

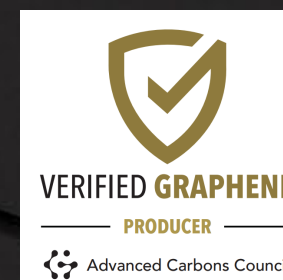


Graphene Manufacturing Group

TSX-V:GMG
OTCQX:GMGMF

TRANSFORMATIVE **GRAPHENE** ENERGY SOLUTIONS

 graphenemg.com



GMG is a certified Verified Graphene Producer® - independently verified by the Advanced Carbons Council (ACC) through rigorous in-person facility inspections and world-class material characterization.

DISCLAIMER

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

Certain statements made within this Presentation constitute forward-looking statements and forward looking information within the meaning of applicable including Canadian securities legislation and U.S. Federal Securities Laws (collectively herein referred to as "forward-looking information"), which are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied and which can often be identified by words such as "will", "may", "estimate", "expect", "plan", "project", "intend", "anticipate" and other words indicating that the statements are forward-looking, and include but are not limited to statements relating to: (a) GMG's business objectives and goals; (b) GMG's and other parties' planned or contemplated business (THERMAL-XR®, SUPA G®, G@FLUID and G@LUBRICANT) and activities and timelines relating thereto; (c) potential applications and expected performance of GMG's products; (d) expectations with respect to the expected capital, timing, revenue capacity, graphene production volumes from MPU's and liquid blending facilities and time to build MPU's, the development of the Graphene battery; expectations as to G@LUBRICANT's impact on reduced fuel consumption (e) the Company's intention to engage third parties to assist in the development of its products and matters regarding GMG's existing relationships with third party partners; (f) the expectation that GMG will be able to improve its business operations; (g) GMG's expected target markets; (h) the timing, development, testing and commercialization of the Company's prototypes and products; (i) the sales channels and strategic partners the Company will engage in the marketing, sales, and development of its products; (j) the expansion of GMG's existing production facilities and the development, funding, approval, construction, commissioning and operation of the Fulcrum Facility, as well as the timing, expense, location, facility design, operational readiness, resulting productivity, and required machinery related thereto; (k) potential distributor agreements, and the target markets for entering into distributor agreements; (l) the potential production capacity of the Company's existing and future facilities, including without limitation the Gen 2 Graphene Production Plant; (m) the progression of the Company's products along the Battery Technology Readiness Level scale and the Battery Cell Roadmap on expected timelines; (n) the nature and timing of sales to parties which have executed a non-disclosure agreement with the Company;(o) the expectation that the Company's products will be granted the necessary governmental approvals; (p) management's confidence in the development and scaling of production processes; (q) product capabilities, such as battery charging times, and expected commercial benefits of the GMG's products, including without limitation, cost and fuel saving potentials, improved efficacies, equipment life extensions and lowered emissions; (r) GMG's expectation that its proprietary graphene production process will reduce dependence on graphite mining and foreign-controlled graphite supply chains; (s) projections regarding market opportunities and revenue growth potentials; (t) GMG's plans to grow product sales and sales growth initiatives; and (u) market estimates and growth projections for the industries and product categories in which the Company operates or intends to compete.

Such forward-looking statements are based on a number of assumptions of management, including, without limitation, that the Company's cost and timing expectations are accurate, that GMG will be successful in generating revenue from and increase the sales of its existing products, that the Company will be able to complete the development of its Graphene battery, that the Company will be able to achieve the expected results of its Graphene battery and other products, that the Company's expectations regarding the performance potentials and benefits of its products will be substantially accurate, that the Company's proprietary production processes will provide an alternative to traditional graphite mining, that the Company will be successful in the deployment of its resources and personnel, that results of testing and development data will be consistent with anticipated results and estimates and are replicable in commercial applications, that the Company will be able to successfully identify and engage strategic partners, that the Company will be able to develop and test prototypes and products on the expected timelines, and that the results will align with management's current expectations, that existing production capability aligns with management's expectations, that an increase in GMG's existing production facility will result in a corresponding increase in production capacity, that the

markets and sales channels for the Company's products will develop as expected, that the Company's planned production expansion into target countries will proceed as planned and deliver the expected strategic and operational benefits, that the Fulcrum Facility will be developed, funded and operated in accordance with management's current expectations, including as to timing, cost and operational readiness, that the Company will have the equipment, materials, approvals, personnel and other resources required for the Fulcrum Facility; that the Fulcrum Facility will achieve the expected production capacity and operational benefits as expected, that parties that have entered into NDAs with the Company will proceed to commercial arrangements on acceptable terms, that the Company will enter into additional 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 conflicts in Eastern Europe and the Middle East, the ability of the Company to generate cash flow from operations and obtain necessary financing on acceptable terms, the ability of the Company to obtain qualified staff, equipment and services in a timely and cost-efficient manner, and that third-party market data and industry projections relied upon by the Company are accurate. 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; (b) public health crises such as pandemics 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 conflicts in Eastern Europe and the Middle East 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 or parties that have entered into NDA arrangements with the Company will not be interested in purchasing the Company's products; (n) that GMG's products may not perform as anticipated or deliver the expected commercial benefits; (o) that GMG's proprietary production processes may not provide an alternative to traditional graphite supply chains; (p) that the Company's expansion plans, including the construction of the Fulcrum Facility, will not proceed as planned and will not achieve anticipated strategic or operational benefits; (q) that the Company will be unable to grow its sales or revenues as anticipated; (r) that third-party market data and industry projections will not be accurate as presented; and (s) 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. Any of the foregoing risks could materially and adversely affect the Company's business, financial condition, or results of operations. 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. This presentation does not constitute an offer to sell or a solicitation of an offer to buy any securities.

THIRD PARTY INFORMATION

This Presentation includes market and industry data which was obtained from various publicly available sources and other sources believed by the Company to be true. Although the Company believes it to be reliable, the Company has not independently verified any of the data from third-party sources referred to in this Presentation or analyzed or verified the underlying reports relied upon or referred to by such sources, or ascertained the underlying assumptions relied upon by such sources.

RIGHTS IN RELATION TO COPYRIGHT

GMG owns the copyright that subsists in this presentation.



International Energy Agency (IEA):

“thermal management improvements in buildings and industry represent the largest single opportunity for energy cost reduction globally”

WITH OUR PRODUCTS WE ALL CAN DO BETTER

GMG PRODUCTS ARE FOR the industries that can't afford to waste energy:

Data Centres | HVAC-R Owners and Manufacturers | Automotive Manufacturers | Vehicle Fleets | Industrial Plants and counting...

WE PUT GRAPHENE TO WORK



Graphene Manufacturing Group

"Energy Efficiency 2023" report: <https://www.iea.org/reports/energy-efficiency-2023>

TRANSFORMATIVE **GRAPHENE** ENERGY SOLUTIONS

GMG PRODUCTS SOLVE ONE PROBLEM: **TRAPPED HEAT**

Our Products move heat **FASTER** through the use of GMG's Graphene

When Heat is moved **FASTER** it can provide four outcomes:



Cost and energy savings



Time efficiencies gained



Equipment life extension



Less emissions



GMG PRODUCTS

GRAPHENE —
HIGHEST HEAT TRANSFER
RATE OF ANY MATERIAL

MOVE TRAPPED HEAT FASTER

MANY APPLICATIONS WHICH REDUCE
ENERGY COSTS AND EMISSIONS

GMG makes its graphene to transfer heat faster – i.e. HEAT TRANSFER FUNCTIONALISATION.

