


TSX-V:GMG  
OTCQX:GMGMF



Graphene Manufacturing Group

# Transformative **Graphene** Energy Solutions

 [graphenemg.com](http://graphenemg.com)



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distributor agreements, that the Company's products will be granted the necessary regulatory approvals, include that of the EPA; that the Company's operations and ability to develop its products will not be adversely impacted by the ongoing conflict in eastern Europe. Additionally, forward-looking information involve a variety of known and unknown risks, uncertainties and other factors which may cause the actual plans, intentions, activities, results, performance or achievements of GMG to be materially different from any future plans, intentions, activities, results, performance or achievements expressed or implied by such forward-looking statements. Such risks include, without limitation: (a) GMG's operations could be adversely affected by possible future government legislation, policies and controls or by changes in applicable laws and regulations, or by the failure to obtain all necessary regulatory approvals, including that of the EPA; (b) public health crises such as the COVID-19 pandemic may adversely impact GMG's business and the ability of the Company to develop its products; (c) the volatility of global capital markets; (d) political instability; (e) the failure of GMG to attract and retain skilled personnel; (f) unexpected development and production challenges; (g) GMG could face technology or software disruptions; (h) unanticipated costs; (i) risks relating to the extent and duration of the conflict in Eastern Europe and its impact on global markets; (j) that the Company will be unable to develop, market, and sell its products as currently anticipated; (k) that the Company will be unsuccessful in identifying and engaging strategic partners; (l) that the Company will be unable to acquire equipment to streamline its production process, or that the expansion of the production facility will not result in the benefits currently expected; (m) that companies currently working with GMG will not be interested in purchasing the Company's products; and (n) the risk factors set out under the heading "Risk Factors" in the Company's AIF dated November 4, 2025 available for review on the Company's profile at [www.sedarplus.ca](http://www.sedarplus.ca). Such forward-looking information represents management's best judgment based on information currently available. No forward-looking statement can be guaranteed and actual future results may vary materially. Accordingly, readers are advised not to place undue reliance on forward-looking statements or information. Neither GMG nor any of its representatives make any representation or warranty, express or implied, as to the accuracy, sufficiency or completeness of the information in this Presentation. Neither GMG nor any of its representatives shall have any liability whatsoever, under contract, tort, trust or otherwise, to you or any person resulting from the use of the information in this Presentation by you or any of your representatives or for omissions from the information in this Presentation. The forward-looking statements herein are made as of the date of this Presentation only, and the Company does not assume any obligation to update or revise them to reflect new information, estimates or opinions, future events or results or otherwise, except as required by applicable law. Historical statements contained in this Presentation regarding past trends or activities should not be taken as a representation that such trends or activities will continue in the future. In this regard, certain financial information contained herein has been extracted from, or based upon, information available in the public domain and/or provided by the Company. In particular, historical results should not be taken as a representation that such trends will be replicated in the future. No statement in this document is intended to be nor may be construed as a profit forecast. An investment in the Company is speculative and involves substantial risk and is only suitable for investors that understand the potential consequences and are able to bear the risk of losing their entire investment. Investors should consider the risks set out in the AIF, in addition to many others, and consult with their own legal, tax and financial advisors with respect to all such risks before making an investment.

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# GMG HIGH MARGIN, SCALABLE & DISRUPTIVE APPLICATIONS

Graphene Manufacturing Group

## GMG targets two major markets:

- **Energy Efficiency: Graphene** coatings, lubricant additive and lithium-ion battery additive improve efficiency in HVAC-R, engines and lithium-ion batteries. Lowering energy use and reducing emissions for commercial and industrial clients.
- **Energy Storage:** In collaboration with the University of Queensland, GMG is developing graphene aluminium-ion batteries that are expected to surpass lithium-ion batteries on charging speed, cycle life, safety, and sustainability. Aluminium is more abundant and less costly than lithium, and GMG's batteries reduce the risk of thermal runaway.



