Graphene Manufacturing Group

Management's Discussion and Analysis
For the three month period ended September 30, 2023 and 2022

(in Australian dollars)

This Management' Discussion and Analysis ("MD&A") provides a review of Graphene Manufacturing Group Ltd's ("GMG" or the "Company") operations, performance and financial position for the Three-month period ended 30 September 2023 and 2022. This MD&A should be read in conjunction with the unaudited condensed financial statements for the Three-month periods ended 30 September 2023 and 2022. The purpose of this document is to provide information on GMG's activities. The information contained herein is dated as November 24, 2023.

Further information about GMG, including the Company's annual information form dated October 12, 2023, that does not form part of, nor is incorporated within this MD&A, is available on GMG's website and on SEDAR (the official site of the Canadian Securities Administrators, which is publicly available), including all news releases.

The period from July 1, 2023 to September 30, 2023 has been referred to as Q1FY24 and the period from July 1, 2022 to September 30, 2022 has been referred to as Q1FY23. The financial year ending 30 June 2023 has been referred to as FY23 and the financial year ended 30 June 2022 has been referred to as FY22.

The financial statements of GMG and extracts of those financial statements provided in this MD&A have been prepared in accordance with IAS 34 *Interim Financial Reporting* as issued by the International Accounting Standards Board ("IFRS"). The Company has consistently applied the accounting policies used in the preparation of its IFRS financial statements from period to period, including the comparative figures. References to the symbol AUD or $ or A$ means the Australian dollar, the official currency of Australia. References to the symbol CAD or C$ mean the Canadian dollar. References to "K" indicate thousands. Except as otherwise set out herein, all amounts expressed herein are in Australian dollars, the functional and presentation currency of the Company. As a result of the rounding of dollar differences, certain total dollar amounts in this MD&A may not add exactly to their constituent amounts. Throughout this MD&A, percentage changes are calculated using numbers rounded as they appear. Readers are cautioned that this MD&A contains certain forward-looking information. Please see the "Forward Looking Statements" section which follows.

(Unless specified otherwise, all amounts are expressed in Australian dollars)

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This MD&A contains "forward looking statements" that reflect the Company's expectations and projections about its future results. When used in this MD&A, forward looking statements can be identified using words such as "may", or by such words as "will", "intend", "believe", "estimate", "consider", "expect", "anticipate", and "objective" and similar expressions or variations of such words. Forward looking statements are, by their nature, not guarantees of the Company's future operational or financial performance and are subject to risks and uncertainties and other factors that could cause the Company's actual results, performance, prospects or opportunities to differ materially from those expressed in, or implied by, these forward-looking statements. No representation or warranty is intended with respect to anticipated future results, or that estimates, or projections will be sustained.

In developing the forward-looking statements in the MD&A, the Company has applied several material assumptions, including the availability of financing on reasonable terms, the Company's ability and general business and economic conditions. Many risks, uncertainties and other factors could cause the actual results of GMG to differ materially from the results, performance, achievements or developments expressed or implied by such forward-looking statements. These risks, uncertainties and other factors include, but are not limited to the following: overall economic conditions, technical de-risking and market acceptance for GMG's products and solutions, the introduction of competing technologies/products, environmental and regulation requirements, competitive pressures, change in market conditions and other factors that may cause the actual results, performance or achievements to differ materially from those expressed or implied in these forward-looking statements.

Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of the MD&A or as of the date otherwise specifically indicated herein. Due to risks and uncertainties, including the risks and uncertainties elsewhere in this MD&A, actual events may differ materially from current expectations. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. All forward-looking statements contained in the MD&A are expressly qualified in their entirety by this cautionary statement.

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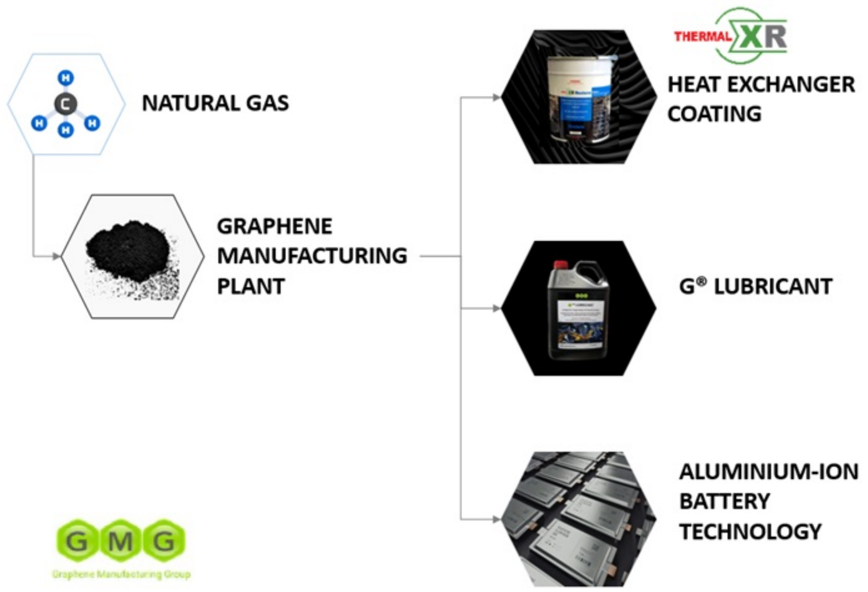
BUSINESS OVERVIEW

GMG is a clean-technology company which seeks to offer energy saving and energy storage solutions, enabled by graphene, including those manufactured in-house via a proprietary production process.



GMG Graphene

GMG has developed a proprietary production process to decompose natural gas (i.e. methane) into its elements, carbon (as graphene), hydrogen and some residual hydrocarbon gases. This process produces a distinctively high quality, scalable, 'tuneable' and low/no contaminant graphene with low-cost inputs suitable for use in clean-technology and other applications. The Company's present focus is to de-risk and develop commercial scale-up capabilities, while continuing to develop and expand market applications.

As a technology development company, GMG has matured its strategy over time. While GMG graphene may be suitable for a wide range of industries, GMG has narrowed its focus to target select applications and sectors that will provide it best traction in specific markets. GMG's management team ("**Management**") believes that focusing on these end customer opportunities will provide a higher return on in-house graphene production. Also, the vertically integrated approach will enable it to build a long-term competitive advantage. In line with this approach, GMG's initial focus has been developing applications for energy savings and energy storage.

Energy Savings

Within energy savings, GMG has developed THERMAL-XR®, a graphene enhanced coating platform that enhances heat transfer and corrosion protection. Initial commercial applications are in the heating, ventilation, air conditioning and refrigeration ("HVAC-R") sector. Other industry sector applications are being pursued. G®LUBRICANT, a graphene enhanced lubricant additive that seeks to reduce fuel consumption and carbon emissions by reducing internal friction in engines is also being demonstrated.

Since the recent Australian Government approval for GMG to produce and sell THERMAL-XR® at scale in early 2023, the Company has driven sales activities and is in the process of bolstering related production capacity. Important forward order sales at scale have been secured and the Company's efforts to widen potential market segments is finding positive reception providing strong encouragement for continued sales focus targeting notable near-term revenues. GMG sales of THERMAL-XR® in the HVAC-R market is expected to grow in various countries following the May 2023 and July 2023 HVAC-R Distributor signings (see Page 9). Additionally, the Company has identified several markets outside the HVAC-R segment, where it also sees expanded opportunities for application of the THERMAL-XR® platform.