HIGH MARGIN, SCALABLE & DISRUPTIVE APPLICATIONS

G M G targets two major markets:



ENERGY EFFICIENCY: Graphene coatings, lubricant additive and lithium-ion battery additive improve efficiency in HVAC-R⁽¹⁾, engines⁽¹⁾ and lithium-ion batteries⁽¹⁾. Lowering energy use and reducing emissions for commercial and industrial clients.



ENERGY STORAGE: GMG is developing graphene batteries (without lithium) that are intended to ultimately surpass lithium-ion batteries on charging speed, cycle life, safety, and sustainability.



Patented

THERMAL-XR[®]

Air Conditioner & Heat Pump Coatings System

N. America Distributor



Patented

G[®] LUBRICANT

Engine Oil Additive

Sales Starting

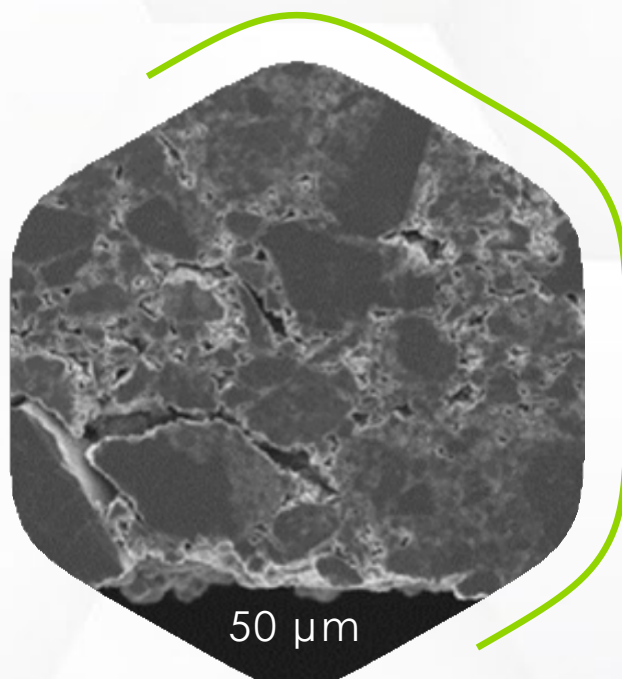


Patent Pending

G[®] FLUID

Coolant Additive

Customer Testing



SUPA G[®]

Additive for Lithium-Ion Battery

Customer Testing



Patent Pending

G[®] CELLS

Fast Charging Energy Storage

Co-Developing



(1) Third party testing and validation data available on www.graphenemg.com

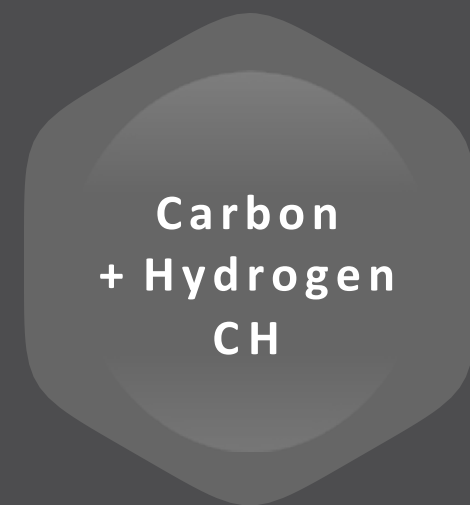
PROPRIETARY **CLEAN TECHNOLOGY** PLATFORM

G M G Graphene Production

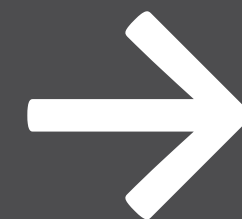
GMG manufactures graphene in-house using a proprietary process that converts natural gas into high-quality graphene, **bypassing typical graphite** mining dominated and controlled by China.

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

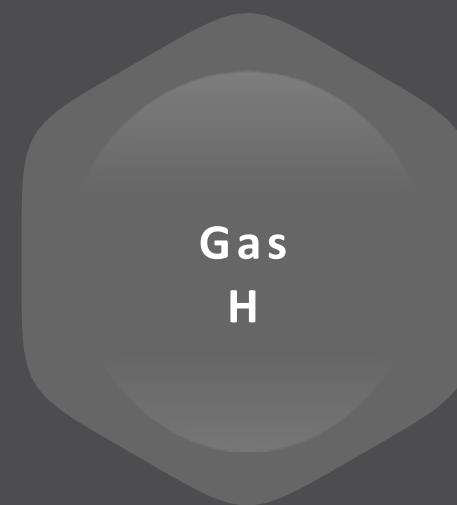
NATURAL GAS METHANE



Electric Plasma

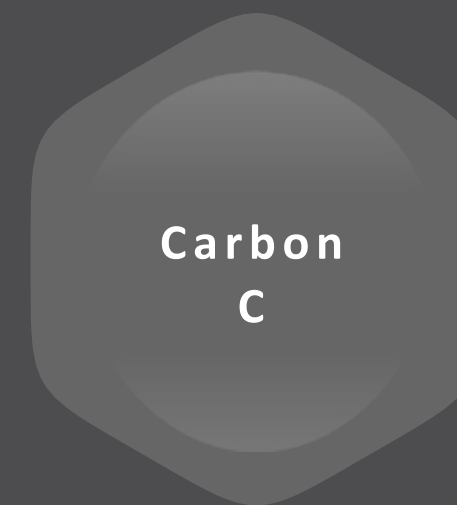


HYDROGEN



+

GRAPHENE POWDER



ON-TIME START UP
OF GEN 2.0 PLANT



EXPECTED: 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



Bypassing:

- Graphite Mining & Processing; and
- Acetylene (which is made from Natural Gas) to Graphene.

SIGNIFICANT REVENUE GENERATING OPPORTUNITIES

-  Sales Team Members
-  Countries with Product Testing & Sales Activity

GMG's target markets for energy saving lubricants, coatings, and advanced batteries are multibillion-dollar opportunities, with initial deployment and sales underway in North America, Asia, Europe and other regions through distributors and direct B2B channels.



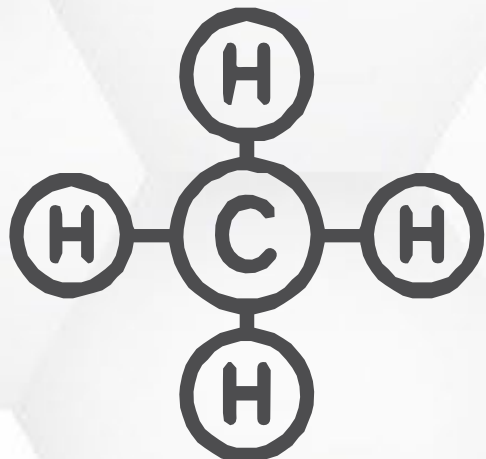
Graphene Manufacturing Group



TRANSFORMATIVE GRAPHENE ENERGY SOLUTIONS

GMG OPERATIONS

NATURAL GAS



GRAPHENE
MANUFACTURING
PLANT

- Gen 1.0
Operational
- Gen 2.0
Ongoing Commissioning

HYDROGEN
enriched Natural Gas



Graphene Manufacturing Group

HEAT TRANSFER
FUNCTIONALISATION



HEAT EXCHANGER
COATING
Coating Blending Plant
(~2% Graphene)