THERMAL -XR®

Air Conditioner & Heat  
Pump Coatings System

N. America Distribution Partner



GMG® LUBRICANT

Engine Oil Additive

Product Launched – sales starting



SUPA G®

Additive for  
Lithium -Ion Battery

Undergoing customer testing



GRAPHENE  
ALUMINIUM -ION BATTERY

Fast Charging  
Energy Storage

Co-developing with

RioTinto BIC

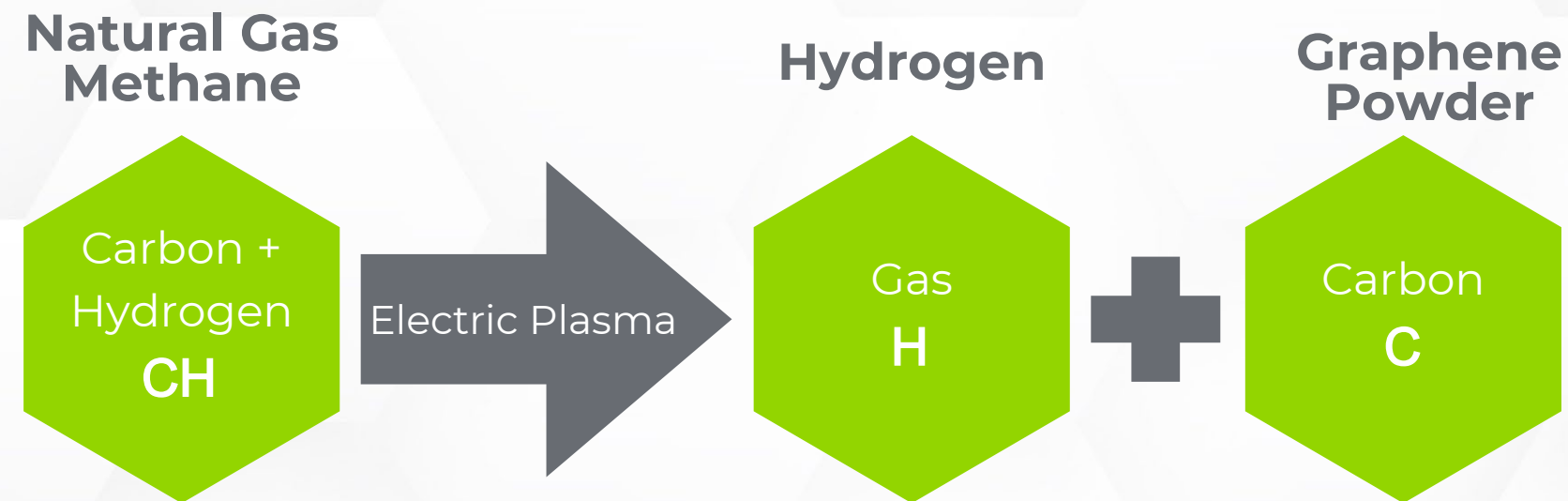


# PROPRIETARY **CLEAN TECHNOLOGY** PLATFORM

## GMG Graphene Production

GMG manufactures graphene in-house using a proprietary process that converts natural gas into high-quality graphene, **bypassing typical graphite mining** dominated and controlled by China.

This graphene then supports GMG's energy-saving and energy storage applications.



**Bypassing:**  
**Graphite Mining & Processing**

**\*GMG is expecting to bring online its Gen 2 Graphene Production Project in Jun'26 with up to 20 times higher production rate per unit – 10 tonne per annum.**

- Instantaneous & Continuous
- Low-Cost Inputs and Setup
- Fast Scalability Unconstrained by Resource
- Controlled Definability
- High-Quality Grade Graphene (University Verified)
- Cogeneration Capabilities
- Low environmental footprint



# LAUNCH: AUSTRALIAN ROLL OUT OF THERMAL-XR® COATING ON BEIJER REF COILS

**BEIJER REF**

Beijer Ref is one of the world's largest global refrigeration and HVAC wholesalers, headquartered in Malmö, Sweden, with operations spanning more than 40 countries and over 500 branches worldwide, 6,000 employees and 200,000 customers.



- Beijer Ref has agreed to offer THERMAL-XR® ENHANCE as an optional coating solution on self branded refrigeration evaporator coils.
- ~ 73 wholesale locations in Australia.
- Rolled out on November 17, 2025



# WORLD FIRST PALLETISED GRAPHENE PRODUCTS AVAILABLE FOR ORDER FOR GLOBAL\* DISTRIBUTION





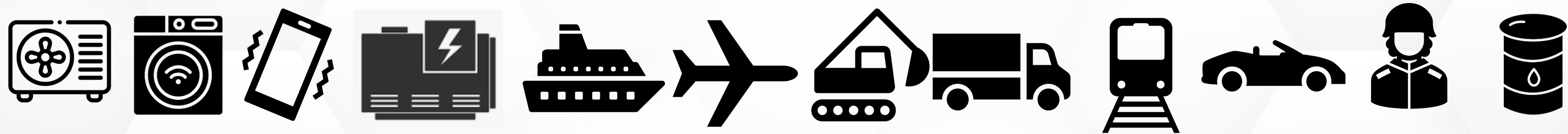
# SIGNIFICANT MARKET OPPORTUNITY & REVENUE GROWTH POTENTIAL





# STRATEGIC PARTNERS AND GLOBAL REACH

GMG has established confidential partnerships and distributor relationships with large manufacturers covering applications in automotive, personal electronics, aviation, energy, and heavy industry.



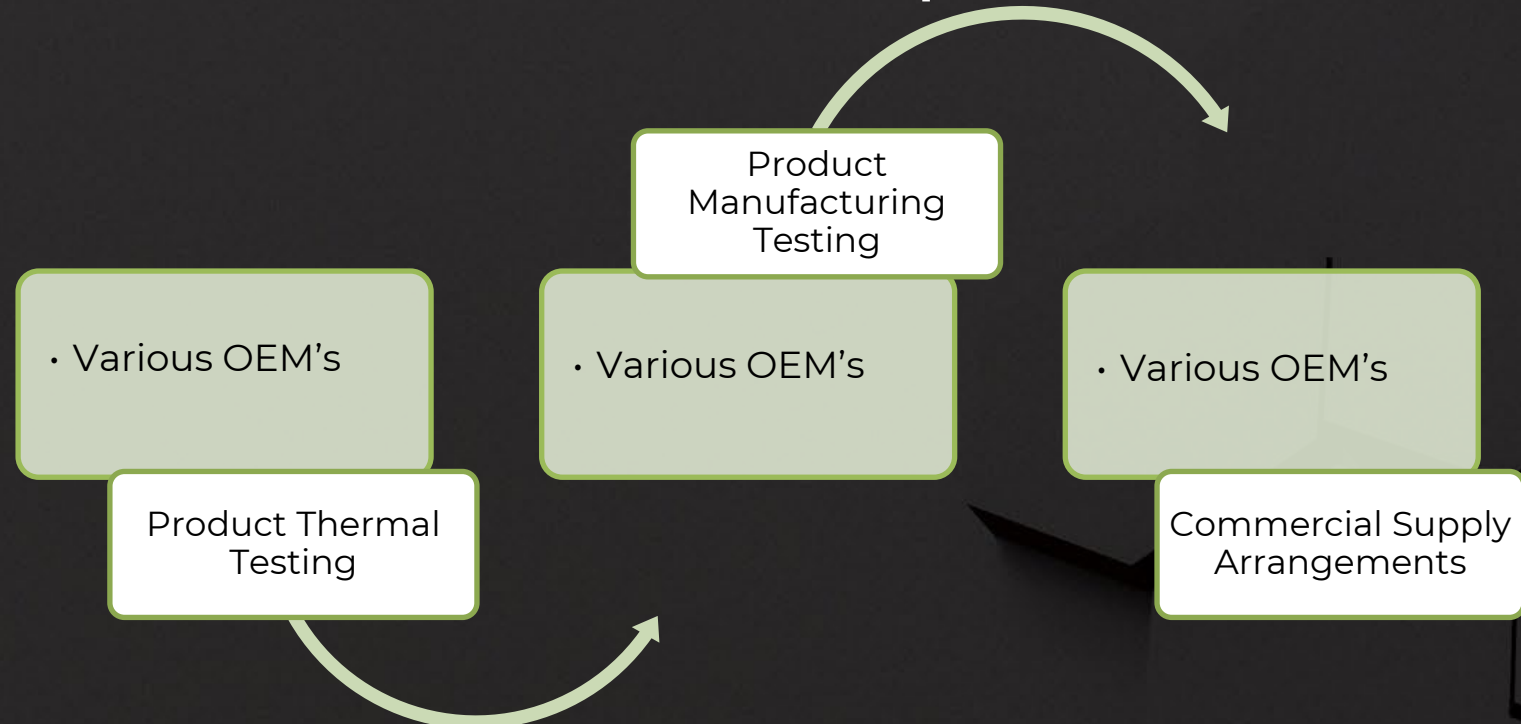
The company received support from tier-one industry participants like Rio Tinto (AU\$6M joint product development agreement), and ongoing collaborations with academic institutions and government grants reinforce technical leadership and commercialization credibility.



