



ASX Announcement | 24 November 2022  
Hexagon Energy Materials Limited (ASX: HXG)

## WAH<sub>2</sub> Progress Report and Corporate Update

### Highlights:

- Hexagon plans to have WAH<sub>2</sub> Scoping Study before year end followed by PFS in Q1 2023.
- Hexagon secures Commercial Advisor to progress conversations with Gas Suppliers, CO<sub>2</sub> Sequestration and Hydrogen offtake partners.
- Green Critical Minerals/Chase Mining transaction for WA Graphite earn in closes and Hexagon receives A\$300,000 as first tranche payment.

### Hydrogen

Hexagon's management has remained busy progressing the Western Australia Hydrogen project "WAH<sub>2</sub>". Hexagon has been pursuing the four main pillars of the WAH<sub>2</sub> project namely:

- Securing gas supply,
- Application for land for project site,
- Hydrogen/Ammonia offtake customers and strategic initiatives, and
- CO<sub>2</sub> sequestration agreement.

The team has progressed the findings from the Pedirka PFS (announced March 2022) to an extent that the Company aims to complete a Scoping Study for WAH<sub>2</sub> before year end followed by a PFS in early 2023.

Hexagon's key findings from the Pedirka Hydrogen project PFS were as follow:

- There is relatively little existing hydrogen infrastructure existing or being publicly funded in Australia so:
  1. In the short term, producing and selling Ammonia rather than Hydrogen as a "Carrier" is logistically more economic, and
  2. Location of the Hydrogen/Ammonia plant is a key consideration optimising proximity to feedstock, CO<sub>2</sub> sink and port being highly advantageous to reduce both CapEx and OpEx.
- In a zero emissions project with CO<sub>2</sub> sequestration available, it is still economically advantageous to minimise **gross** CO<sub>2</sub> production to reduce the amount of CO<sub>2</sub> to be sequestered:
  1. Using natural gas rather than coal as a feed stock approximately halves the amount of CO<sub>2</sub> produced per unit of hydrogen, and
  2. Using renewable sources (such as solar) for the energy needs of the process further reduces gross CO<sub>2</sub> production and is a hybrid pathway to fully green hydrogen.
- A staged/modular approach to build out has the advantages of:
  1. Lower initial CapEx and lower OpEx during commissioning and ramp up,
  2. Easier path to market product at optimal pricing, and
  3. Ability to adopt new technology in later stages to further reduce gross emissions.

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The Scoping Study and PFS will allow more detailed advancement of conversations with key potential partners. These conversations are now at a point where management has felt it necessary to bring in an industry specialist to advance and negotiate the parameters of these potential agreements. To this end, Hexagon is delighted to announce that it has retained Stephen Hall as Commercial Advisor on a consulting basis. Stephen is a veteran of the Australian energy industry with over 30 years' experience spanning the energy value chain. He is the founder of Strategy Advice and Implementation Pty Ltd and previously held a variety of senior positions at Woodside Energy. Stephen will co-ordinate with the team for the focus and refinement of the feasibility studies and take the lead on our initiatives with third parties.

## **Graphite**

Hexagon is pleased to announce that its agreement with Green Critical Minerals "GCM" (ASX Announcement 14 February 2022) has now closed with all CPs being met and the receipt by Hexagon from GCM of A\$300,000 as first tranche payment. Green Critical Minerals (through its transaction with Chase Mining "CML") is now funded to meet its spending commitments for exploration and progressing of the graphite potential at McIntosh. Under the terms of the agreement Hexagon is free carried through to decision to mine at McIntosh and for any downstream value-added components of the value chain developed by the transaction GCM/CML.

