



ASX Announcement | 30 October 2024
Hexagon Energy Materials Limited (ASX: HXG)

July to September 2024 (FYQ1) Quarterly Activities Report

Flagship WAH₂ Project momentum continues to build towards planned FEED entry

Hexagon Energy Materials Limited (ASX: HXG) ('Hexagon' or 'the Company') is pleased to provide this Quarterly Activities Report for the quarter ended 30 September 2024 (Q1 FY24).

Hexagon is an Australian-listed company focused on the clean energy transition including project development of low-emission fuels and energy materials.

EXECUTIVE SUMMARY

The September 2024 quarter saw the Company make significant strides in progressing the key strategic agreements that will underpin the WAH₂ Project's planned entry into Front End Engineering and Design ('FEED') at the end of 2024.

Pre-FEED technical work is nearing completion, confidential commercial discussions are being advanced with key input providers, potential off-takers and strategic partners for the project, and regulatory approvals remain on track.

An economic update will be provided by Hexagon prior to FEED-entry once the ongoing confidential commercial discussions are completed.

Increased Mineral Resource estimates were announced for the Company's McIntosh and Ceylon graphite projects, representing increases of 26% and 137% over previous estimates respectively.

The Company continued to progress strategic conversations regarding potential development of the Company's mineral assets.

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 Asia's energy transition drives an increasing demand for low emissions energy.

The WAH₂ Project progressed to plan through Q3 2024 with pre-FEED technical activities on track to support FEED-entry at the end of 2024, continued progression of commercial discussions, and ongoing focus on regulatory approvals.

1.1 Pre-FEED Technical Activities

Technical activities are being led by Petrofac Asset Solutions Australia Ltd as lead engineer and Topsoe A/S as technology provider.

Topsoe has completed its pre-FEED scope which covers the core process.

HEXAGON ENERGY MATERIALS LIMITED

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Optimisation of ancillary process and services by Petrofac continues to plan with the Pre-FEED process simulation model, process flow diagrams, process mass balance and equipment lists all being delivered in the quarter.

An opportunity has been identified that could further reduce carbon intensity below the PFS Base Case¹ and potentially support access to government subsidies. Evaluation is ongoing.

Preparation of an updated overall cost estimate and the FEED project execution plan continues.

1.3 Commercial Activities

Hexagon previously executed a Key Terms Agreement² with the Water Corporation of Western Australia for the supply of sufficient volume of water for Phase 1 of the WAH₂ Project. Work has continued as planned towards executing a definitive supply agreement.

Hexagon previously signed a Memorandum of Understanding with Oceania Marine Energy Pty Ltd ('Oceania')³ regarding the potential development of a low-emissions ammonia bunkering business at Dampier that could create a valuable additional domestic market for the WAH₂ Project. The initial market assessment has been completed and the business model and delivery plan are being informed by ongoing stakeholder engagement.

Hexagon continues to progress confidential commercial discussions with key input and service providers regarding gas supply, CO₂ sequestration and infrastructure. These discussions have included confidential indicative pricing from third parties for several key aspects of the project, have continued to reduce uncertainty and have tended to come in under PFS Base Case assumptions¹, 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.

Confidential commercial discussions continue to progress with potential off-takers and strategic partners and will ramp up as the pre-FEED technical work and financial modelling is completed.

1.4 Regulatory Approvals

The terms of the Option to Lease for the land allocated to Hexagon for the WAH₂ Project have been agreed in-principle with Development WA and final approvals are pending.

Planning for baseline environmental surveys continued through the period. Survey timing will be dependent on approval of Hexagon's application for a Section 91 Licence (per Land Administration Act 1997).

1.5 Timeline

Hexagon's target is WAH₂ FEED-entry at the end of 2024, leading to a final investment decision at the end of 2025 and the start of production at the end of 2028.

FEED-entry 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). Given the interdependency between the commercial agreements, their sequencing and timing will be determined as they progress.

¹ HXG ASX 'WAH₂ Project Pre-Feasibility Study' updated announcement dated 2 August 2023.

² HXG ASX announcement 'WAH₂ Project – Water Supply Key Terms Agreement' dated 11 March 2024.