Energy Storage

In the energy storage segment, GMG and The University of Queensland are working to progress further research and development ("R&D") and commercialization of graphene aluminium-ion batteries ("G+AI Batteries"). Additionally, GMG and Rio Tinto have signed a binding Joint Development Agreement with the goal of accelerating the development and application of GMG's Graphene Aluminium-Ion batteries for use in the mining and minerals industry (refer to page 13 for further details). The Company is pleased overall with its progress and its growing ability to develop and manufacture battery prototypes in-house.

Corporate and Governance

As at September 30, 2023, GMG had a cash position of $4,578K and no debt other than lease liabilities. In the month of August 2023, the Company undertook a market raise of C$3.45m, strengthening its ability to sustain its commercialisation and development activities.

The net loss for the year to date was $1,052K, including the change in fair value of warrants. As outlined in more detail below, the adjustments included in net results, required by IFRS to account for certain warrants on issue, are a non-cash item and largely result from movements in GMG's share price during the period.

Q1FY24 EBITDA was a loss of $2,824K (refer page 16 for details for non-IFRS adjustments).

The Company had a number of Board Director and Officer changes during the quarter and up to the date of this report. These changes align with the Company's strategic direction and future growth plans.

Appointed in Q1FY24 were Bob Galyen, a leading battery industry expert, Andrew Small, an experienced business developer, and Jack Perkowski, an experienced financier and business developer, and the departure of Frederick Kotzee who was also CFO.

In October 2023, the Company appointed Jack Perkowski as Chair of the Board of Directors, transitioning from Guy Outen, who remains a director and Chair of the Audit Committee until the company's Annual General Meeting ("AGM"). It was announced that current Directors Emma FitzGerald, Guy Outen, and Rob Schewchuk would not stand for re-election at the November 2023 AGM. The external search process for the position of CFO concluded in October 2023 with the appointment of Brandon Leong, transitioning from Scott Richardson who acted as interim CFO.

In line with the Company's plan for increased access to North American markets, GMG has engaged a capital markets advisor for the application for quotation of the Company's securities on the OTCQX® ("OTCQX"), an over-the-counter public market in the United States, enabling greater US share trading opportunities. GMG's shares will remain listed on the TSX Venture Exchange ("TSXV") under the ticker "GMG" and quoted on Frankfurt Stock Exchange under the trading symbol "0GF". Certain GMG warrants trade on TSXV under the ticker "GMG.WT" and "GMG.WT.A".

GMG is a founding member of the Australian Advanced Material and Battery Council ("AMBC") that was officially launched at Queensland Parliament House in October, 2022. Craig Nicol, GMG's CEO and Managing Director, is the council's Chair.

The ability of the Company to continue as a going concern is principally dependent upon the ability to raise additional capital or secure other forms of financing, to augment its current cash position, as and when necessary to meet the levels of expenditure required for the Company. This is required to continue its ongoing development and commercialisation of energy saving and energy storage solutions and to meet the Company's working capital requirements. These conditions give rise to material uncertainty which may cast significant doubt over the Company's ability to continue as a going concern.

Business Objectives

GMG is focused on four critical **Business Objectives**:

- **PRODUCE GRAPHENE & IMPROVE/SCALE PRODUCTION PROCESS.**
- **BUILD REVENUE FROM ENERGY SAVINGS PRODUCTS**
- **DEVELOP NEXT-GENERATION BATTERY**
- **DEVELOP SUPPLY CHAIN, PARTNER & PROJECT EXECUTION CAPABILITY**

1: Produce Graphene & Improve/Scale Production Process

GMG expects ongoing iteration and improvement over time of the graphene quality from the GMG graphene production process. GMG has increasing confidence that it has found an economically sustainable path to scale the graphene manufacturing and treatment process.

In February 2023, GMG received full and final approval for all its Graphene products from the Australian Industrial Chemicals Introduction Scheme ("AICIS") of the Australian Government Department of Health and Aged Care under Assessment statement CA09624. This AICIS approval allows GMG to significantly increase the production and sale of GMG graphene-enhanced products to industrial applications in Australia. Regulatory approvals are being sought in targeted other markets where required.

The graphene plant Phase 1.0 expansion project to the Company's Graphene manufacturing facilities announced in August 2022 continues to progress and is expected to provide additional graphene supply for the ongoing development of Company's graphene aluminium-ion battery prototypes ("G+AI Battery"), as well as the Company's energy saving products.

This project also sets the design infrastructure for further capacity expansions for GMG's graphene production in Richlands. It will serve as a model and blueprint for future graphene plant constructions. Commissioning of this Phase 1.0 will commence in Q2FY24.

GMG has also successfully passed Stage One (Gap Analysis) of the ISO 9001 accreditation process and is on track to complete the final stages and receive full accreditation for ISO9001, for Quality Management, in the first half of calendar year 2024. GMG sees ISO 9001 accreditation as an important table stake to become a commercial manufacturing operation for our energy saving and energy storage products while also providing a structured basis for continuous improvement for our company's operations and customer satisfaction.

2: Build Revenue from Energy Savings Products

THERMAL-XR®

In September 2022, GMG completed the acquisition of the manufacturing intellectual property and brand rights of OzKem Pty Ltd.'s ("OzKem") THERMAL-XR® coating products (the "OzKem Transaction")

THERMAL-XR® COATING SYSTEM is a unique method of improving the conductivity of corroded heat exchange surfaces and maintaining the performance of new units at peak levels. The process coats and protects heat exchange surfaces while improving and rebuilding the lost corroded thermal conductivity and increasing the heat transfer rate by leveraging the physics of GMG Graphene resulting in an efficiency improvement and a reduction in energy use.

THERMAL-XR® can also protect both RTPF coils (round tube plate fin) and MCHC coils (microchannel) from accelerated corrosion damage, thereby extending the life of the coil and reducing energy consumption.

Commercialisation

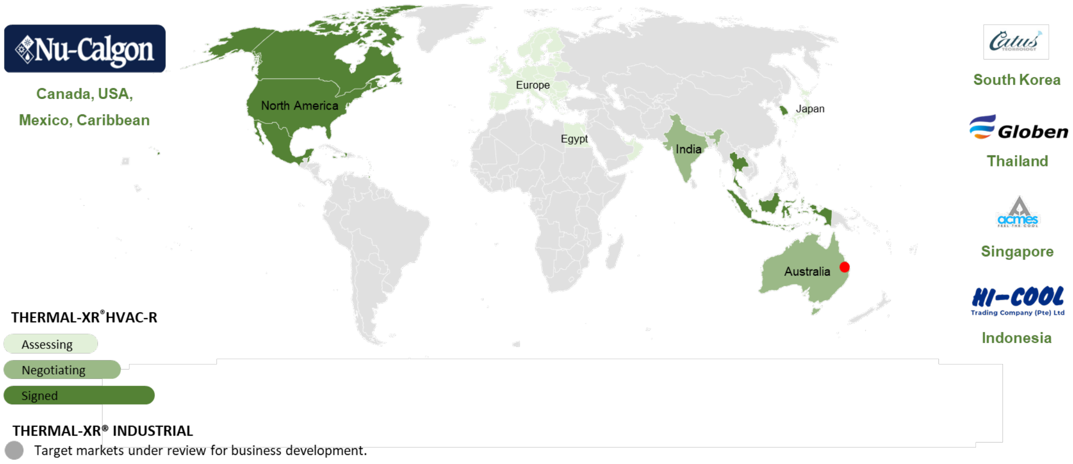
Further to the Company's development of production capability with the opening of its THERMAL-XR® blending plant in October 2024 and together with the business objective of achieving scale production, GMG is well positioned for widespread distribution of THERMAL-XR® for HVAC-R applications.