Chairman Charles Whitfield commented, "In addition to the exciting drill program announcement last Tuesday, we are happy to be able to update the market on the Company's other ongoing initiatives. The WAH<sub>2</sub> Hydrogen project has a firm foundation from the findings of the Pedirka PFS and the team has run with those findings to build the Western Australia project. We are now at a stage where we can formalise the data into a meaningful study for WAH<sub>2</sub> which will formalise the conversations with potential third-party partners. At the same time, management made an undertaking to simplify the Company's operations and projects, and with the closing of the transaction with GCM both our graphite properties now have a pathway to production without the need for capital investment."

## **ABOUT HEXAGON ENERGY MATERIALS LIMITED**

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

Hexagon 100% owns the McIntosh Nickel-Copper-PGE and Graphite project in Western Australia (WA) and the Halls Creek Gold and Base metals project in WA. On 14 February 2022 Hexagon announced a binding Graphite Mineral Rights Earn-in agreement (up to 80%) had been entered into with Critical Green Minerals Pty Ltd, with McIntosh graphite expected to become part of an ASX Initial Public Offering during 2022. In the USA, Hexagon has an 80 per cent controlling interest of the Ceylon Graphite project located in Alabama, over which South Star Battery Materials Corp. (TSXV: STS) on 7 December 2021 signed an Option to develop and earn-in up to 75% interest.

Hexagon also is developing a business to deliver decarbonised Hydrogen (blue Ammonia) into export and domestic markets at scale, with Hexagon's WA Hydrogen (WAH<sub>2</sub>) project currently being pursued.

Hexagon's plan is to use renewable energy in clean Hydrogen production to the greatest extent possible in its projects, transitioning from blue to green Hydrogen production on a commercial basis, over time. Supporting this strategy in January 2022 Hexagon signed a Memorandum of Understanding with renewable energy company FRV Services Australia Pty Ltd (FRV Australia) (51% owned by Fotowatio Renewable Ventures S.L. and 49% owned by OMERS Infrastructure part of OMERS Canadian defined benefit pension plan fund). FRV has almost 800MWdc of Australian PV assets built or under construction in Australia.

# HEXAGON

Hexagon’s overarching goal for 2022 is to secure and leverage technical and commercial alliances by commodity across its project portfolio whilst maintaining a core focus on Northern Australian Future Energy Materials and Future Energy project developments, in-house. The graphics below summarises Hexagon’s Strategy and the locations of Hexagon’s projects.