# THERMAL-XR® COMMERCIAL PROGRESS

Some of our customers trialing THERMAL-XR® are considered world market leaders in their industry and bring considerable large scale opportunity potential

## THERMAL -XR Customer Adoption Process



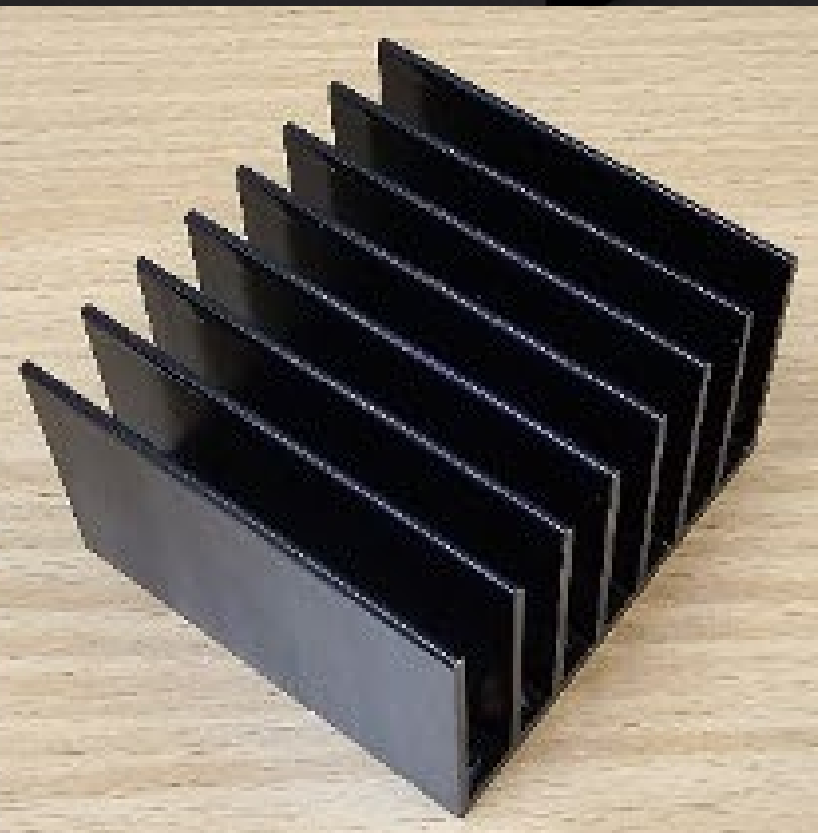
AIR CONDITIONERS

INDUSTRIAL PLANTS

HEAT SINKS FOR ELECTRONICS

DATA CENTRES

REFRIGERATION





# THERMAL-XR® DISTRIBUTION



## Distribution/Logistics

**Nu-Calgon is GMG's exclusive distribution partner for AFTER MARKET HVAC in North America**

- Nu-Calgon is the largest specialty chemical provider to the HVACR market
- 37 person sales team; 4000 distribution points
- Cool Worx is Nu-Calgon's private brand name for THERMAL-XR®
- Nu-Calgon introduced Cool Worx to the HVACR industry at the Chicago AHR Expo in January 2024, generating tremendous interest

**GMG is distributing TXR directly and through distribution partners in other markets globally**

## Regulatory

THERMAL-XR® is approved for sale in Australia, Canada, Mexico, and China; Europe, Chile, Thailand, Singapore and South Korea.

The U.S. EPA requested a full Pre-Manufacture Notice (PMN) resubmission for THERMAL-XR®. This enables a comprehensive examination and the possibility of flexible approval conditions not available under a PMN LVE. The full PMN was submitted in 1H 2025, and was expected to take up to 12 months for the EPA to approve.