Opening of TXR Blending Plant by Hon. Milton Dick MP, Speaker of the House. (Source: GMG)

After a period of customer demonstrations supported by external verification of the potential energy saving results of TXR, the Company has seen increasing interest maturing into both larger sales as well as signing of international distributor arrangements.

GMG has signed distribution agreements with four international distributors to buy GMG's THERMAL-XR® and resell in their respective countries in the Heating Ventilation Air Conditioning and Refrigeration (HVAC-R) markets - Thailand, Singapore, Indonesia and South Korea. GMG and certain of the Distributors have successfully completed several THERMAL-XR® projects in Southeast Asia to provide case studies that illustrate the product's local benefits and customer value proposition in these countries and first orders have been received.

GMG has also signed a THERMAL-XR® distribution agreement with Nu-Calgon Wholesaler, Inc ("Nu-Calgon"). Nu-Calgon is the leading Heating Ventilation Air Conditioning, and Refrigeration (HVAC-R) specialty chemical supplier in North America and will partner with GMG to provide THERMAL-XR® to the HVAC-R markets in the United States of America, Mexico, Canada and the Caribbean. THERMAL-XR® allows Nu-Calgon to continue distributing HVAC-R coatings to their existing distributors with the added value of graphene-enhanced superior heat transfer and corrosion protection. Preparations for the early 2024 product launch in the USA by Nu-Calgon are advanced with marketing, sales and customer engagement activities well progressed supported by continuing demonstrations of successful energy savings results.



GMG currently has forward orders of over A$400k for THERMAL-XR® from various distributors and customers worldwide. Most of the value of these orders is conditional on the in-country Government approval for the THERMAL-XR® to be imported from Australia and sold into that country for the product's initial launch.

THERMAL-XR® is progressing through the USA Environmental Protection Agency's (EPA) approval process to import and sell in the USA. All the required documentation has been submitted, and the EPA has assigned a case number as part of the thorough evaluation of the product's safety and environmental impact. The Company believes the approval will potentially be received in Q2FY24. This is in conjunction with ongoing review of EPA requirements for Canada, Mexico and the Caribbean countries.

Development

GMG is developing specific formulations of THERMAL-XR® for different industry applications and conditions. GMG has installed laboratory facilities for quality control requirements and progressing research and development to support this extension of THERMAL-XR® platform into additional industries and applications.

For example, THERMAL-XR® sales and third-party service projects in Southeast Asia have occurred with applications in the data centre cooling sector representing a significant opportunity as according to the IEA it represents up to 1.3% of global electricity demand. The Company progresses discussions regarding projects with a number of data centre operators.

GMG's work with the University of Queensland Materials Performance Consultancy ("UQMP") verified that GMG's THERMAL-XR® when applied to Copper and Aluminium, reduced the surface temperature by 15-16% when operating between 70 degrees Celsius and 90 degrees Celsius.

Independent results on top of customer trials provide both 'controlled' and 'real world' demonstrations and encouragement as to the potential significant commercial opportunity of the TXR platform.

The Company is in discussions with various mining, energy and gas producers in Australia, North America and Asia about the potential for application of the THERMAL-XR® platform to provide increased heat transfer and corrosion resistance for operations, including gas processing heat exchangers, notably liquefied natural gas (LNG) plants. GMG made an initial sale of THERMAL-XR® and coating by GMG for a micro-LNG plant in Australia in late 2022 with encouraging results.

G®LUBRICANT

G®LUBRICANT is a concentrate of GMG Graphene and lubricating oil that is designed for energy savings, emission savings, and wear prevention. The concentrate can be added to an existing fully formulated lubricant or tailored by Graphene Manufacturing Group as an addition to the client's choice of fluid. G®LUBRICANT protects the friction surfaces and reduces the friction coefficient by forming a protective layer between metal interfaces.

GMG continues to work with various Southeast Asian customers for infield testing and also carrying out its own diesel engine fuel testing. Current GMG diesel engine fuel testing is also being carried out to examine fuel saving potential with the use of the G®LUBRICANT. The patent application for G®LUBRICANT is progressing through to country level – where GMG is currently applying in 20 countries for the in-country patent.

Further Research and Development assessment is in progress.

3: Develop Next-Generation Battery

The world-exclusive Graphene Aluminium-Ion battery is a significant step closer to reality thanks to GMG, The University of Queensland Research, and UniQuest commencing the scale-up research project.

Laboratory testing and experiments have shown so far that the Graphene Aluminium-Ion Battery energy storage technology has potential high energy densities and higher power densities compared to current leading marketplace Lithium-Ion Battery technology – which means it will give longer battery life (up to 3 times) and charge much faster (circa 60 times faster charging).

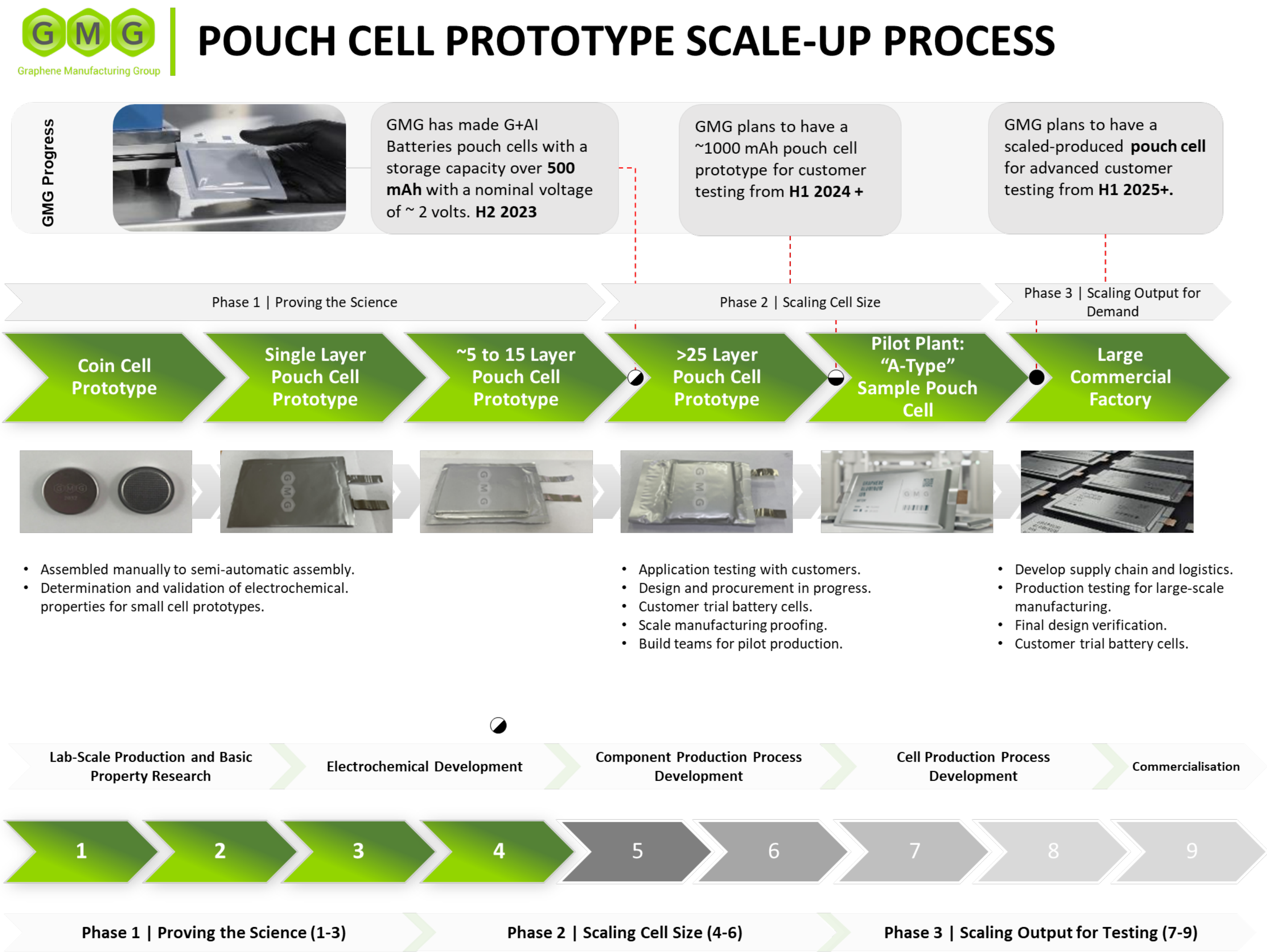
Since initial development of coin cell prototypes, GMG has aligned its development focus, adopting a strategic view to concentrate on the wider markets for pouch cells.

