics

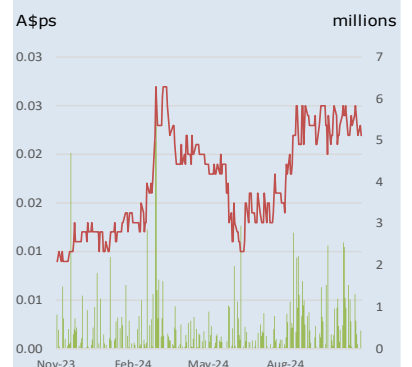
52-week range	0.009 - 0.028
Market Cap (A\$m):	11
Shares on issue (m):	513
Avg daily volume (k):	518
Avg. daily volume (A\$m)	0.01

Board & Key Management

Charles Whitfield	Chairman
Stephen Hall	CEO
Andrew Kirk	Non-Exec Director
Garry Plowright	Non-Exec Director
Philipp Kin	Non-Exec Director

Substantials:

None



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Curran & Co have not built our own financial model for the WAH₂ Project at this stage and as thus have not initiated formal coverage or released a price target for HXG.

If you would like to discuss the full desk note, please contact the analyst directly using the details above.

Please see the second page of this report for important disclosures.

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