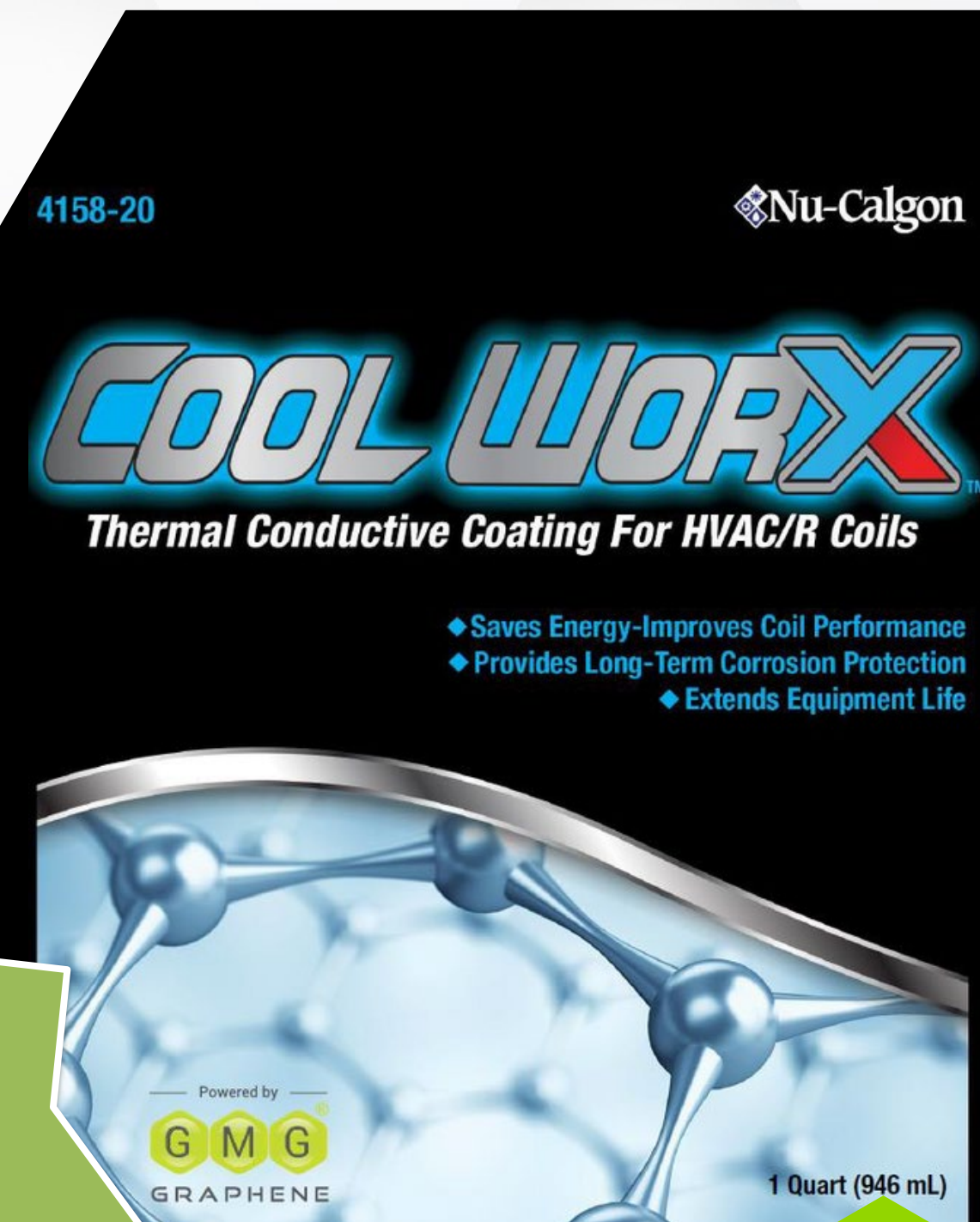
Supplying USA Customers for R&D purposes for now.



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EPA conditions have been received and accepted by GMG. Awaiting final consent notice for exporting.





# G<sup>®</sup> LUBRICANT PERFORMANCE

**Graphene from G<sup>®</sup> LUBRICANT reduces fuel consumption by up to 10% by lowering the friction on the critical boundary lubrication zones of pistons**

~ 30% of fuel burned in an engine is to overcome internal friction.

More than 60% of engine friction is generated in the piston area.

\$1 spent on G-Lubricant equates to ~ \$10 saved in fuel\*



G<sup>®</sup> Lubricant is mixed into engine oil at a 1:100 ratio.

G<sup>®</sup> Lubricant contains ~ 1% GMG Graphene

So the end mixed ratio of GMG Graphene to engine oil is 1:10,000

**No other additive has 10% fuel reduction benefit claim with a dosage rate of 0.01%.**

[www.g-lubricant.com](http://www.g-lubricant.com)

\* Results vary and the figures are sourced from client performance testing, GMG 4 ball wear testing, and third-party laboratory testing on a variety of base oils and fully formulated engine oils with 0.01% GMG Graphene.

Note: the Company notes that the data presented here should be considered preliminary, and that test results are not necessarily indicative of realized performance.



# GRAPHENE ADDITIVE FOR LITHIUM-ION BATTERY

- GMG's SUPA G® is an additive for Lithium-Ion Batteries
- It can be used as a Cathode Additive (1%) and/or after further development work it has potential for an Anode Alternative to Graphite - which is largely export controlled from China
- BIC Indiana is currently testing SUPA G with Lithium-ion Batteries and the results for this work should be available shortly.