1 Million Litres p.a.
Operational



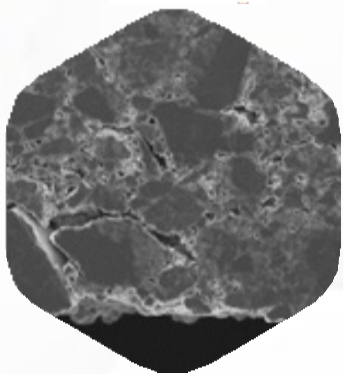
G[®] LUBRICANT
Lubricants Pilot Plant
(~1% Graphene)

Pilot Plant
Operational



G[®] FLUID
Coolant Pilot Plant (~1%
Graphene)

Pilot Plant
Operational



SUPA G[®]
Graphene Battery
Slurry Pilot Plant
(~90% Graphene)

Pilot Plant
Operational



G[®] CELLS

Battery Development
Centre
Operational

STRATEGIC PARTNERS UNDER DEVELOPMENT

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

RioTinto



BEIJER REF

ALSTOM



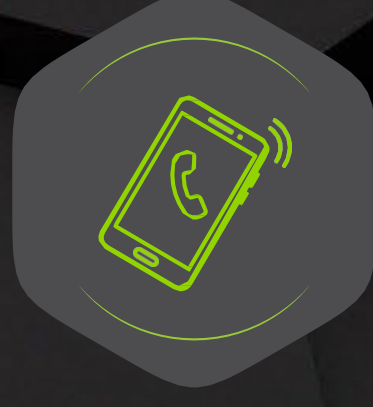
The company received support from Rio Tinto (AU\$6M joint product development agreement) and ongoing collaborations.



The company signed a Distribution Agreement with Nu Calgon for North America and GMG's Products are available through Beijer Ref



The company signed an MOU to exclusively develop HVACR graphene products with ALSTOM



FULCRUM: “FACTORY FOR GRAPHENE FACTORIES”

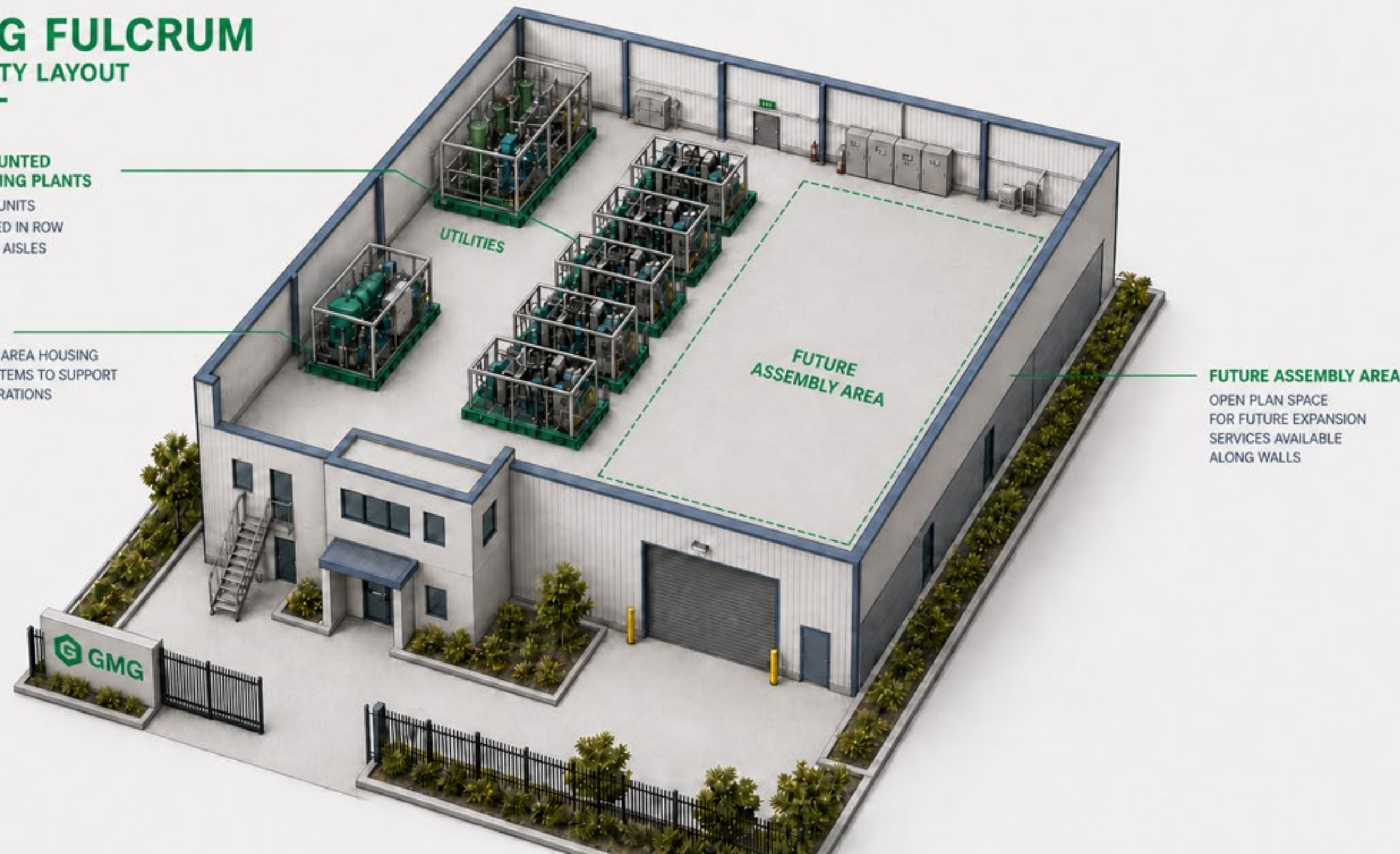
GMG FULCRUM FACILITY LAYOUT

SKID-MOUNTED PROCESSING PLANTS

- 5 × SKID UNITS
- ARRANGED IN ROW
- NARROW AISLES

UTILITIES

DEDICATED AREA HOUSING
UTILITY SYSTEMS TO SUPPORT
PLANT OPERATIONS



FUTURE ASSEMBLY AREA

OPEN PLAN SPACE
FOR FUTURE EXPANSION
SERVICES AVAILABLE
ALONG WALLS

GMG Board approved AU\$1.2 million capital to support feasibility level design, engineering and long-lead procurement for GMG’s “Fulcrum” Facility.

The GMG Fulcrum Facility is expected to include an area for assembling Graphene Modular Production Units (MPU’s) and a separate operating area for up to 5 separate Graphene MPU’s.

Once fully completed and optimised, the Fulcrum Facility is expected to have annual production capacity of up to 100 tonnes of graphene.

The facility is expected to assemble and commission up to 12 additional MPU’s per annum, equivalent to a further 240 tonnes of annual graphene production capacity.



Graphene Manufacturing Group

The GMG Fulcrum Facility is expected to take several years to complete, with funding and operational readiness to be phased and subject to separate Board approvals and press releases.

