



ASX Announcement | 2 August 2023
Hexagon Energy Materials Limited (ASX: HXG)

April – June 2023 (FYQ4) Quarterly Activities Report

Hexagon completes the WAH₂ Preliminary Feasibility Study and continues to progress commercial discussions regarding the flagship project.

Hexagon Energy Materials Limited (ASX: HXG) ('Hexagon' or 'the Company') is pleased to provide this Quarterly Activities Report for the quarter ended 30 June 2023 (Q4 FY23).

Hexagon is an Australian-listed company focused on *Future Energy* project development and *Future Energy Materials* exploration and project development.

EXECUTIVE SUMMARY

The June 2023 quarter was a watershed for the Company as it saw the successful completion of the WAH₂ Project Preliminary Feasibility Study (PFS) (ASX updated announcement 2nd August 2023). The results of the PFS are encouraging and project risks have been reduced to a level considered appropriate to commence Pre-FEED. Opportunities for further improvement have been identified and will be a focus of pre-FEED studies. Progress was also made across the Company's suite of mineral assets.

Future Energy

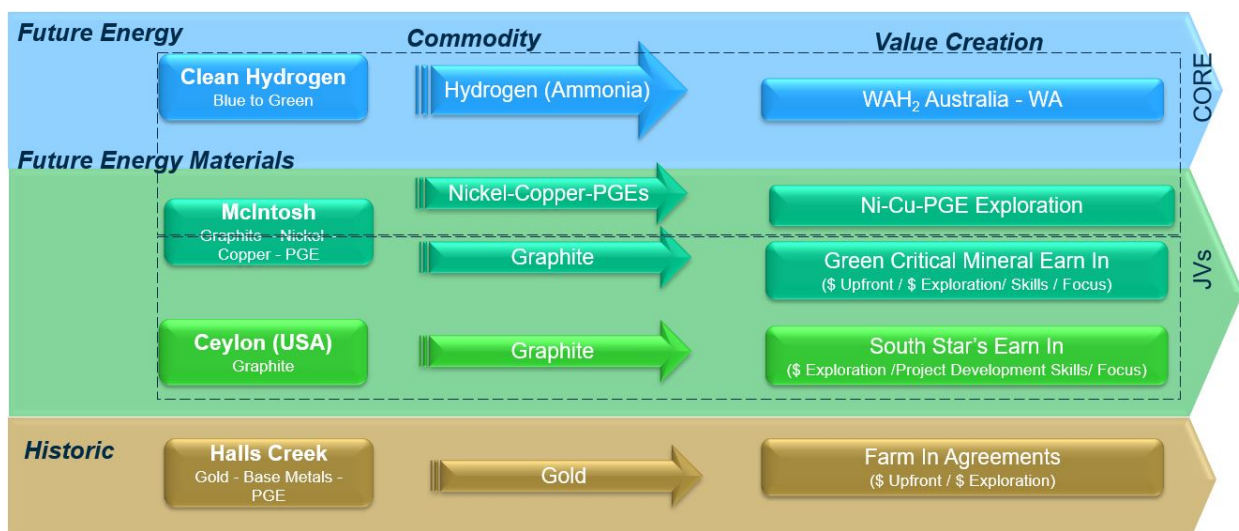
- WAH₂

Future Energy Materials

- McIntosh Ni-Cu-PGE
- Graphite – McIntosh and Ceylon (Alabama)

Historic

- Halls Creek Au-Base Metal-PGE



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1. WAH₂

The WAH₂ Project is Hexagon's flagship project 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 the energy transition drives an increasing demand for low-emissions energy.

The WAH₂ project progressed to plan through Q2 2023 with the Western Australian Government allocating Hexagon land for the project (HXG ASX announcement 15 May 2023), successful completion of Pre-Feasibility Studies (HXG ASX updated announcement 2nd August 2023) and progression of commercial discussions.

1.1 Land Allocation

During the quarter the Western Australian Government approved allocation of land for Hexagon's proposed WAH₂ low-emissions ammonia project. The 40 Ha site is in Hexagon's preferred location in the Maitland Strategic Industrial Area and is proximal to existing services, an existing infrastructure corridor and established export routes.