POUCH CELL DEVELOPMENT

GMG's Battery Development Centre ("BDC") for its G+AI Batteries has been operational since Q2FY22 and was further upgraded during Q3FY22 enabling the research and development of battery prototypes in a spacious, fully integrated work environment. The BDC also incorporates the equipment required to assemble and test battery prototypes. The Company has successfully increased its organisational capability by attracting new staff experienced in pouch cell development, thereby enabling the acceleration of its battery development, producing the first single layer working pouch cell prototype during Q2FY23.

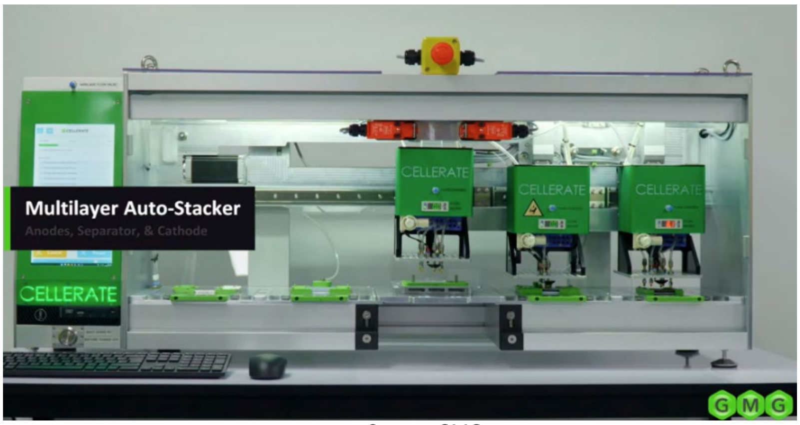
During Q3FY23, GMG received regulatory and local council approvals for the commercial scale manufacturing of batteries at its existing Richlands site in Brisbane Australia. To date GMG has been adhering to a research and development regulatory approval to make battery cell prototypes. In addition, this site already has council approvals that allow GMG to manufacture its graphene. These commercial scale regulatory approvals are an important step in GMG's consideration, at an appropriate future time, to build and operate a battery manufacturing plant at the GMG Headquarters at Richlands.

GMG applies the battery technology readiness level ("BTRL") framework to the Graphene Aluminium-Ion technology and has progressed to Level 4 as assessed by our technical advisory committee (see figure below). It is noted that developing the electrochemical attributes for pouch cells to attain Level 4 is an important milestone in this process. Subsequent development through to commercialisation will follow a structured and well-established program.



Source: "The Battery Component Readiness Level (BC-RL) Framework: A technology-specific development framework", Matthew Greenwood et al

In Q1FY24, GMG announced that it has now made initial G+AI Battery prototype pouch cells, which have a storage capacity of over 500mAh, with a nominal voltage of ~ 2 volts. This is a significant development as it shows the Company has matured the battery electro-chemistry and assembly techniques of producing pouch cells with over 10 layers of graphene coated cathode and aluminium foil anode.



Source: GMG

The next step for the Company is to optimise the assembly techniques of the pouch cell prototypes. This is to achieve repeatable storage capacity of over 500 mAh cells to conduct a variety of standard testing conditions for comparative purposes. The Company then intends to pursue producing cells with over 20 double-layers to attain a storage capacity of 1000 mAh by using an automatic coating machine, cathode laser cutting equipment, and a semi-automatic stacker, to achieve reproduceable cells for validation trials. The aforementioned reproduceable cells target match an objective in the Rio Tinto Joint Development Agreement, being the achievement of a repeatable capacity of 1000mAh cells by first half of calendar 2024, followed by being able to produce this pouch cell at scale by FY25.

RIO TINTO JOINT DEVELOPMENT AGREEMENT

In Q4FY23, GMG and Rio Tinto signed a binding Joint Development Agreement ("JDA") which aims to co-develop GMG's Graphene Aluminium-Ion battery pouch cell into an initial battery pack/module for a proof-of-concept trial. Rio Tinto will contribute technical and operational performance criteria and up to AU$6 million, in exchange for preferential access rights.

Success could see performance enhancements for Rio Tinto, including faster charging and longer-life batteries for heavy mobile equipment and grid energy storage, as well as supporting Rio Tinto's decarbonisation ambitions. GMG will retain ownership of the intellectual property of the developed technology with Rio Tinto having procurement rights for operational use.

COMMERCIALISATION AND MARKET

The Company is building its commercial market roadmap to prioritise a wide range of potential applications for a completed GMG Graphene Aluminium Ion Battery. These capture its unique ultra-high power-density and nominal energy density characteristics.

A range of global companies have confidentially expressed their interest in working with GMG including in the following sectors:

- Diesel engine replacement (high load and power requirements)
- Energy storage (in front of, or behind the meter, safety)
- Personal electronics (fast charging and long life)
- Aviation (including vertical take-off and landing)
- Electric Vehicles
- Rail

4: Develop Supply Chain, Partners & Project Execution Capability

GMG continues to focus on developing and strengthening its product value chain partnerships. The Company's ability to form long-lasting strategic partnerships is a key success factor, supporting its other production and product commercialisation Business Objectives.

GMG believes this approach will de-risk, optimise, position and accelerate GMG's energy savings and G-AI Battery technology success.