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

1.6 WAH₂ Tracking

Timing	Stage	Status
Q3 – Q4 2022	<ul style="list-style-type: none"> Complete scoping study 	Achieved on time & budget
Q1 – Q2 2023	<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 2023 – Q4 2024	<ul style="list-style-type: none"> WAH₂ Pre-FEED Studies MOUs or other conditional commercial agreements for project inputs and offtake prior to FEED entry FEED entry end 2024 	Ongoing
Q4 2024 – Q4 2025	<ul style="list-style-type: none"> FEED Studies Unconditional commercial agreements for project inputs and offtake prior to FID FID end 2025 	

2. Graphite – McIntosh and Ceylon (Alabama)

2.1 McIntosh

The McIntosh graphite project continues to progress via the earn-in arrangement with Green Critical Minerals ('GCM').

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.

On 1 July 2024 and 8 July 2024, GCM released ASX announcements 'Major Mineral Resource Estimate Upgrade for the McIntosh Graphite Project' and 'Clarification and Retraction Announcement' respectively which reported an updated mineral resource estimate of 30.2 Mt grading 4.40% total graphitic carbon, a 26% increase over the previous estimate.

On 8 August 2024 GCM released ASX announcement 'Wave International Awarded PFS Engineering for McIntosh Graphite Project' regarding the upstream pre-feasibility study.

2.2 Ceylon (Alabama)

Hexagon and South Star Battery Metals Corp (TSXV: STS, OTCQB: STSBF) (South Star) entered an 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 (A\$825,000) in expenditure on the project within agreed guidelines.

Subsequent to the quarter, South Star announced on 10 October 2024 that it had completed its Preliminary Economic Assessment ('PEA') which included an updated mineral resource estimate of 52.2 Mt of Inferred pit-constrained Mineral Resources, a significant increase from the previous estimate of 22 Mt.

Total expenditure on the project by South Star to the completion of the PEA is expected to be approximately C\$3m (A\$3.3m). Hexagon is free carried.

3. Minerals

During the quarter Hexagon furthered its strategy and planning regarding the development of the Company's mineral assets. The Company will provide further details as and when any definitive agreements are made.

3.1 McIntosh

The Company's McIntosh Ni-Cu-PGE Project, located 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. During the quarter, Hexagon undertook additional appraisal and modelling work to further establish the prospective geology of the project.

3.2 Halls Creek

Hexagon's Halls Creek project has demonstrated significant potential for Au-Base Metal-PGE located in prospective anomalous areas. During the quarter the Company furthered work for additional exploration to be undertaken including target generation within these prospective areas.

TENEMENTS

Hexagon's list of exploration tenements at 30 September is set out in the Appendix.

CORPORATE

Hexagon's cash position at the end of the quarter was A\$509,000.

The Company paid the amounts noted at Item 6.1 on the Appendix 5B, being payments of A\$85,000 to related parties and their associates. This was the aggregate amount paid to the directors including director's fees and consulting fees.

Hexagon has ongoing discussions to secure funding for the Company's future capital requirements.

Hexagon's McIntosh graphite rights earn-in partner GCM Graphite Pty Ltd ('GCM Graphite') previously commenced legal proceedings in the Supreme Court of Western Australia against the Company and its wholly owned non-core subsidiary McIntosh Resources Pty Ltd⁴ with respect to information disclosure warranties in the parties' earn-in agreement. Hexagon strongly refutes GCM Graphite's claims, considers them to be without merit, and will vigorously defend them.

⁴ HXG ASX announcement 'McIntosh Graphite Project, GCM Legal Proceedings' dated 13 June 2024.

APPENDIX 1 - LIST OF TENEMENTS

Hexagon Energy Materials Limited held the following interests in exploration tenements at 30 September 2024 (ASX Listing Rule 5.3.3).