Hexagon is in discussions with DevelopmentWA to finalise key terms for land tenure.

1.2 Pre-Feasibility Study

The WAH₂ Pre-Feasibility Study (PFS) was completed on time and on budget in Q2 2023 with engineering and cost estimation undertaken by Petrofac (a leading energy services company) in parallel to Hexagon's commercial discussions with potential gas suppliers, CCS service providers, utility providers and ammonia customers.

The key results of the PFS include:

- Market assessment.
- Identification of preferred production technology.
- Scale and phasing of production capacity.
- Definition of the Base Case project. This is an 'islanded project' that builds, owns, and operates dedicated facilities for supply of utilities, production of ammonia and production export. This provides for a project that is, as far as practicable, independent of others and therefore offers Hexagon a high degree of control. It also facilitates the evaluation of potential benefits of third-party provision of services and shared infrastructure.
- Mass balance analysis to support low-emissions intensity of the ammonia produced.
- AACE Class 4 capital and operating cost estimates.
- Economic analysis.
- Risk assessment and mitigation controls.
- Definition of Pre-FEED scope.

1.3 Commercial Discussions

During the quarter Hexagon progressed confidential commercial discussions with potential gas suppliers, CCS service providers, utility providers and ammonia customers. The results of the PFS will enable these discussions to progress.

The results of the WAH₂ PFS are encouraging and project risks have been reduced to a level considered appropriate to commence Pre-FEED, which is planned to start imminently.

2. WAH₂ TRACKING

Timing	Stage	Status
Q3-Q4 2022	<ul style="list-style-type: none"> Complete scoping study 	Achieved on time & budget
Q1-Q2 2203	<ul style="list-style-type: none"> Complete WAH₂ Preliminary Feasibility Study Report Secure Option to Lease from WA Government over preferred project site Progress Commercial discussions 	Achieved on time & budget
Q3-Q4 2023	<ul style="list-style-type: none"> WAH₂ Concept Selection Studies Conditional commercial agreements for project inputs and offtake prior to FEED entry FEED entry by Q1 2024 	
Q1-Q4 2024	<ul style="list-style-type: none"> Feed Studies Unconditional commercial agreements for project inputs and offtake prior to FID FID by Q1 2025 	

3. McIntosh Ni-Cu-PGE

Hexagon's McIntosh Project in the West Australian Kimberly region lies in the centre of an area known for active Ni-Cu-PGE extraction. McIntosh is surrounded by well-established Nickel and/or PGE producers, exporters and substantial Ni-Cu-PGE JORC resources. Over the past three years, Hexagon has undertaken substantial appraisal work to establish the geology of the project.

During the quarter, Hexagon engaged Dennis Arne, Director of Telemark Geosciences, to undertake a geochemical assessment of the 895 ultra-fine fractions (UFF) soils program over the Panton North, Mini M and Togo prospect. The work will incorporate the results from the review concluded in March 2022 (See HXG Announcement 21 March 2022) with the aim of adding further ranked geochemical targets to the previously reported 19 areas of interest.

Furthermore, initial results of the 4m composite from the first phase of the RC exploration program were received (See HXG ASX announcement 22nd November 2022). These are currently being evaluated, with 1m resampling currently being undertaken.