TRANSFORMATIVE GRAPHENE ENERGY SOLUTIONS

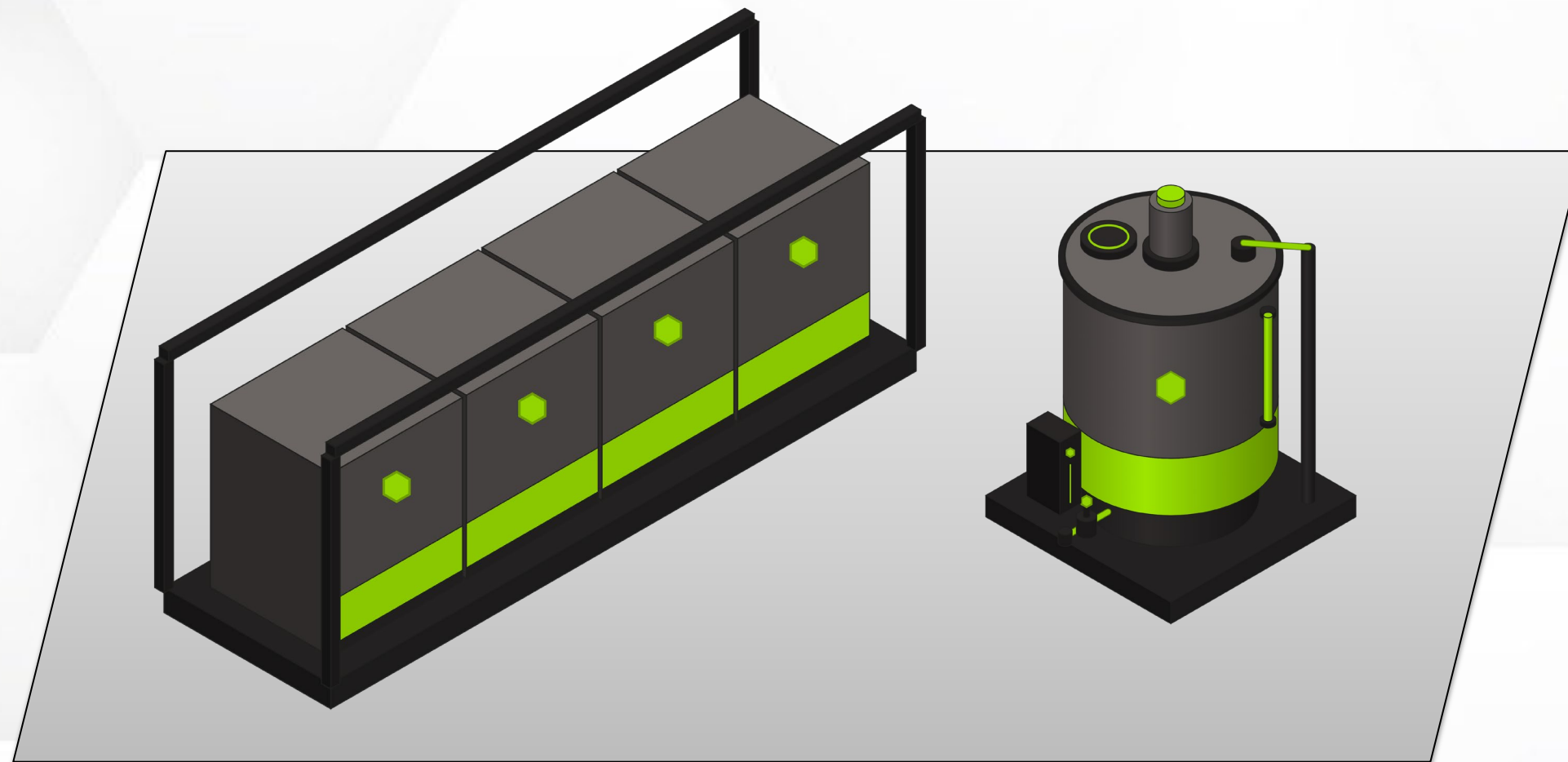
BUSINESS ECONOMICS – THE FUNDAMENTALS ARE EXCITING

Modular Plant Unit (MPU) & Liquids Blending Facility:

Expected Capital: <AU\$ 5 million

Expected Graphene Production: ~10 tonne per annum

Expected Liquid Graphene Production: ~ 1 million litres per annum



Initial Location: Brisbane
Planned NA Expansion: USA
and Canada

Significant Operating Leverage:
AU\$ 5 Million Capital Investment
provides enough capacity to
produce **AU\$ 100 Million in Revenues**



Approximate time to build one MPU is ~ 9 months from investment decision.

MATURING FINANCIAL CAPABILITY



BUILD REVENUE

Maturing sales and marketing team, processes and systems

New Distributors in Asia, Europe & North America (EPA Approved)

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 (2026: ~AU\$1.9M)

Exploring Grants and incentives



CASH ON HAND

AU\$10.3M^(a)



SHARES OUTSTANDING
133,877,670^(b)



MARKET CAPITALIZATION
~C\$310M^(b)



OPTIONS
2,104,912^(a)
WAEP AU\$1.37



WARRANTS
15,165,045^(a)
WAEP AU\$1.55
RSUs
2,784,883^(a)

(a) As at June 30, 2026
(b) As at October 1, 2026



INVESTMENT HIGHLIGHTS

- 1 PROPRIETARY LOW-COST SCALABLE PRODUCTION TECHNOLOGY
- 2 HIGH MARGIN PATENTED PRODUCTS IN GLOBAL SCALE SECTORS
- 3 MULTIPLE POTENTIAL REVENUE OPPORTUNITIES
- 4 ENERGY EFFICIENCY & ENERGY STORAGE MARKET FORCES
- 5 POTENTIAL EXPANSION TO NORTH AMERICA





Graphene Manufacturing Group

TSX-V:GMG
OTCQX:GMGMF

TRANSFORMATIVE GRAPHENE ENERGY SOLUTIONS

INVESTOR RELATIONS

 info@fcir.ca

 +647 – 689 – 6041

 www.focusir.ca



PRODUCT INFORMATION

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



Global Data Center Industry Innovation Challenge Winner



Product Excellence Award - HVAC



Australian Air Conditioning Industry Product of the Year

THERMAL-XR[®] VIDEO:



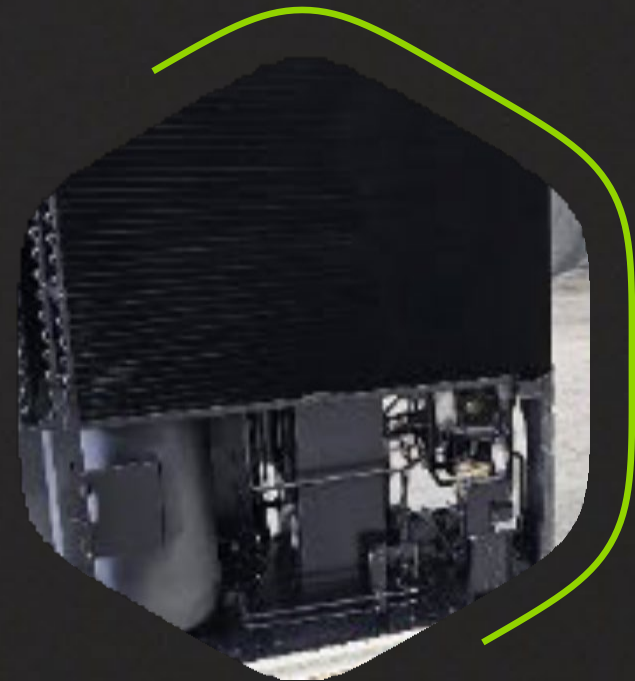
THERMAL-XR[®] CUSTOMER ADOPTION PROCESS

Product Deployment & Manufacturing Testing



Product Testing

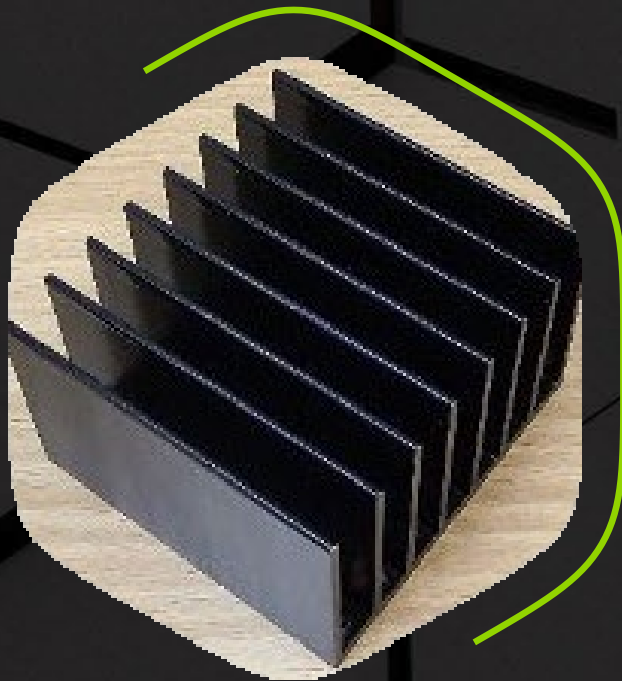
Commercial Supply Arrangements



AIR CONDITIONERS



INDUSTRIAL PLANTS



HEAT SINKS FOR ELECTRONICS



DATA CENTRES



REFRIGERATION



THERMAL-XR® DISTRIBUTION



DISTRIBUTION/LOGISTICS

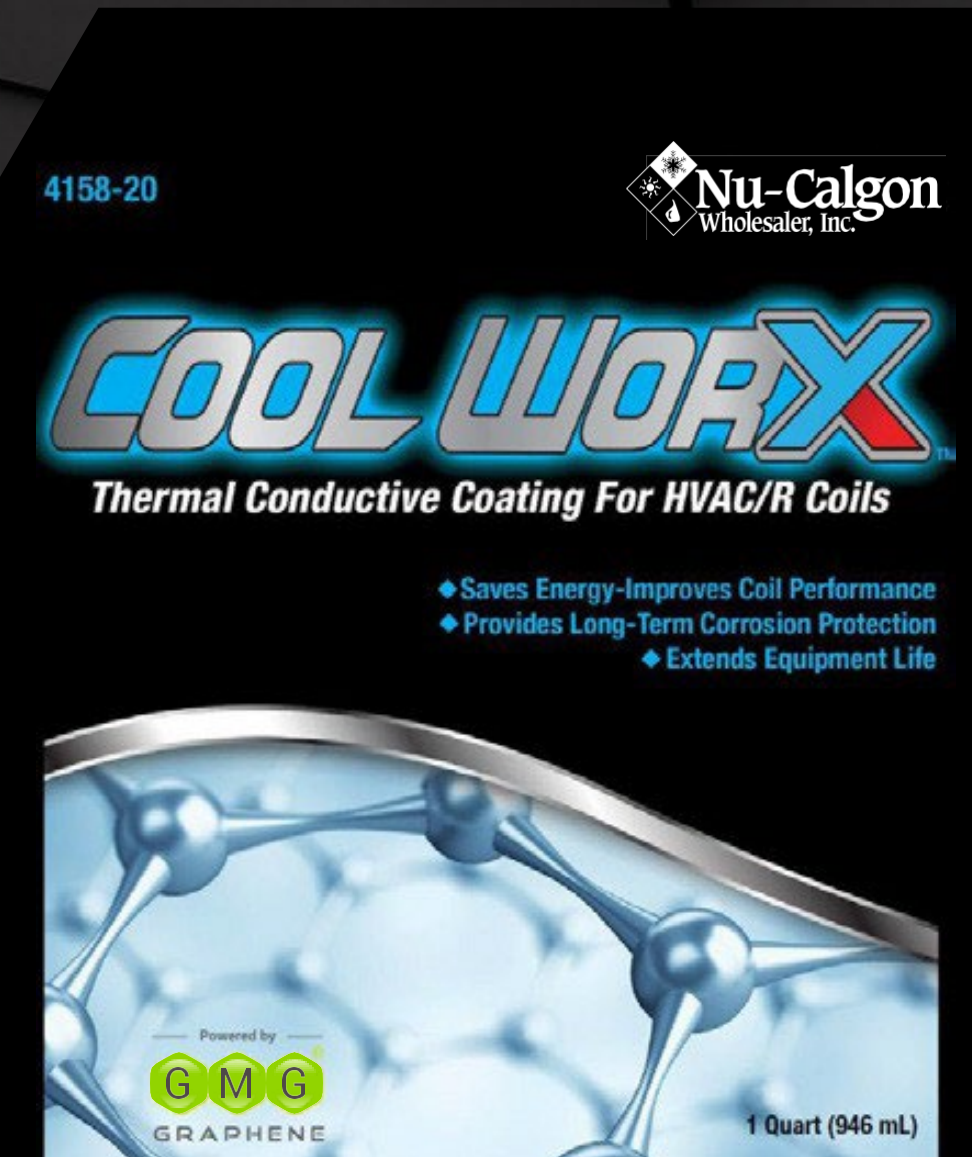
Nu-Calgon is GMG's exclusive distribution partner for AFTER MARKET HVAC in North America

- **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 strong market interest

GMG is distributing THERMAL-XR® 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 has approved the import and sale of GMG's THERMAL-XR® graphene-based coating system in the United States.



NO CORROSION 30,000 HOUR MILESTONE



INDUSTRIAL[®]
INSPECTION & ANALYSIS
Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analysis and Field Services

GRAPHENE MANUFACTURING GROUP
5/848 Boundary Road
Richlands, QLD 4077

June 24, 2026
WO# C-0269743
Page 1 of 2

Attention: Paul Mackintosh

SALT SPRAY REPORT

MATERIAL:

5 Ea. 4" x 6" Graphene Coated Panels

START DATE & TIME:

Tuesday, 12/27/2022 @ 03:30 P.M.

FINISH DATE & TIME:

Tuesday, 05/30/2026 @ 3:30 P.M.

LENGTH OF EXPOSURE:

30,000 Hours

TEST METHOD:

ASTM B117-19

SALT SOLUTION:

5%

TEMPERATURE IN EXPOSURE ZONE:

96 °F

METHOD OF SUPPORT:

Rack, 20° from vertical

EDGE PROTECTION:

No

WATER:

TYPE IV (Ion Exchange) ASTM D1193-24

VOLUME OF SOLUTION COLLECTED PER 80 CENTIMETERS SQUARE PER HOUR:

1.8 mL

Ph OF COLLECTED SOLUTION:

6.7

INTERRUPTIONS:

N/A

RESULTS:

The submitted sample exhibited no white or red corrosion.

See figures 1-6.

BA/mlb



Image of THERMAL-XR® coated plates upon commencement of tests



Images of THERMAL-XR® coated plates after 30,000 hours of salt spray testing



LAUNCH:

AUSTRALIAN ROLL OUT OF THERMAL-XR[®] COATING ON BEIJER REF COILS

Available from
BEIJER REF
Australia



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 OFFERS **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



INDUSTRY FIRST PALLETISED GRAPHENE PRODUCTS AVAILABLE FOR ORDER FOR GLOBAL* DISTRIBUTION



- ENG
- DEU
- FRA
- SPA
- ITA
- POR
- POL
- TUR
- IND
- VIE
- HIN
- CHI
- JPN
- KOR
- THA
- ARA

* Each product label has 16 languages. Delivery times to be confirmed at time of order.