**SUPA G®**

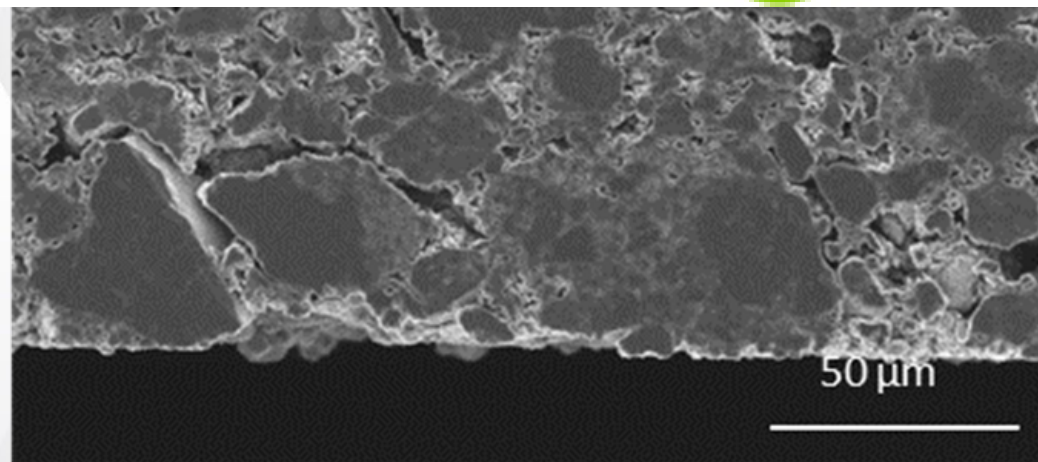
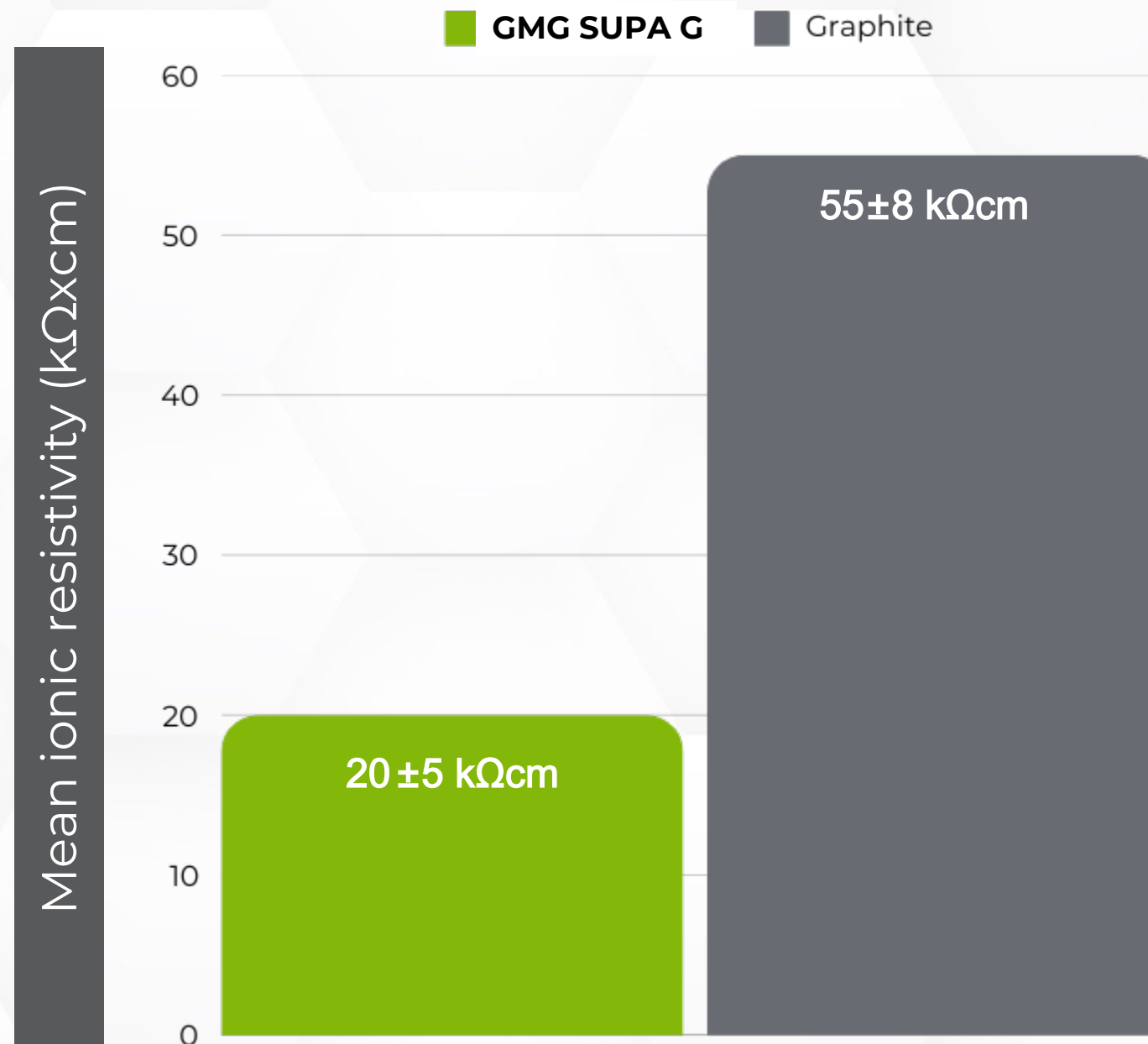


Image: Cross-section prepared using wide-beam Ar+ ion polishing  
EDX pixel assignment filtered with 95% confidence interval  
threshold



World Leading  
University study  
showed SUPA G® has  
very attractive  
properties:

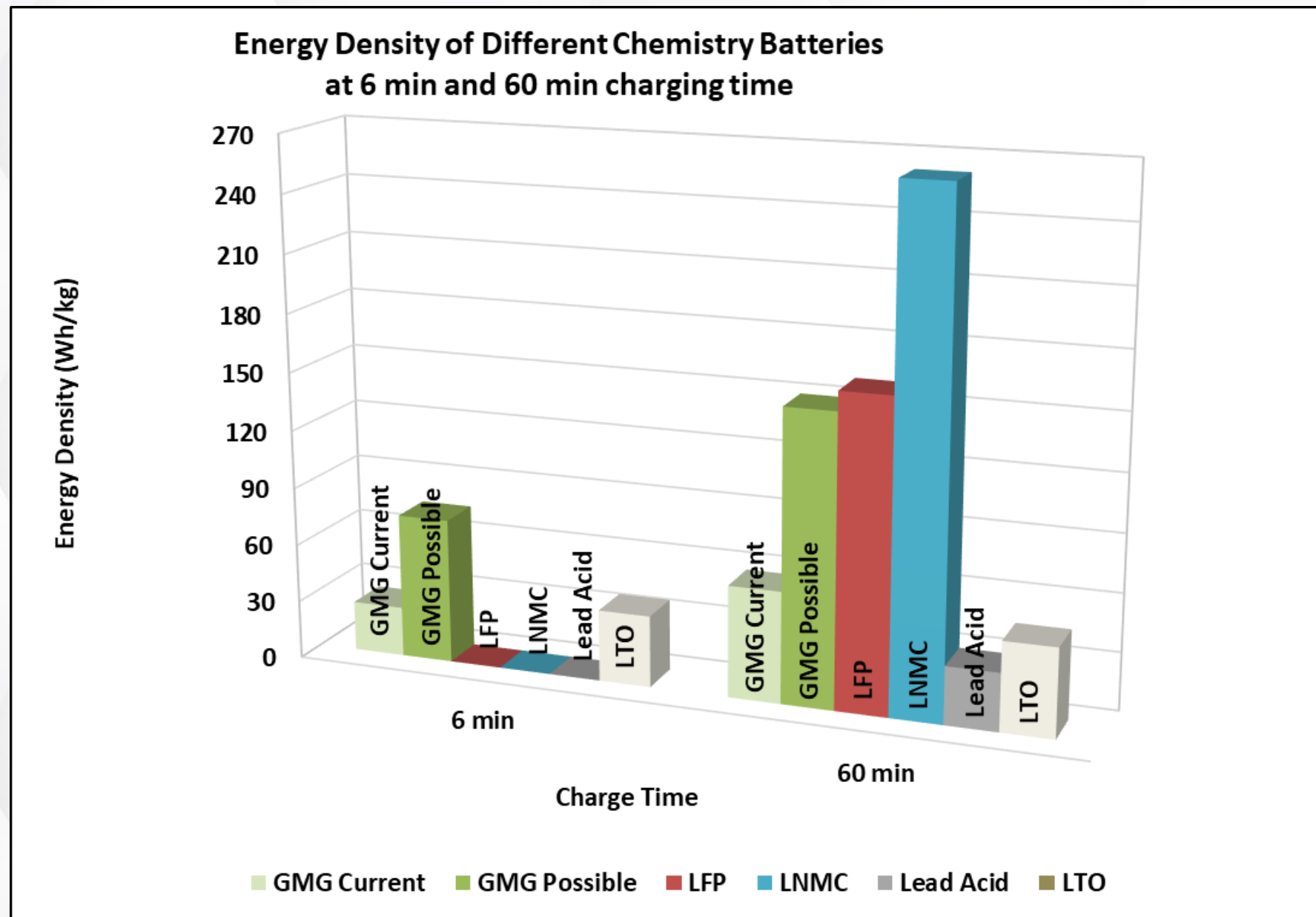
- Apparent ionic resistivity 2.5× lower than compared to typical graphite electrode
- Multimodal active particle distribution (~20 µm large particles + sub-1 µm particles)
- Calendaring does NOT significantly damage the binder layer



# GRAPHENE ALUMINIUM ION BATTERY ADVANTAGES

Battery Development Update: 6 minute fast charging performance

Battery **prioritizes durability and power capability** over energy density



Already **similar performance to Lithium Titanium Oxide (LTO) Batteries**

which can be **priced up to US\$1500 / Whr** for their long-life high performance



## Targeted Battery Use Case:

- Business/Industrial use vehicles
- Safety First – no Lithium chemical fires
- Similar recharging time as diesel refueling (~5 mins)
- Long life cycle > 1000 cycles ++
- Energy Density enough to be economic (>100 Wh/kg)
- Strategic Supply Chain and Simplicity
- High value / Low overall cost (when produced at scale)