Ongoing engagement between our current partners continued throughout the quarter. Additionally, non-disclosure agreements have been signed with several international, high profile potential customers across a wide range of industry segments to explore opportunities to collaborate, understand their application requirements and priorities for the subsequent development and commercial production of GMG's battery prototypes.

FINANCIAL HIGHLIGHTS

Income Statement

$'000 unless otherwise stated	3 month period ended September 30 2023	2022	Variation $'000	%
Revenue from operations	104	86	*18*	*21%*
Other income	767	143	*624*	*436%*
Employee benefit expenses	(1,763)	(1,567)	*(196)*	*13%*
Professional and consulting fees	(1,050)	(433)	*(617)*	*142%*
Depreciation and amortisation expense	(377)	(218)	*(159)*	*73%*
Travel expenses	(140)	(78)	*(62)*	*79%*
Raw material and production inputs	(41)	(25)	*(16)*	*64%*
Gain / (loss) on change in fair value of warrants	2,181	(693)	*2,874*	*(415%)*
Occupancy expenses	(95)	(84)	*(11)*	*13%*
Factory expenses	(97)	(99)	*2*	*(2%)*
Share based payments expense	(193)	(279)	*86*	*(31%)*
Other expenses	(317)	(283)	*(34)*	*12%*
Finance expenses	(32)	(28)	*(4)*	*14%*
Loss before income tax	**(1,053)**	**(3,558)**	***2,505***	***(70%)***
Income tax expense	-	-	-	-
Loss for the period	**(1,053)**	**(3,558)**	***2,505***	***(70%)***
Basic and diluted loss per share (cents)	(1.27)	(4.51)	*3.24*	*(72%)*
Non-IFRS financial measures [(1)]				
EBITDA	(2,825)	(2,619)	*(206)*	*8%*
Adjusted loss before income tax	(3,234)	(2,866)	*(368)*	*13%*
Adjusted basic and diluted loss per share (cents)	(3.89)	(3.63)	*(0.25)*	*7%*

Balance Sheet

$'000	As at 30 September, 2023	As at 30 June, 2023
Cash and cash equivalents	4,578	4,648
Trade receivables, other receivables and contract assets	1,903	1,875
Research and development grants receivable	2,580	2,580
Inventories	492	361
Other current assets	432	392
Property, plant and equipment	5,507	4,385
Intangible assets	1,613	1,716
Total assets	**17,105**	**15,957**
Trade payables, other payables and contract liabilities	2,953	2,947
Lease liabilities	410	273
Financial liabilities	993	2,571
Employee benefit liabilities	225	219
Provisions	19	19
Long term liabilities	1,360	1,233
Total liabilities	**5,960**	**7,262**
Total equity	**11,145**	**8,695**

Summary of Cash Flows

$'000	For the year ended September 30 2023	2022	Variation $'000	%
Net cash used in operating activities	(2,283)	(2,677)	*394*	*15%*
Net cash used in investing activities	(1,077)	(1,322)	*245*	*19%*
Net cash from financing activities	3,275	149	*3,126*	*2098%*
Net increase / (decrease) in cash and cash equivalents	**(85)**	**(3,850)**	*3,765*	*98%*

Selected Quarterly Financial Information

The following table contains selected reviewed quarterly financial information for the last eight quarters through to September 30, 2023:

IFRS

$'000 unless otherwise stated		**Revenue**	**Other income**	**Profit / (loss)**	**Basic and diluted profit / (loss) per share (cents)** (1)	**Notes (IFRS)**
Q1-2024	September 30, 2023	104	767	(1,053)	(1.27)	1
Q4-2023	June 30, 2023	56	3,057	(1,349)	(1.65)	2
Q3-2023	March 31, 2023	24	26	(2,634)	(3.22)	3
Q2-2023	December 31, 2022	4	-	(1,781)	(2.22)	4
Q1-2023	September 30, 2022	86	142	(3,559)	(4.51)	5
Q4-2022	June 30, 2022	17	1,413	1,764	2.25	6
Q3-2022	March 31, 2022	9	6	1,877	2.42	7
Q2-2022	December 31, 2021	15	39	(16,252)	(21.22)	8

NON-IFRS

$'000 unless otherwise stated		**Profit / (loss)**	**Less: Adjustment items** (1)	**Adjusted Profit / (loss)**	**Adjusted basic and diluted profit / (loss) per share (cents)**
Q1-2024	September 30, 2023	(1,053)	(2,181)	(3,234)	(3.89)
Q4-2023	June 30, 2023	(1,349)	(107)	(1,456)	(1.78)
Q3-2023	March 31, 2023	(2,634)	(1,493)	(4,127)	(5.04)
Q2-2023	December 31, 2022	(1,781)	(2,267)	(4,048)	(5.04)
Q1-2023	September 30, 2022	(3,559)	693	(2,866)	(3.63)
Q4-2022	June 30, 2022	1,764	(3,452)	(1,688)	(2.15)
Q3-2022	March 31, 2022	1,877	(3,777)	(1,900)	(2.45)
Q2-2022	December 31, 2021	(16,252)	14,190	(2,062)	(2.69)

(1) Refer to Non-IFRS financial measures for further information. Adjustment items relate to the change in fair value of warrants.

Notes (IFRS):

1. The loss of $1,053K in Q1FY24 was primarily $3,696K incurred in operating expenses due to increased consulting and staffing costs leading up to the commissioning of the THERMAL-XR Blending plant and graphene plant expansion projects, offset by growing operational revenue, $750k of income recognised from joint development agreements and $2,181K gain in the Fair value of warrants outstanding.
2. The loss of $1,349K in Q4FY23 was driven by $4,229K of operating expenses, primarily due to continued expansion of staff resources and scale up of business operations, offset by $2,579K for the refundable FY23 R&D tax offset, recognition of $375K of joint development income from a collaboration agreement, $42K of research grants, as well as $56K of TXR sales.
3. The loss of $2,634K in Q3FY23 was primarily $3,827K of operating expenses, primarily due to continued expansion of staff resources and increased costs of R&D for product development, offset by a gain from the reduction of in the fair

value of financial liabilities of $1,493K arising from changes in GMG's share price since the prior reporting date at December 31, 2022.

4. The loss of $1,781K in Q2FY23 was primarily $3,682K of operating expenses, that were higher due to increases in staff resources, offset by a gain from the reduction of in the fair value of financial liabilities of $2,267K arising from changes in GMG's share price since the prior reporting date at September 30, 2022.
5. Revenue during the quarter included $85K for TXR sales and installation, in addition to $143K of additional refundable R&D tax offset, recoverable from further assets qualifying for immediate tax write-off. The higher loss in Q1FY23 is driven by increased staff employed, premises occupied and plant and equipment compared to Q1FY22. This accelerated growth is reflected in the higher employee, overhead and depreciation expenses, in addition to a $693K increase in the fair value of financial liabilities due to the higher share price since FY22.
6. The profit in Q4FY22 was driven by higher revenue, mainly comprised of the refundable R&D tax offset of $1,412K for FY22, as well as the gain recognised from the reduction in the fair value of financial liabilities. The reduction in fair value was attributable to GMG's lower share price at reporting date compared to the prior quarter end on March 31, 2022. Higher operating expenses were mainly driven by the increase in staff resources in line with the strategic growth of the business.
7. The profit in Q3FY22 was driven by a reduction in the fair value of financial liabilities due mainly to changes in GMG's share price compared to the prior reporting date at December 31, 2021. Lower revenues are considered a normal fluctuation given GMG's various products being at an early stage of commercialisation.
8. The increase in Q3FY22 losses was mainly due to fair value adjustments required to reflect the higher value of financial liabilities (warrants), due to share price increases during the quarter.