G[®] LUBRICANT PERFORMANCE

 **10%**

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

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

G[®]LUBRICANT
VIDEO:



500 ml
16.9 fl oz



50 ml
1.7 fl oz



→ **G[®] LUBRICANT** is mixed into engine oil at a 1:100 ratio.

→ **G[®] 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

~ **30%**
of fuel burned
is to overcome friction.

> **60%**
of engine friction
is generated in the
piston area.

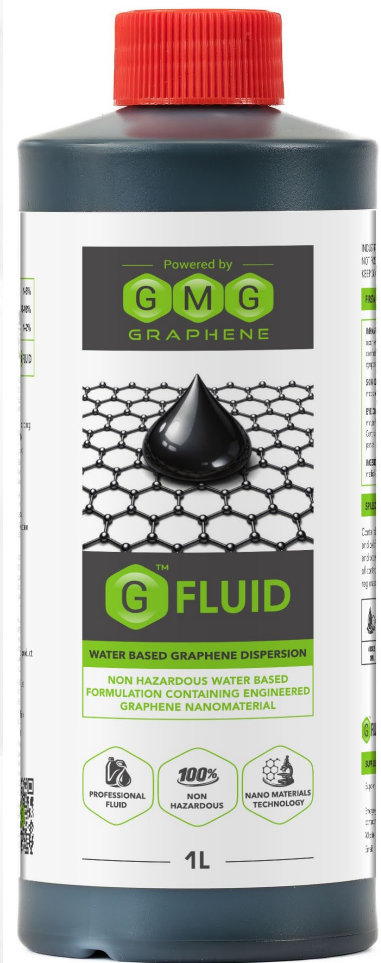


Graphene Manufacturing Group

* Results vary and the figures are sourced from University of Queensland verified GMG internal engine testing, 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. The Company notes that product performance results may vary for difference applications over time.

TRANSFORMATIVE **GRAPHENE** ENERGY SOLUTIONS

→ **GMG's G[®]FLUID** is a graphene enhanced water-based 1:100 concentrate for industrial cooling systems in Data Centres, Industrial Processing Plants, Oil Refineries and Energy Generation Plants



REDUCES ENERGY COSTS AND REDUCES BACTERIA / MICROBES:

INTERNAL GMG TESTING
SHOWS G[®] FLUID
PROVIDES ~ 20% MORE
HEAT TRANSFER OVER
DEMINERALISED WATER*

WHICH CAN PROVIDE:

→ Energy Savings for pumping power

→ or Higher Capacity Cooling

→ Less stress on equipment

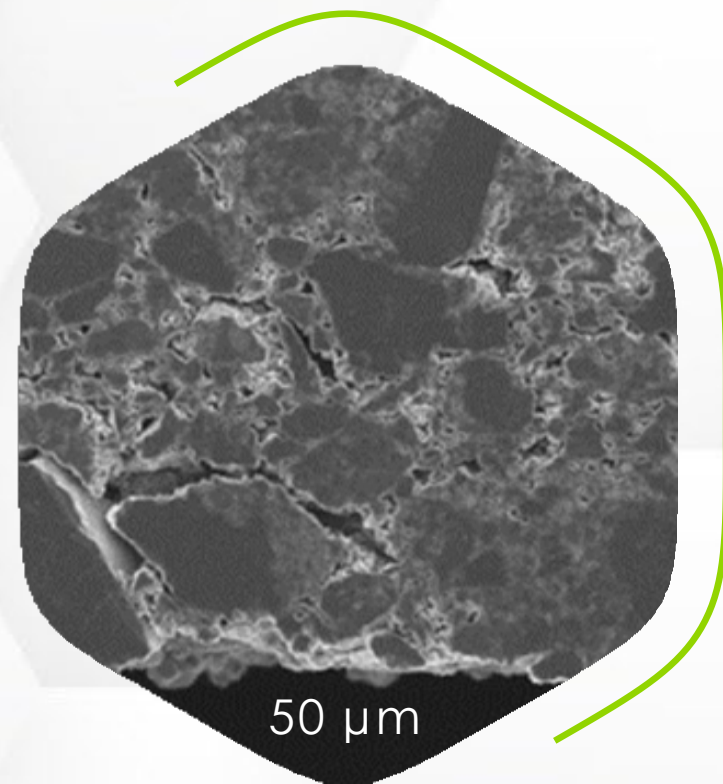
- * Internal GMG testing

ORGANISM	TEST STANDARD	MICROBIAL REDUCTION
STAPHYLOCOCCUS AUREUS (ATCC 6538)	EN 1276	84.2%
ESCHERICHIA COLI (ATCC 10538)	EN 1276	60.2%
PSEUDOMONAS AERUGINOSA (ATCC 15442)	EN 1276	87.4%
ENTEROCOCCUS HIRAE (ATCC 10541)	EN 1276	50.1%
MICROBACTERIUM SP.	EN 1276	50.0%
LEGIONELLA PNEUMOPHILA BACTERICIDAL ACTIVITY	EN 1276	50.0%