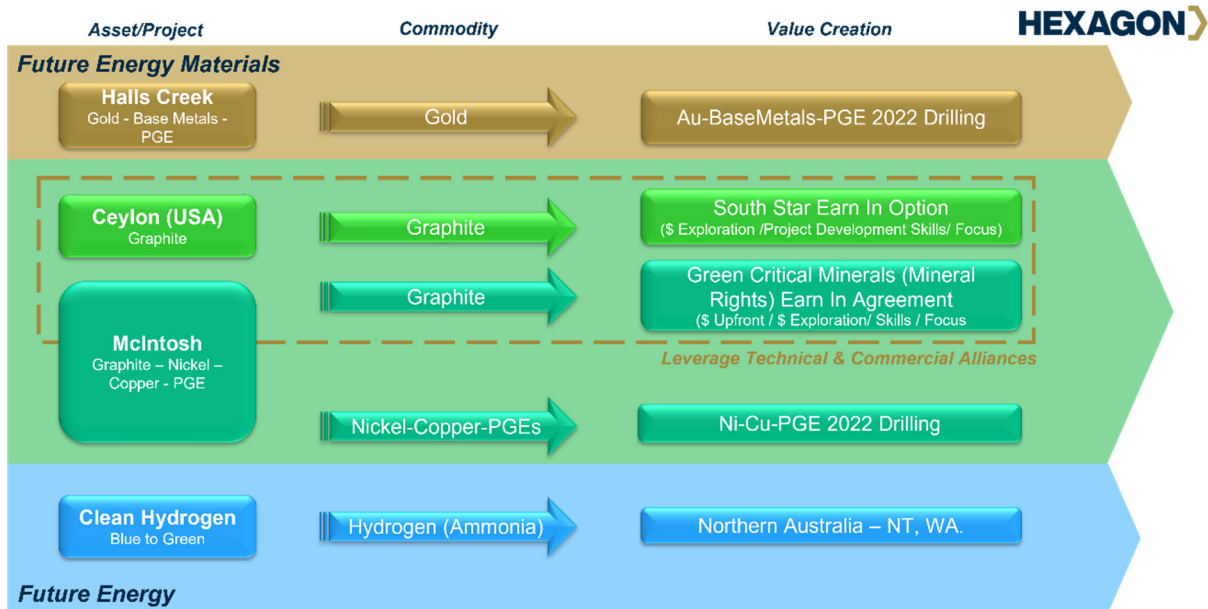


Figure 1: Hexagon’s Strategy 2022.

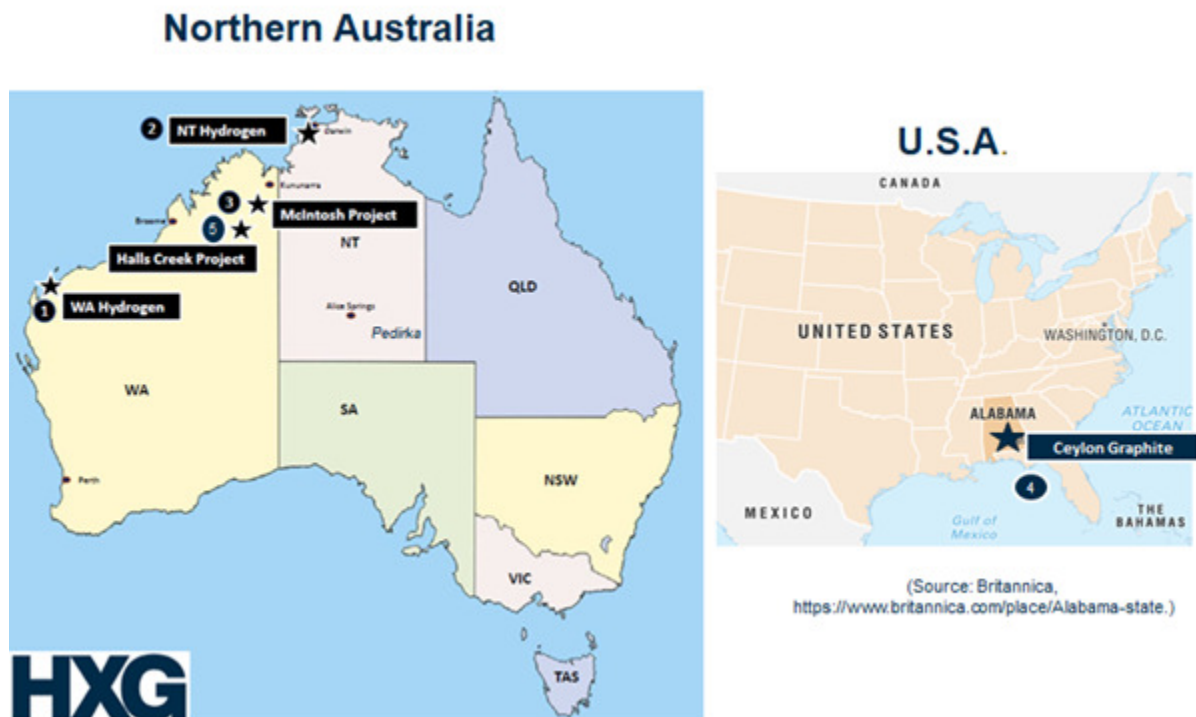


Figure 2: Hexagon project locations.



**Authorisation**

This announcement has been authorised by the Board of Directors.

To learn more please visit: [www.hxgenerymaterials.com.au](http://www.hxgenerymaterials.com.au)

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