OPERATIONS

Non-IFRS financial measures

This MD&A refers to measures of EBITDA and Adjusted Profit and Loss before income tax for the year to date and each quarterly period and adjusted basic and diluted loss per share that are measures with no standardised meaning under IFRS. They are non-IFRS measures and may not be comparable to similar measures presented by other companies. Their measurement and presentation is consistently prepared and is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. Management considers these measures appropriate as they reflect the underlying operational performance of the business.

Adjusted loss for the period and adjusted loss per share

Adjusted loss for the period and adjusted loss per share are used by management and investors to measure the underlying operating performance of the Company. Adjusted loss for the period, excludes specific items that are significant but not reflective of the underlying operating performance of the Company, such as the impact of changes in the fair value of warrants. Adjusted loss per share amounts are calculated using the weighted average number of shares outstanding on a basic and diluted basis as determined by IFRS.

The following table provides the calculation of the adjusted loss for the period and adjusted basic and diluted loss per share, as adjusted and calculated by the Company:

	3 month period ended September 30	
$'000 unless otherwise stated	**2023**	**2022**
Loss for the period	(1,053)	(3,559)
Less:		
Change in fair value of warrants	(2,181)	693
Total adjustment items	(2,181)	693
Adjusted loss for the year	**(3,234)**	**(2,866)**
Loss per share (1)		
Basic and diluted (cents) (2)	(1.27)	(4.51)
Adjusted basic and diluted (cents) (3)	(3.89)	(3.63)
Weighted average number of ordinary shares - basic and diluted	83,220,787	78,915,842

(1) Due to the loss recognised for the years, all outstanding stock options, warrants, broker warrants, restricted share units and performance share units were excluded from the calculation of diluted loss per share due to their anti-dilutive effect.
(2) Calculated using loss for the period over the weighted average number of ordinary shares as per IFRS.
(3) Calculated using adjusted loss for the period over the weighted average number of ordinary shares (non-IFRS measure).

Revenue and other income

	3 month period ended September 30		Variation	
$'000	**2023**	**2022**	**$'000**	**%**
Revenue from operations	104	86	*18*	*21%*
Other income	767	142	*625*	*440%*

Revenue from operations were higher at $104K in Q1FY24 compared to $86K in Q1FY23, primarily compromising THERMAL-XR® products and services sold to domestic and international HVAC-R service providers.

In April 2023, the Company received a sales order for over $130,000 (including GST) for THERMAL-XR® sales and service for a large Australian eco-friendly resort for the coating of nearly 200 air conditioners. Revenue is being progressively recognised with the project scheduled to be completed in Q2FY24, with 80% completed as at 30 September 2023.

Foreign regulatory approvals are being sought to further bolster our international THERMAL-XR® revenue streams.

Other income

Other income for the quarter was mainly comprised of $750K of joint development income related to the progressive recognition of the Rio Tinto JDA payments (Q1FY23 $nil) and $15K of gains on foreign exchange rates movements due to the weakening of the Australian dollar increasing the value of our Canadian cash holdings. No grants, government subsidies or incentives were received in Q1FY24, compared to grants & tax incentive income recorded of $142K in Q1FY23.

Operating costs

The growth of the Company together with global economic market conditions and inflation have resulted in an increase in overall operating expenses. Management continues to prudently manage the pace of growth as well as monitor inflationary pressures and control operating expenses where feasible.

Shown in the table that follows, are total operating expenses, which exclude finance costs, depreciation and amortization.

	3 month period ended September 30		Variation	
$'000	**2023**	**2022**	**$'000**	**%**
Employee expenses	1,763	1,567	*196*	*13%*
Share based payments expense	193	279	*(86)*	*(31%)*
Plant expenses	138	124	*14*	*11%*
Professional and consulting fees	1,050	433	*617*	*142%*
Occupancy expenses	95	84	*11*	*13%*
Overheads expenses	457	361	*96*	*27%*
Total operating expenses	**3,696**	**2,848**	***848***	***30%***

Following is a description of, and commentary on the high-level expense categories of GMG:

Employee expenses

Employee expenses consist of salaries and employee related overheads (primarily superannuation and payroll tax).

Overall employee expenses increased from $1,567 in Q1FY23 to $1,763k in Q1FY24, primarily due to the expansion of staff resources in the move toward commercialisation. An increase in staff numbers has resulted in a corresponding increase in other staff related expenses and on-costs.

Share based payments expenses

Share based payments includes share payments for all employees, directors, certain contractors and commercial transactions, such as shares issued for capital raising costs and shares issued for the purchase of IP, Trademark & Sole distribution rights for THERMAL-XR®.

Overall share-based payments expenses declined from $279K in Q1FY23 to $193K in Q1FY24 due to a delay in the company's annual share incentive plan grant and turnover of staff due to internal restructuring.

Plant expenses

This includes raw materials and production inputs, general warehouse expenses, Health, safety and environment ("**HSE**"), machinery parts and consumables, repairs and maintenance ("**R&M**") and other costs.

Plant expenses, excluding raw materials and production inputs, were $97K in Q1FY24, with the main difference to the $99K spend in Q1FY23 being a decline in machinery consumables and HSE costs incurred as efficiencies are being realised with the growth of the business. Costs for raw materials and production inputs increased from $25K in Q1FY23 to $41K in Q1FY24 inline with expected increases in production to meet anticipated sales volumes.

Professional and consulting fees

Professional and consulting costs for the three months ended 30 September, 2023 increased $617K compared to the same period 2022 primarily due to the $614K increase in costs associated with consultants and contractors. These costs were primarily incurred for external expert advice in relation to the construction, implementation and commissioning of the THERMAL-XR® Blending plant and graphene plant expansion project (expected to be completed Q2FY24).

These projects target a step increase in the Company's current production volume capacity to meet anticipated growth in demand for our energy savings products and further development and testing of our G+AI battery.

Occupancy

Occupancy expenses relate primarily to lease costs for the production facilities located at Sumner, Queensland held under short-term leases. These are short-term leases to which the IFRS 16 *Leases* exemption has been applied, and as such, lease costs are recognised on a straight-line basis as an expense.

The Company's Richlands Headquarters and warehouse leases meets the recognition criteria as a right-of-use ("**ROU**") asset under IFRS 16. The ROU assets and corresponding lease liabilities are recognised on the balance sheet with lease payments split between lease liability principal repayments and interest expense and therefore do not appear under occupancy expenses. Depreciation of the leased asset is recorded on a straight-line basis.

Overall occupancy expenses increased from $84K to $95K from Q1FY23 to Q1FY24, primarily due to a $13K increase in rental outgoings and electricity costs associated with the Company's Richlands headquarters lease, including the new offices and Q&A testing laboratories lease coupled with production beginning at this facility which resulted in a corresponding increase in outgoings and electricity costs.

This newly leased premises allows the Company to conduct extensive Q&A testing on site to ensure quality control of our energy savings products.