Antimicrobial - EN 1276 external third party lab test results

GRAPHENE ADDITIVE FOR LITHIUM-ION BATTERY

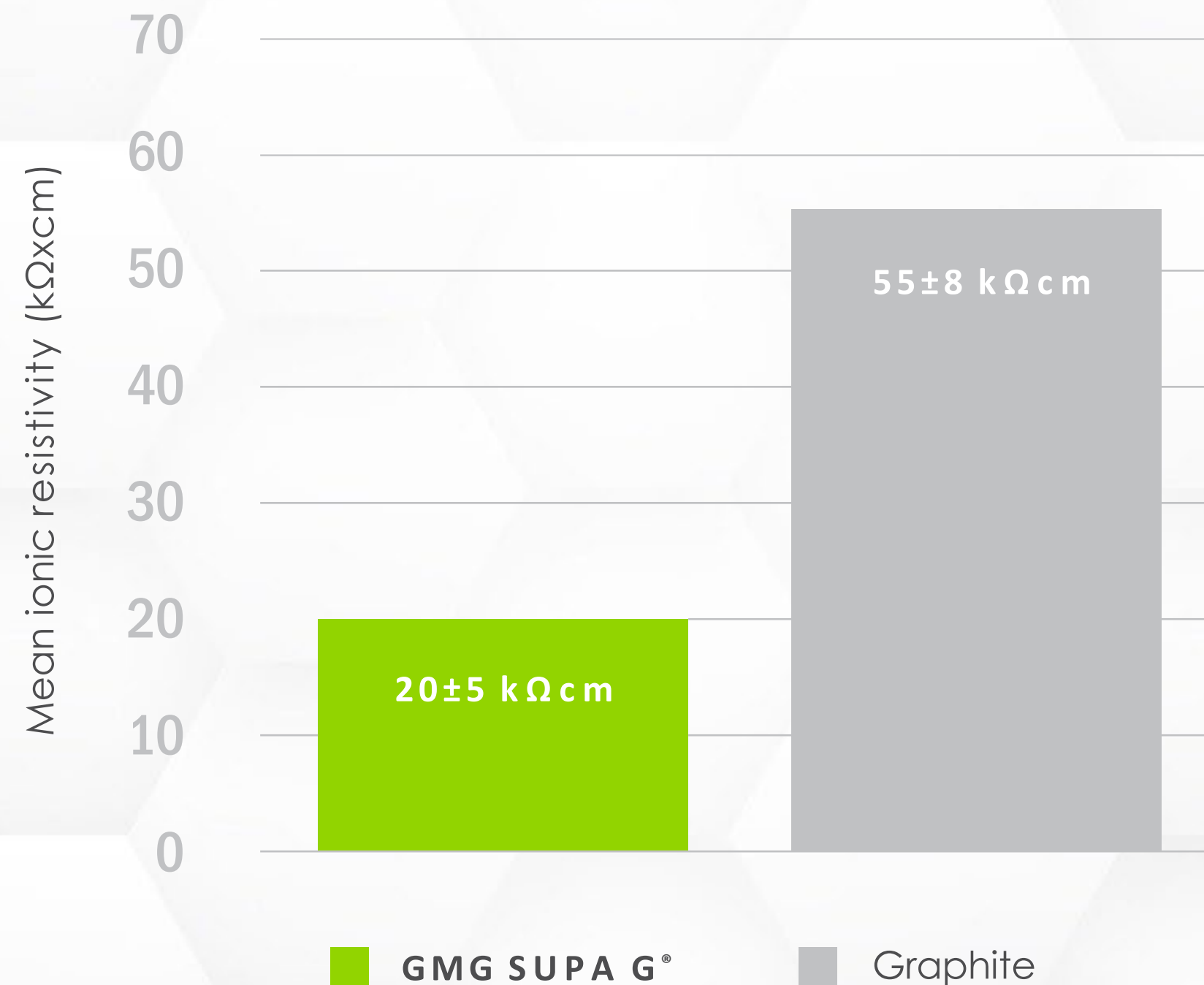
- GMG's **SUPA G**[®] is an additive for Lithium-Ion Batteries
- It can be used as a Cathode Additive (1%) and/or after further development, management believes it has potential for an Anode Alternative to Graphite – which is largely export controlled from China



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

→ 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



G[®] CELLS BATTERY ADVANTAGES- FAST CHARGING

G[®]CELLS prioritize long life and fast charge capability over energy density – but still have 87% more energy density than competing tested LTO’s

6 Minute Fast Charging Performance	G [®] CELLS*	High Power LTO
Energy Density (Wh/kg) charged in 6 minutes (10C)	58	31

Exceeding performance of Lithium Titanate Oxide (LTO) Batteries which can be priced up to US\$1200 / kWh for their long-life high performance



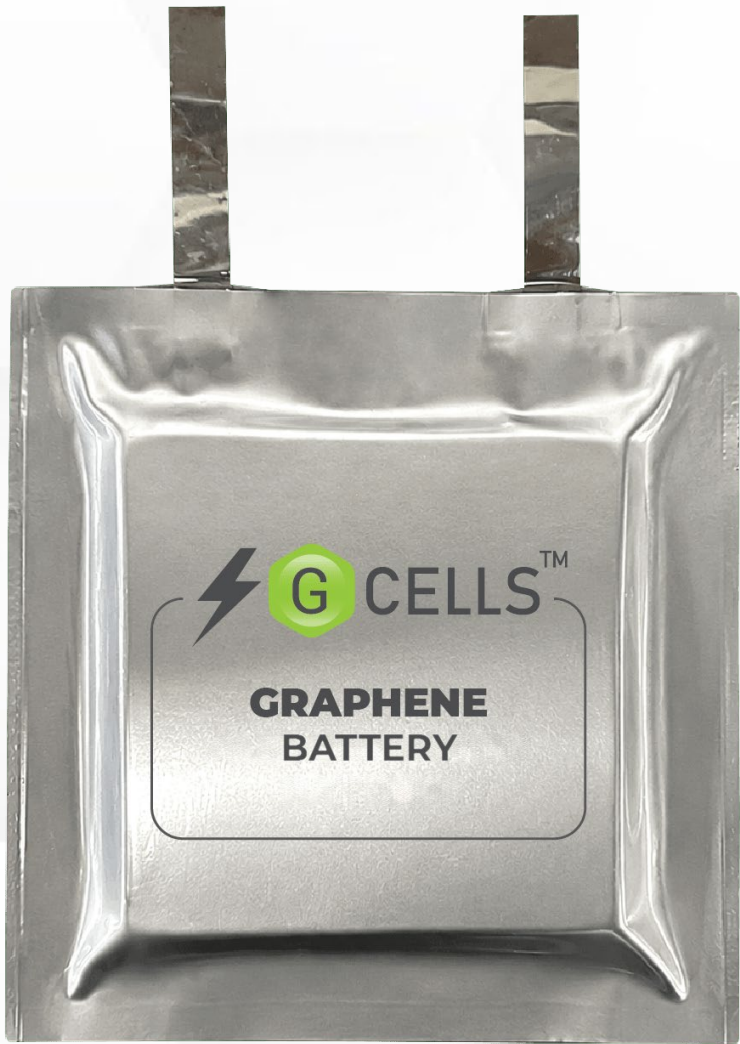
RioTinto

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

G[®]CELLS VIDEO:



POUCH CELL SAMPLES



Energy Density of 101 Wh/kg when charged in 1 hour

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 (Australia/North America) Supply Chain and Simplicity
- High value / Low overall cost (when produced at scale)



Graphene Manufacturing Group

*Testing data provided by BIC Indiana.