# GRAPHENE ALUMINIUM ION BATTERY ADVANTAGES

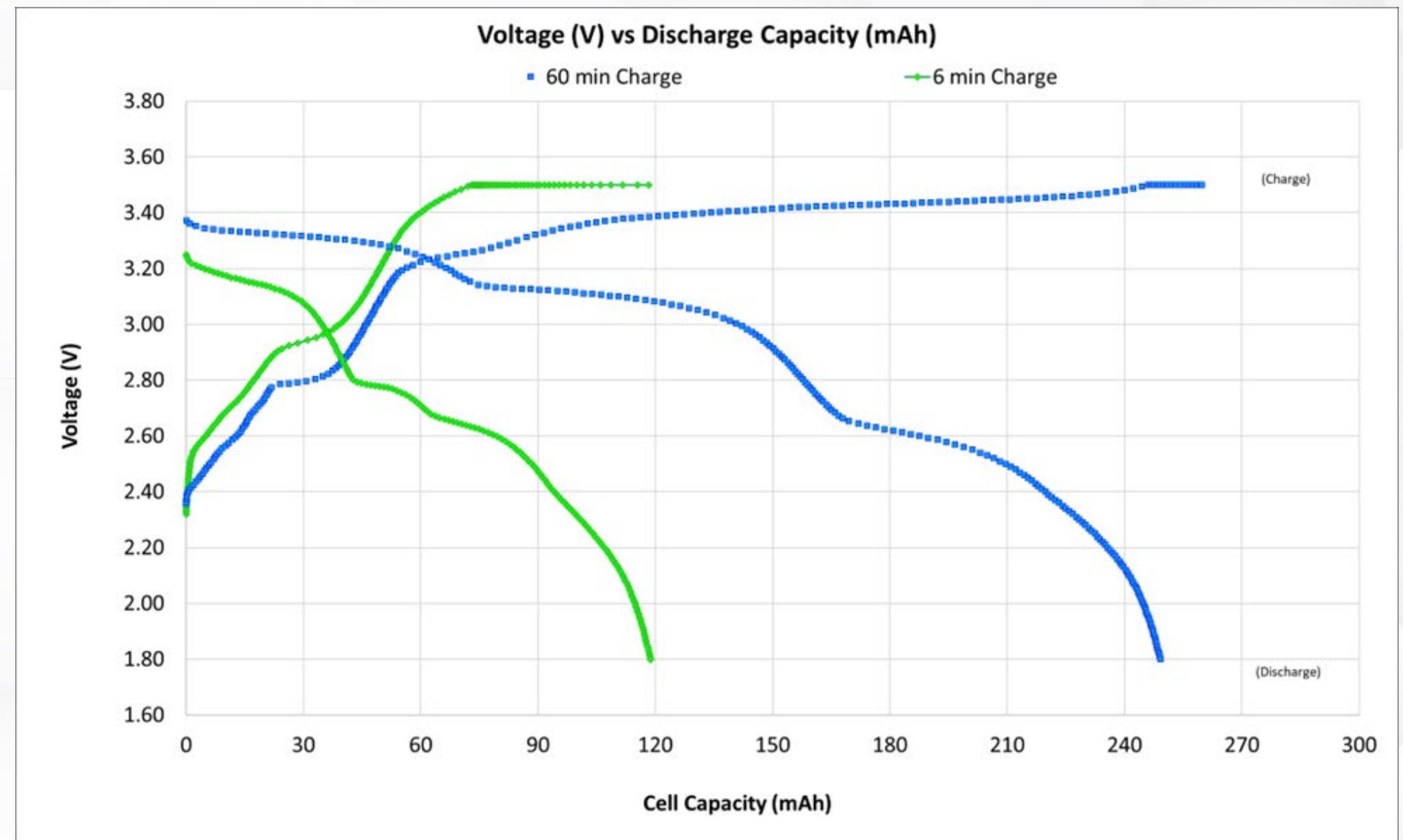
Pouch Cell  
Samples



Expected  
Battery Pack  
Design



Charge and Discharge Curves





# GRAPHENE ALUMINIUM ION BATTERY ADVANTAGES

## Potential Applications



**DIESEL ENGINE REPLACEMENT  
(HIGH LOAD & POWER REQUIREMENTS)**



**ENERGY STORAGE  
(IN FRONT OR BEHIND THE METER)**



**ELECTRIC VEHICLES**



**AVIATION  
(ELECTRIC VERTICAL TAKE OFF & LANDING)**



**RAIL**



**PERSONAL ELECTRONICS  
(FAST CHARGING & LONG LIFE)**



**POWER TOOLS  
(FAST CHARGING & LONG LIFE)**

## Similar to LTO Batteries

**LTO** battery energy density range **from 50 – 80 Wh/kg** (compared **to 58 Wh/kg** for GMG's G+A Battery currently)

Sales of LTO Batteries in **2025 : US\$5.6 billion**

Sales expected to grow at 10% per annum to an estimated **US\$ 12.5 billion by 2030.**

The major manufacturers of LTO batteries include **Toshiba, Gree, Microvast and CATL.**



# BATTERY TECHNOLOGY READINESS LEVEL (BTRL)

**RioTinto**

Rio Tinto is GMG's Joint Product Development Partner for use of the battery in heavy mobile equipment & grid energy storage applications in the mining and mineral industry

## GMG Progress

G+AI Battery has progressed to BTRL 4

GMG is currently optimizing electrochemical behaviour for pouch cells

Lab -Scale Production and Basic Property Research

Electrochemical Development

Component Production Process Development

Cell Production Process Development

Commercialisation

1

2

3

4

5

6

7

8

9

Phase 1 | Proving the Science (1 -3)

Phase 2 | Scaling Cell Size (4 -6)

Phase 3 | Scaling Output for Demand (7 -9)

BIC Indiana is a world leading battery innovation centre which has completed over 500 battery development projects to date

## COLLABORATION:

- CELL MODEL & DESIGN
- ELECTROLYTE DEVELOPMENT
- CATHODE MANUFACTURING
- CELL ASSEMBLY
- MATERIAL SUPPLY
- SEMI AUTOMATED CELL PLANT

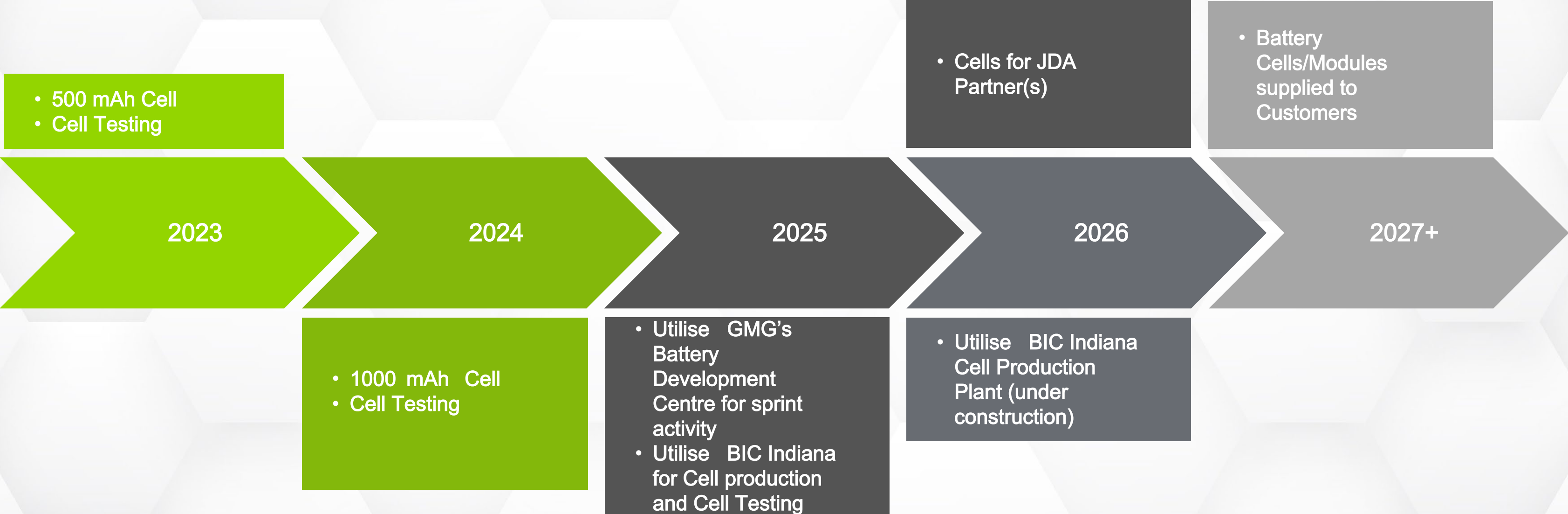


GMG has engaged BIC with a monthly fee service to support BTRL 4 to 8 battery development.