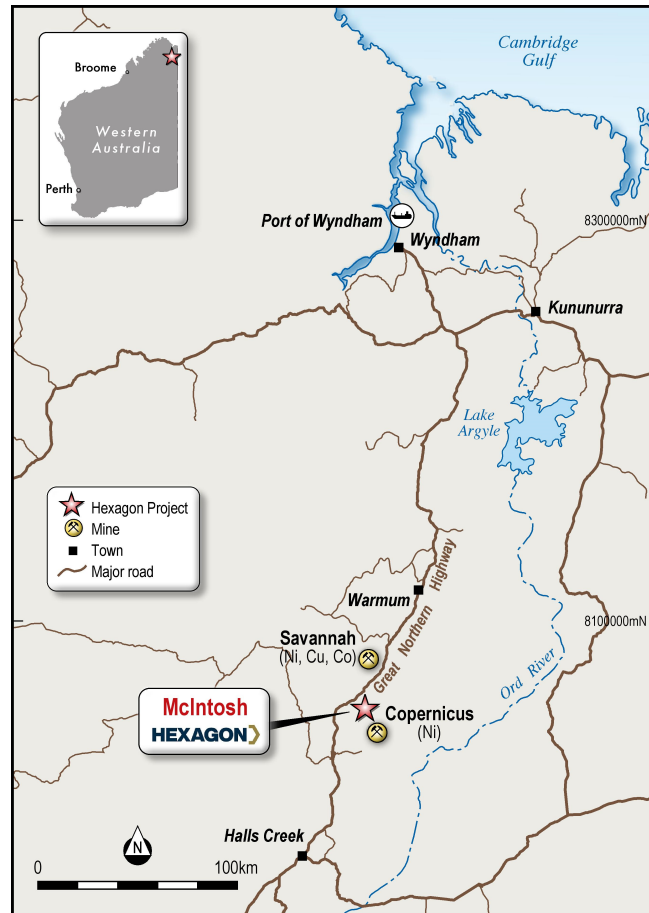


Figure 2 - Location map for Hexagon's McIntosh Project

4. Graphite – McIntosh and Ceylon (Alabama)

4.1 McIntosh

Good progress has been made in Hexagon's joint venture with Green Critical Minerals Pty Ltd (GCM). During the quarter results from the latest exploratory drill program were announced. (ASX GCM 18th July 2023). Highlights included 280m thick Graphitic Schist at the Emperor target. A follow up drill program planned for Q3 2023 is being designed to fully delineate the entire potential and release an updated Resource. The Expanded Emperor Resource will form the basis of the updated PFS due in Q1 2024

Under the terms of the Agreement Green Critical Minerals (GCM) has the right to earn up to 80% interest in the Graphite Mineral Rights **only** across Hexagon's McIntosh Project tenements. The tenements will remain wholly held/managed by Hexagon. The Agreement will bring cash and exploration funding to Hexagon and leverage off past investments made by the Company.

In addition to expenditure on the GCM drill program GCM will make the second payment of \$200,000 to Hexagon Q4 2023.

4.2 Ceylon (Alabama)

South Star Battery Metals Corp (TSXV:STS, OTCQB: STSBF) (South Star) are executing a Binding Earn-In and Option Agreement on Hexagon's Ceylon Graphite Project located in Alabama, USA (HXG ASX Announcement 4 November 2021). The agreement provides the right for South Star to acquire 75% in the project in return for C\$750,000 in expenditure on the project within agreed guidelines.

A drill program is underway at the time of writing and should be completed by the first week of August. Total drilling to be around 1500m. Request for quotations for the "PEA" (Preliminary Economic Assessment) have been sought and the contract should be awarded by mid-August. Anticipated timeline for completing the PEA continues to be end of Q1 2024. In addition, a development program for characterization/battery testing/met work on 35kg of ROM ore is under way. South Star are budgeted to spend about US\$1M on project in 2023 on drilling, testing, geos/consultants and reports.

5. **Halls Creek Au-Base Metal-PGE**

During the quarter strategic conversations with potential partners took place around the Halls Creek Au-Base Metal-PGE project. With heritage approvals currently being sort to enable further on ground activity.

CORPORATE

During the June 2023 quarter:

- The majority of focus was on completion of the WAH₂ PFS however strategic progress was pursued on the company's mineral resource projects
- Hexagon's cash position at the end of the quarter was \$1.57 million
- The Company paid the amounts noted at Item 6.1 on the Appendix 5B, being payments of \$47,000 to related parties and their associates. This was the aggregate amount paid to the directors including directors' fees and consulting fees.

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 100% owns the McIntosh Nickel-Copper-PGE and Graphite project in Western Australia and the Halls Creek Gold and Base metals project in WA.

Hexagon is also developing a business to deliver decarbonised Hydrogen (blue Ammonia) into export and domestic markets at scale, via its WAH₂ Project.

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.

Hexagon's overarching goal for 2023 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 and Future Energy Materials project development, in-house.