Pedirka (NT, Australia)				
Tenement	Interest at Beginning of Quarter	Interest at End of Quarter	Acquired During Quarter	Disposed During Quarter
EL29237	100% Hexagon	100%	-	-
EL29239	100% Hexagon	100%	-	-
McIntosh¹ (WA, Australia)				
Tenement	Interest at Beginning of Quarter	Interest at End of Quarter	Acquired During Quarter	Disposed During Quarter
E80/3864	100% Hexagon	100%	-	-
E80/3906	100% Hexagon	100%	-	-
E80/3907	100% Hexagon	100%	-	-
E80/3928	100% Hexagon	100%	-	-
E80/4688	100% Hexagon	100%	-	-
E80/4732	100% Hexagon	100%	-	-
E80/4733	100% Hexagon	100%	-	-
E80/4734	100% Hexagon	100%	-	-
E80/4739	100% Hexagon	100%	-	-
E80/4825	100% Hexagon	100%	-	-
E80/4841	100% Hexagon	100%	-	-
E80/4842	100% Hexagon	100%	-	-
E80/4879	100% Hexagon	100%	-	-
E80/4931	100% Hexagon	100%	-	-
E80/5151	100% Hexagon	100%	-	-
E80/5157	100% Hexagon	100%	-	-
Halls Creek (WA, Australia)				
Tenement	Interest at Beginning of Quarter	Interest at End of Quarter	Acquired During Quarter	Disposed During Quarter
E80/4793	100% Hexagon	100%	-	-
E80/4794	100% Hexagon	100%	-	-
E80/4795	100% Hexagon	100%	-	-
E80/5689	100% Hexagon	100%	-	-
E80/5126	75% Hexagon	75%	-	-
P80/1814	100% Hexagon	100%	-	-
P80/1815	100% Hexagon	100%	-	-
P80/1816	100% Hexagon	100%	-	-
P80/1817	100% Hexagon	100%	-	-
P80/1818	100% Hexagon	100%	-	-
Alabama² (USA)				
Tenement	Interest at Beginning of Quarter	Interest at End of Quarter	Acquired During Quarter	Disposed During Quarter
MLAs*	80% Hexagon	80%	-	-

* Mineral Lease Agreements with respective mineral rights holders.

¹ Green Critical Minerals 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 (HXG ASX Announcement 14 February 2022).

² Hexagon and South Star Battery Metals Corp (TSXV: STS, OTCQB: STSBF) (South Star) entered an 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 and completion of a Preliminary Economic Assessment within agreed guidelines.

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 decarbonized hydrogen (low-emission ammonia) into export and domestic markets at scale, via its WAH₂ Project. The Company plans to use renewable energy to the greatest extent practicable.

Hexagon 100% owns the McIntosh Nickel-Copper-PGE project and the Halls Creek Gold and Base Metals project in Western Australia. The Company has two joint ventures on its Graphite properties.

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

FOR FURTHER INFORMATION,

Investors Contact:

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CEO

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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. Chris Storey and reviewed by Mr. Isaac Eadndel. Mr. Storey and MR Eadndel are consultants to Company and have 28 and 18 years' experience respectively as geologists. Isaac Eadndel is a member of AusIMM and 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 September 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(121)	(121)
(b) development	(116)	(116)
(c) production	-	-
(d) staff costs	(154)	(154)
(e) administration and corporate costs	(394)	(394)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	2	2
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	408	408
1.8 Other	-	-
1.9 Net cash from / (used in) operating activities	(375)	(375)
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	(37)	(37)
(e) investments	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 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	(37)	(37)

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	(60)	(60)
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	(60)	(60)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	981	981
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(375)	(375)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(37)	(37)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(60)	(60)

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 (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	509	509

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	489	961
5.2	Call deposits	20	20
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)	509	981

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	85
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>6.1 - Payments to Directors</i>		

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 – Convertible Note	1,000	1,000
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-

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

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.	
	<ul style="list-style-type: none"> - Lender: Professional and sophisticated investors, via Investorlink Direct Pty Ltd as the Convertible Note Agent. - Interest Rate: 12% - Maturity Date: 21 December 2025 - There are 10 Convertible Notes issued with an issue price of \$100,000 each. Each may be converted into fully paid shares in the future at a minimum floor price of \$0.02 per share or higher, depending on the Company's share price at the time of conversion. - Unsecured 	

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(375)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(37)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(412)
8.4	Cash and cash equivalents at quarter end (item 4.6)	509
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	509
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	1.2
	<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: Yes	
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: Yes. Hexagon has ongoing discussions to secure funding for the Company's future capital requirements.	
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: Yes. The entity expects to continue its operations and meet its business objectives in the coming quarters based on the current cashflow forecast prepared for management purposes and its demonstrated ability to access capital markets.	
	<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: 30 October 2024

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.