Overheads

Insurance, IT, travel, sponsorships, other R&D related expenses, and various other expenses have been classified as 'Overheads'. While expenses such as IT related expenses, travel and marketing are expected to increase as the business grows, others such as licensing and registration, website, other R&D, filing fees and warrant transaction costs will be uncorrelated to the number of employees, product offerings or number of customers. The following are various material operational sub-items that constitute 'Overheads', excluding the expensing of transaction costs.

- International and domestic travel expenses collectively increased from $78K in Q1FY23 to $139K in Q1FY24 due to travel costs associated with investor engagements, Research & Developments Projects, sales representatives, and revenue generating THERMAL-XR® application services;
- Insurance increased from $54K in Q1FY23 to $90K in Q1FY24, mainly due to increases in policy coverage and limits, ongoing business growth, and expansion of business premises since Q1FY23;
- Testing and quality control expenses increased from $40K in Q1FY23 to $45K in Q1FY24 primarily due to increased costs associated with independent testing performed for Energy Saving products to verify our internal results for market communication; and

Fair value of warrants

The $2,181K gain in Q1FY24 resulting from the fair valuation adjustment recognised on the warrant liability was driven by a combination of share price sensitivities and higher interest rates compared to the previous reporting date among other factors.

The share purchase warrants impacted by this adjustment are certain warrants that are recognised by the Company as a derivative liability due to their Canadian dollar denominated, fixed exercise price being different to the Company's functional currency which is Australian dollars. IFRS requires such instruments to be treated as a derivative liability and not equity, until the warrants are exercised or expire. The fair value of the warrants is determined using the Black Scholes option pricing model at the period-end date, or the market trading price in respect of GMG's traded warrants.

There are no cash obligations for the Company relating to this liability. Changes in fair value will continue to be reported in subsequent periods until the warrants are exercised or expire at which time the derivative liability ceases.

A number of factors influence the warrant liability valuation including share price, interest rates and a volatility assumption. For example, share price increases may result in an expense recorded in the profit and loss in conjunction with any increase in the fair value of the warrant liability, while share price decreases, warrant exercises or a reduced time to expiry with the passage of time would result in a gain and decrease in the fair value of the warrant liability.

For warrants exercised, the cumulative difference between the fair value of the warrant liability recognised at grant date, and the fair value based on the GMG share price at exercise date, which is applied to profit or loss, is then extinguished as a liability, with the offsetting entry applied to equity.

FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

Cash and cash equivalents amounted to $4,578K at September 30, 2023, a decrease of $70K from June 30, 2023. Operating cash outflows together with $1,076K spend on purchase and commissioning of plant and equipment as part of the business' move toward commercialisation were offset primarily by gross proceeds of C$3.45 million raised from the marketed offering in August 2023, $1.65 million (GST inclusive) of income received from the Joint Development Agreement with a development partner, as well as revenue generated from our growing THERMAL-XR® sales and coating services.

Trade receivables, other receivables and contract assets of $1,903K as at September 30, 2023, is primarily composed of $1.65 million for the second instalment payment in respect of the Rio Tinto Joint Development Agreement, $90K of GST receivables at the end of the quarter, $121K of trade receivables from sales of THERMAL-XR® and G® LUBRICANT and $13K in contract assets recognised for THERMAL-XR® application jobs in progress.

Research and development grants received comprises the $2,580K of refundable R&D offset for the year ending 30 June 2023. This amount was received in full in October 2023, further bolstering the companies cash position.

Inventories increased by $131K in Q1FY24 to $492K as at September 30, 2023, mainly due to an increase in production of THERMAL-XR® and a corresponding increase in stock from with the commissioning of the THERMAL-XR® blending plant greatly increasing our production capabilities as we move toward greater commercialization. This is also coupled with an increase in graphene production and inventory to support our THERMAL-XR® production and battery development.

Other current assets of $432K is comprised largely of $423K of prepayments, primarily $268K for insurance, $61K for leased premises costs including related outgoings and annual payments for ongoing equipment servicing and marketing costs.

Trade and other payables relate to expenses in the ordinary course of business and deferred revenue to be recognised over a period of time. This including accounts payable, wages payable, PAYG withholding tax payable, superannuation payable, and other accrued expenses. The balance of $2,859K at September 30, 2023 remains slightly higher than June 30, 2023 by $38K. This is primarily due to the increase in deferred income of $750K to $1,875K recorded in respect of the Rio Tinto Joint Development agreement with potential income of $6 million, which is being recognised as income on a straight-line basis over the two year agreement term post receipt of progressive funding payments. A decline in accrued expenditure of $186k for the quarter to $419K, comprised primarily of accrued costs for research and development and consultants for further expansion of our production facilities, and a decline in other share payables of $500k due to the issue of the second tranche of 126K shares to Ozkem upon our first successful blend THERMAL-XR® in line with our binding agreement signed August 2022.

The financial liability relates to certain share purchase warrants issued with an exercise price denominated in Canadian dollars (as described in detail in a previous section).

Liquidity and capital resources

GMG has generated limited revenue to date. Cash expenses mainly relate to R&D activities and other operational expenses to commercialise production. Capital raised has been mainly used to fund the development of the Company's proprietary graphene powder production technology, graphene enhanced products and solutions, and plant and equipment and expenses for developing, testing, manufacturing and marketing these products. Development of G+AI Battery technology, production and commercialisation planning has been an increasing focus area for GMG's employees and intended use of current cash resources.

Timing for commercialisation of G+AI Batteries will depend on the further successful development of a commercial G+AI pouch prototype including the process technology required to produce the necessary commercial scale grade graphene powder. GMG continues to work on various scientific and engineering methods to optimise capacity, energy and power density, other standard battery performance criteria and overall design of pouch cell products. The company aims to progress from the current pouch cell viability prototype to early pouch cell commercial prototype followed by subsequent stages of cell development(s).

Revenue in the near term is targeted to be generated from THERMAL-XR®. Growth in customer demand for this and other product offerings, and timing for commercialisation of G+AI Batteries, will influence the future funding requirements for GMG. A large part of the strategy involves identifying and recruiting distribution channel partners and providing them the marketing, product and technical support necessary to grow revenues in their regions. Since the recent Australian Government approval for GMG to produce and sell THERMAL-XR® at scale, the Company has driven sales activities and is in the process of bolstering related production capacity.

In Q1FY24, the Company incurred a loss of $1,052K after income tax and net cash outflows from operating activities of $2,284K. As at September 30, 2023, the Company had net current assets of $5,385K (June 30, 2023: $3,825K).

The ability of the Company to continue as a going concern is principally dependent upon current cash funding held and the ability to raise additional capital, attract further partners or secure other forms of financing, as and when necessary to meet the levels of expenditure required for the Company. This is required to continue its ongoing development and commercialisation of energy saving and energy storage solutions and to meet the Company's working capital requirements.

These conditions continue to give rise to material uncertainty which may cast significant doubt over the Company's ability to continue as a going concern.