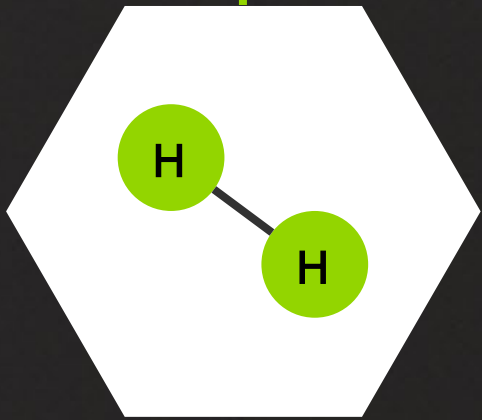
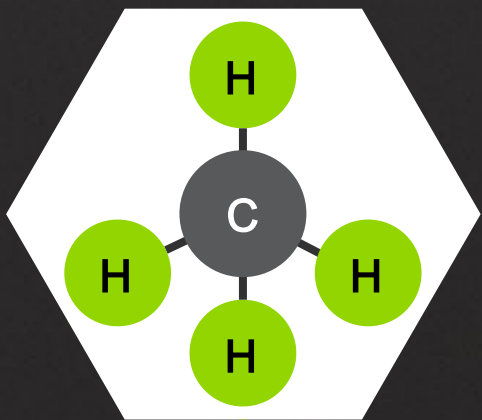
# BATTERY CELL ROADMAP



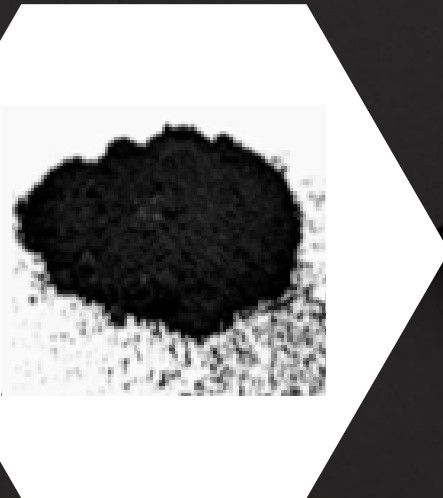


# GMG OPERATIONS

NATURAL GAS



HYDROGEN  
enriched Natural Gas



GRAPHENE  
MANUFACTURING  
PLANT

Phase 1  
Operational



HEAT  
EXCHANGER  
COATING

Coating Blending Plant  
(<2% Graphene)

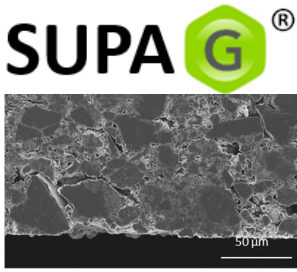
1 Million Litres p.a.  
Operational



G@LUBRICANT

Lubricants Blending Plant  
(<1% Graphene)

Blend Plant  
Operational



SUPA G®

GRAPHENE  
SLURRY

(~90% Graphene)

Pilot Production Plant  
Operational



ALUMINIUM-ION  
BATTERY  
TECHNOLOGY

(~50% Graphene)

Battery Development  
Centre  
Operational



Graphene Manufacturing Group



# MATURING **FINANCIAL** CAPABILITY



## Build Revenue

Maturing sales and marketing team, processes and systems

New Distributors in Asia, Europe & North America (Pending full EPA Approval for USA)

NDA's with global companies targeting increase in sales



## Develop

First leading segment partner Rio Tinto JDA (AU\$ 6M)

Exploring JDA's with other global sector leaders for the battery.



## Partner

Australian Government R&D Tax Rebate Support (2025: AU\$ 2.0M)

Exploring Grants and incentives



## Cash on Hand

AU\$12.9M (a)

Canada's  
TSX-V (TSX Venture)  
Exchange **GMG**



122,797,601 (b)



~C\$321 M (b)



2,903,483 (a)  
WAEP AU\$1.26



17,884,584 (b)  
WAEP AU\$1.60  
2,460,952 (a)



Graphene Manufacturing Group

(a) As at September 30, 2025

(b) As at January 11, 2026

# INVESTMENT THEME COMPARABLES

- 1 PROPRIETARY **LOW COST SCALABLE GRAPHENE** PRODUCTION TECHNOLOGY
- 2 PATENTED OR PATENT PENDING **GLOBAL SCALE HIGH MARGIN APPLICATION WORLD LEADERS**
- 3 LOW COST **SCALABLE PRODUCTION TECHNOLOGIES** FOR COATINGS, LUBRICANTS AND BATTERIES
- 4 DEVELOPING **GRAPHENE SPRAY COATING BUSINESS**
- 5 DEVELOPING **BULK GRAPHENE COATING SUPPLY BUSINESS**
- 6 DEVELOPING **SMALL PACK DISTRIBUTION GRAPHENE COATING BUSINESS**
- 7 DEVELOPING **BULK GRAPHENE LUBRICANT ADDITIVE BUSINESS**
- 8 DEVELOPING **SMALL PACK DISTRIBUTION BUSINESS GRAPHENE LUBRICANT ADDITIVE**
- 9 DEVELOPING **BULK SUPPLY BUSINESS OF GRAPHENE ADDITIVE FOR LITHIUM ION BATTERY**
- 10 DEVELOPING **NEXT GEN BATTERY TECHNOLOGY ALUMINIUM ION**
- 11 DEVELOPING **NEXT GEN BATTERY TECHNOLOGY ALUMINIUM ION ELECTROLYTES**
- 12 POISED FOR **MULTIPLE SOURCES OF SIGNIFICANT POTENTIAL REVENUE WITH LOW COSTS**



## Other graphene companies





# INVESTMENT HIGHLIGHTS

- 1 **Proprietary Low-Cost Scalable Production Technology**
- 2 **High Margin First to Market in Global Scale Sectors**
- 3 **Multiple Revenue Opportunities Poised For Growth**
- 4 **Energy Efficiency & Energy Storage Market Forces**
- 5 **Potential Expansion to North America**

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# Transformative **Graphene** Energy Solutions

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