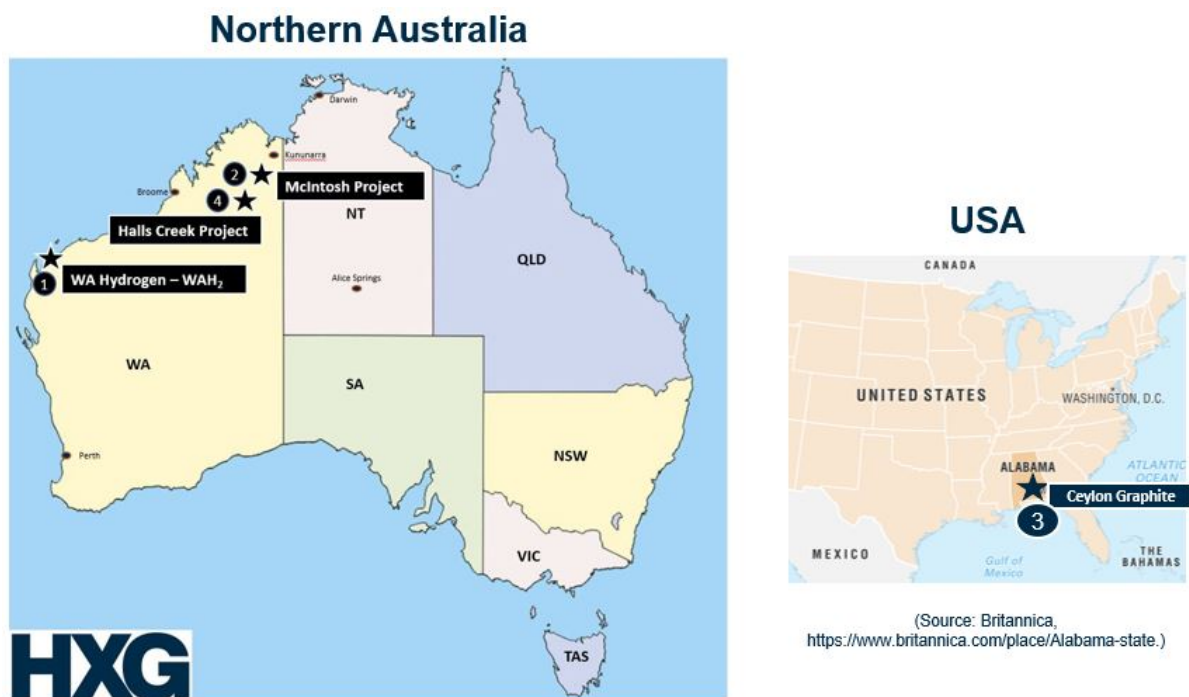


Figure 4 - Locations of Hexagon's projects

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

FOR FURTHER INFORMATION,

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Competent persons' attributions

The information within this report that relates to exploration results including geological data for the McIntosh Project and Halls Creek Project is based on information generated and compiled by Mr Michael Atkinson. Mr Atkinson is a consultant to Company and a member of The Australian Institute of Geoscientists. He has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results Mineral Resources and Ore Reserves and he consents to the inclusion of the above information in the form and context in which it appears in this report.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

HEXAGON ENERGY MATERIALS LIMITED

ABN

27 099 098 192

Quarter ended ("current quarter")

30 June 2023

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(50)	(1,052)
	(b) development	(95)	(234)
	(c) production	-	-
	(d) staff costs	(24)	(150)
	(e) administration and corporate costs	(100)	(624)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	2	12
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	4	1,078
1.8	Other (Green Critical Minerals/Chase Mining Transaction for WA Graphite)	-	300
1.9	Net cash from / (used in) operating activities	(263)	(670)
2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	(6)	(194)
	(e) investments	-	-
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(6)	(194)

3.	Cash flows from financing activities	-	-
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (Office Rental Lease Liability)	-	-
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,804	2,399
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(263)	(670)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(6)	(194)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	1,535	1,535

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	515	784
5.2	Call deposits	1,020	1,020
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,535	1,804

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	47
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
6.1 - Payments to Directors		

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	-	

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(263)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(6)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(269)
8.4 Cash and cash equivalents at quarter end (item 4.6)	1,535
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	1,535
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	5.7
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 July 2023

Authorised by: Board of Directors
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.