Whilst acknowledging these uncertainties, the Directors have concluded that the going concern basis of preparation of the MD&A is appropriate considering the following circumstances:

- As at September 30, 2023, the Company had cash on hand of $4,578K, which is anticipated to be sufficient to meet the ongoing corporate costs and expected project expenditure in the short term;

- As at the date of this report there are 4,246,233 options and 5,496,951 warrants on issue with exercise prices ranging from AUD$0.36 to AUD$3.73[1]. If exercised these could raise up to $19,766,321 in additional capital. Of these, 4,146,233 options and no warrants are considered "in the money", amounting to potential currently 'in the money' proceeds of $2,071,226.
- Subject to the terms and conditions of the Rio Tinto binding Joint Development Agreement ("JDA"), Rio Tinto will contribute technical and operational performance criteria and up to $6 million, in exchange for preferential access rights (the first two payments totalling $3.30million (GST Inclusive) have been received as at the date of this report, with the second $1.65M being received 6 October 2023);
- The Company believes that its research and development activities will continue to satisfy the requirements of the Australian research and development tax incentive regime as shown by the receipt of the $2.58M of research and development refund for the financial year ending 30 June 2023 on 22 October 2023 (shown as a receivable 30 September 2023).
- The Company continues to closely monitor expenditure, and the Board is confident that it will be able to manage its cash resources appropriately;
- The Company continues to engage with potential energy saving products customers with the aim to increase sales; and
- To the extent required, the Company has capacity under the TSXV Listing Rules to raise further funds through the issue or placement of securities and currently has a Base Shelf Prospectus readily available on SEDAR for this purpose. As an example, in August 2023 C$3.45m (gross) was raised via an overnight marketed offering.

Should the Company be unable to continue as a going concern, it may be required to realise its assets and extinguish its liabilities other than in the ordinary course of business, and at amounts that differ from those stated in the MD&A. This MD&A does not include any adjustments related to the recoverability and classification of recorded asset amounts or classification of liabilities and appropriate disclosures that may be necessary should the Company be unable to continue as a going concern.

Off-balance sheet arrangements

As of the date of this MD&A, the Company did not have any off-balance sheet arrangements, except for the non-cancellable operating leases for the Sumner warehouse and portable office units. The Company has elected not to recognise right-of-use assets and lease liabilities for leases of low-value assets, as well as short-term leases, including for leased premises and portable office units, and recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Company recognises a contingent liability as at September 30, 2023, of approximately C$102,195 relating to the repatriation of cash acquired in the Cuspis transaction at the time of listing, prior to the dissolution of Cuspis Capital Ltd on August 12, 2021. The contingent liability relates to a potential withholding tax obligation in Canada at the rate of 5% of the amount of cash distributed. The transaction is being treated as a return of capital for Australian tax purposes. At the date of this report, GMG is consulting with the Canadian tax authorities in relation to this amount.

[1] Assuming a C$/A$ exchange rate of 1.113.

Outstanding shares

As at the date of this report, the Company has:

- 84,486,065 ordinary shares issued and outstanding;
- 4,246,233 options outstanding with expiry dates ranging between March 12, 2024 and March 10, 2028, with exercise prices between A$0.36 and A$2.11. If all the options were exercised, 4,246,233 shares would be issued for proceeds of A$2,282,696. Of these options 4,146,233 are in the money and if exercised proceeds would be A$2,071,226[2];
- 5,496,951 warrants outstanding with expiry dates ranging between September 2, 2024 and November 16, 2028, with exercise prices between C$2.05 and C$3.35. If all the warrants were exercised, 5,496,951 shares would be issued for proceeds of A$17,483,626. No Warrants are "in the money"; and
- 739,906 restricted share units outstanding with a nil exercise price and expiry dates ranging between October 20, 2026 and July 13, 2028.

SUSTAINABILITY AND RISKS

Sustainability

"No Harm to People or Environment" remains at the core of GMG's values. GMG also has the opportunity to "improve" through application of our energy saving products. The board appointed Sustainability & Risk Committee takes a holistic view of sustainability factors with a vision to enrich our environment and society. The United Nations 17 Sustainable Development Goals ("SDGs") were identified as the benchmark for goal alignment and enabled the Sustainability & Risk Committee to identify key priority areas.

GMG is committed to focus on priority SDGs where the Company can best contribute. These are currently identified as:

- # 7 Ensure access to affordable, reliable sustainable and modern energy for all.
- # 13 Take urgent action to combat climate change and its impact.
- # 9 Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

These goals form part of the standing agenda within the Sustainability & Risk Committee and are aligned with goals in GMG's business plan.

Following completion of the new Graphene plant, GMG is committed to providing transparent reporting on the Company's carbon emissions footprint from its operations, verified by an independent party using the National Greenhouse and Energy Reporting Framework and guidance notes on estimating emissions and energy from industrial processes. Once GMG's baseline carbon emissions are verified, GMG is committed to continued focus on Environmentally Sustainable Governance practices to ensure ongoing improvement within its business activities. Through the application and use of GMG's products and services the Company will continue to maintain transparent reporting on its

[1] Assuming a C$/A$ exchange rate of 1.113.

carbon footprint and carbon footprint reductions through the application of energy saving products and services with our customers.

Financial instruments

Financial assets and financial liabilities are recognised in the balance sheet when the Company becomes party to the contractual provisions of the financial instrument. GMG's financial instruments are its cash and cash equivalents, trade and other receivables, trade and other payables. The Company is exposed to a variety of financial risks, which result from its financing, operating and investing activities. The objective of financial risk management is to contain, where appropriate, exposures in these financial risks to limit any negative impact on the Company's financial performance and position.

Credit risk

Credit risk arises when a failure by counterparties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the balance sheet date. The maximum exposure to credit risk at balance date in relation to each class of recognised financial assets is the gross carrying amount of those assets.

As the company expands and increases sales, this will become a larger consideration. Management closely monitors, the activities of its counterparties and potential counterparties.

Liquidity risk

Liquidity risk is the risk that arises when the maturity of assets and the maturity of liabilities do not match. Some financial assets may not be able to be monetised in a timely manner. Based on current cash resources, the companies outstanding warrants and options, and the recently completed capital raising, Management considers liquidity risk to be low for the 2023 calendar year. While the company does not have any credit facilities from banks, GMG ensures it maintains enough cash, to fulfil its near-term liabilities.

Foreign Currency risk

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognized assets and liabilities are denominated in a currency that is not the Company's functional currency. The Company is exposed to foreign exchange risk, however, at present, this risk is relatively low as revenue is limited and most expenses are denominated in Australian dollars. However, in the past, the Company has sourced funding from investors and will increasingly source capital equipment from overseas. Because of the short-term nature of these foreign currency exposures to date and low level of associated risk, the Company has not considered it necessary to enter into any currency hedging transactions. The Company has become exposed to currency risk relating to the financial liability required by IFRS to be recognised in relation to certain warrants with exercise prices denominated in Canadian dollars. As there is no cash obligation associated with this liability, the Company considers the associated currency risk to be low.

Commercial scale up

Delay in, or failure to achieve successful technical, operational and Government approvals enabling commercial scale development and operations are all key risks actively being managed through a range of management initiatives and oversight.

Risk Management

The Company's business is subject to numerous risks and uncertainties, including those described elsewhere in this MD&A, as well as general economic and market risks. These risk factors could materially affect the Company's future operating results and could cause actual events to differ materially from those described in forward-looking information relating to the Company. A detailed description of risks and uncertainties is not incorporated herein. For a detailed description of risks and uncertainties, please refer to the Prospectus available on the Company's SEDAR profile.