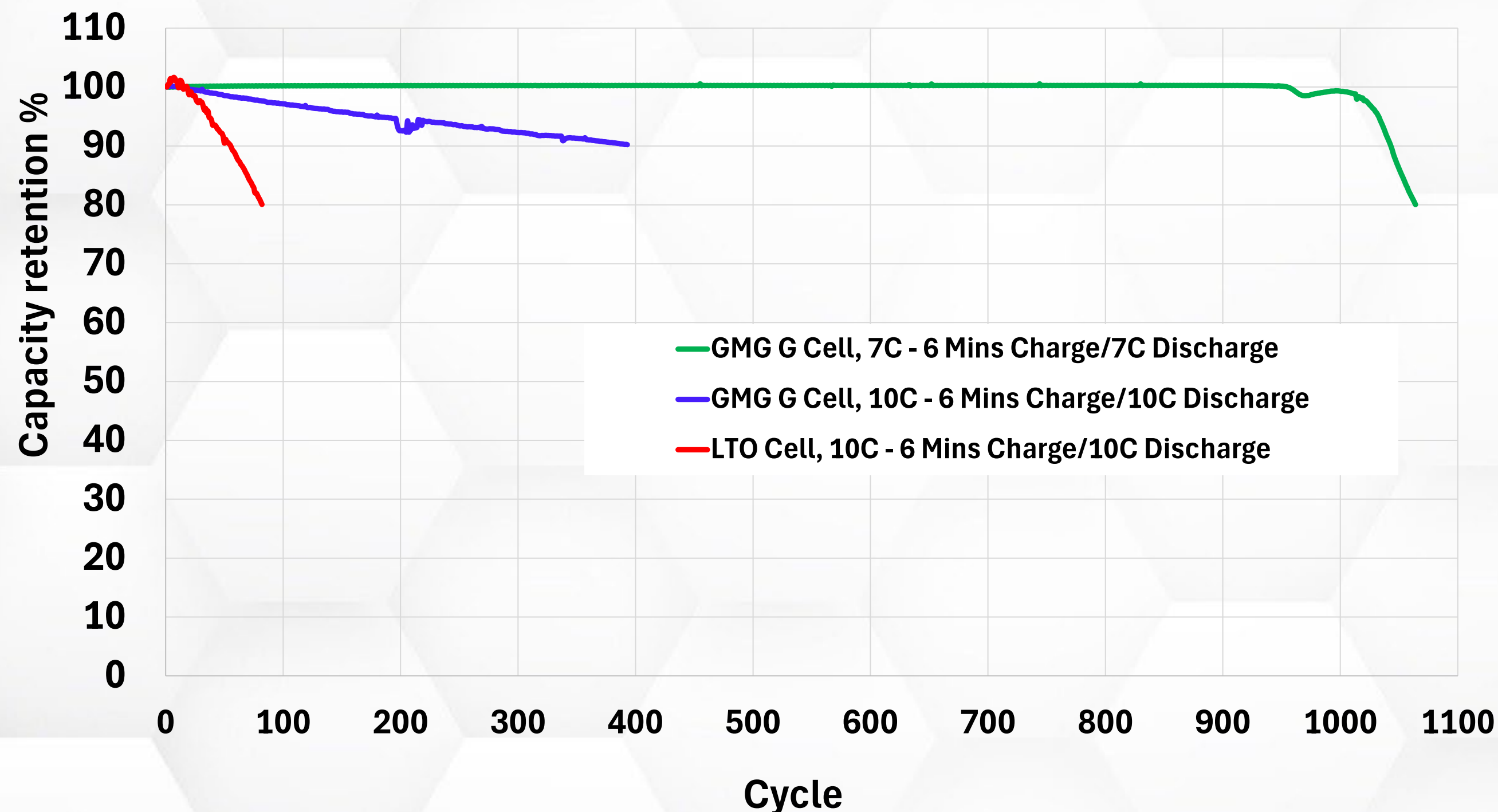
Source: <https://graphenemg.com/gmg-announces-long-life-battery-cycling-data/>

LTO <https://www.global.toshiba/www/products-solutions/battery/scib/product-next/product/cell/high-power.html>

G[®] CELLS BATTERY ADVANTAGES- LONG LIFE

6 Minute Fast Charging Performance- Long Cycle Life Performance

Capacity Retention of GMG G[®] CELLS vs LTO Cell



WHEN COMPARED TO LTO CELLS TESTED:

**G[®] CELLS PROVIDE
~ 9 TIMES LONGER
LIFE:**

**G[®] CELLS : @ 393 cycles
~10% reduction in capacity (10C)**

**LTO : @ 82 cycles
- 20% reduction in capacity
(typically called end of life) (10C)**



Graphene Manufacturing Group

Battery performance curves of G[®] CELLS at 6min charge (10C) versus market leading LTO Cell

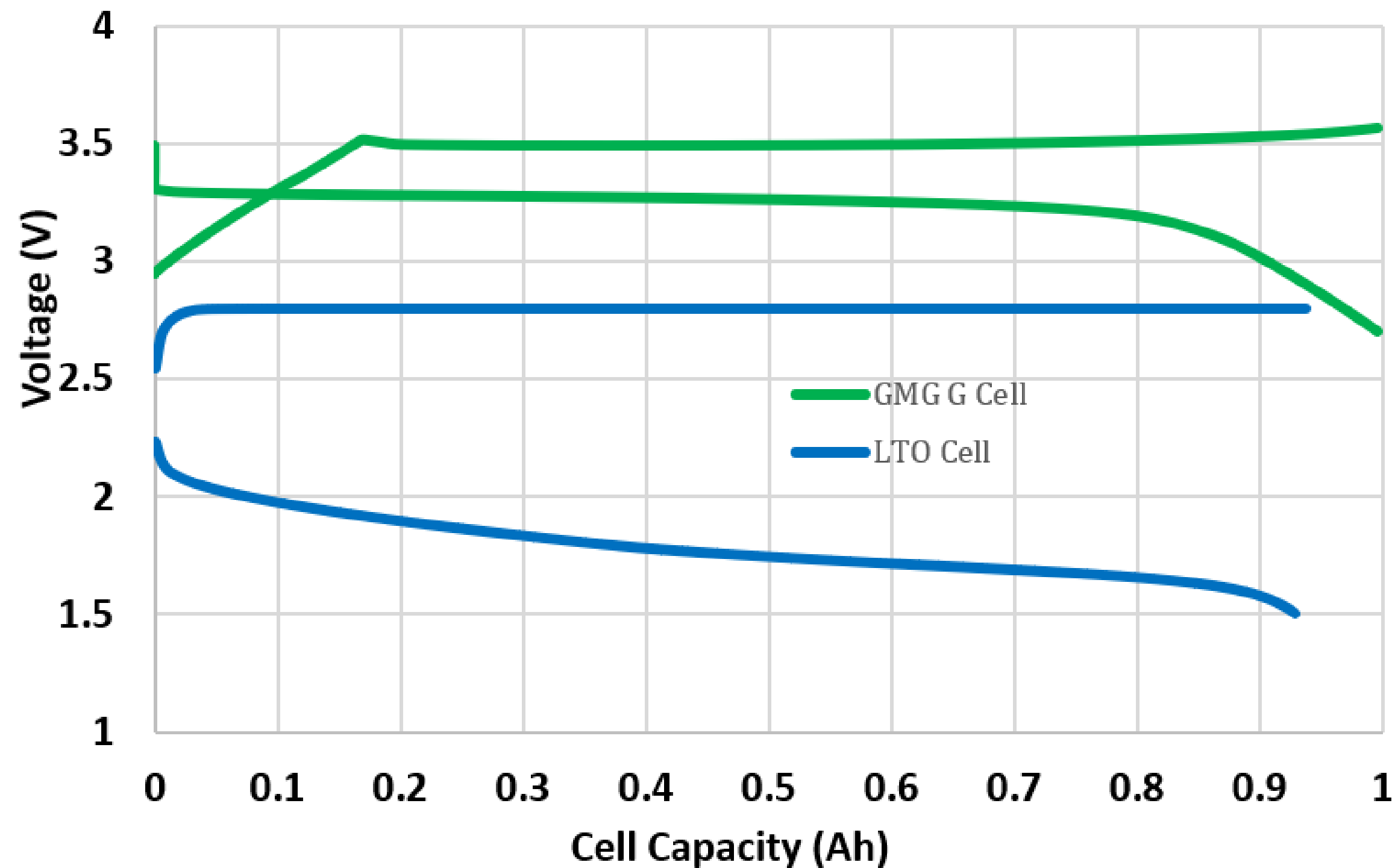
**Testing data provided by BIC Indiana.*

Source: <https://graphenemg.com/gmg-announces-long-life-battery-cycling-data/>

TRANSFORMATIVE GRAPHENE ENERGY SOLUTIONS

G[®] CELLS BATTERY PERFORMANCE- HIGH VOLTAGE

Charge Discharge Characteristics of GMG G[®] CELLS vs LTO Cell
@10C, 6min Charge /10C Discharge



WHEN COMPARED TO
LTO CELLS TESTED:

G[®] CELLS PROVIDE MORE
CAPACITY AT HIGHER VOLTS:

G[®] CELLS : 3.2 Nominal Volts

~ same voltage ~ for 80% of discharge
capacity

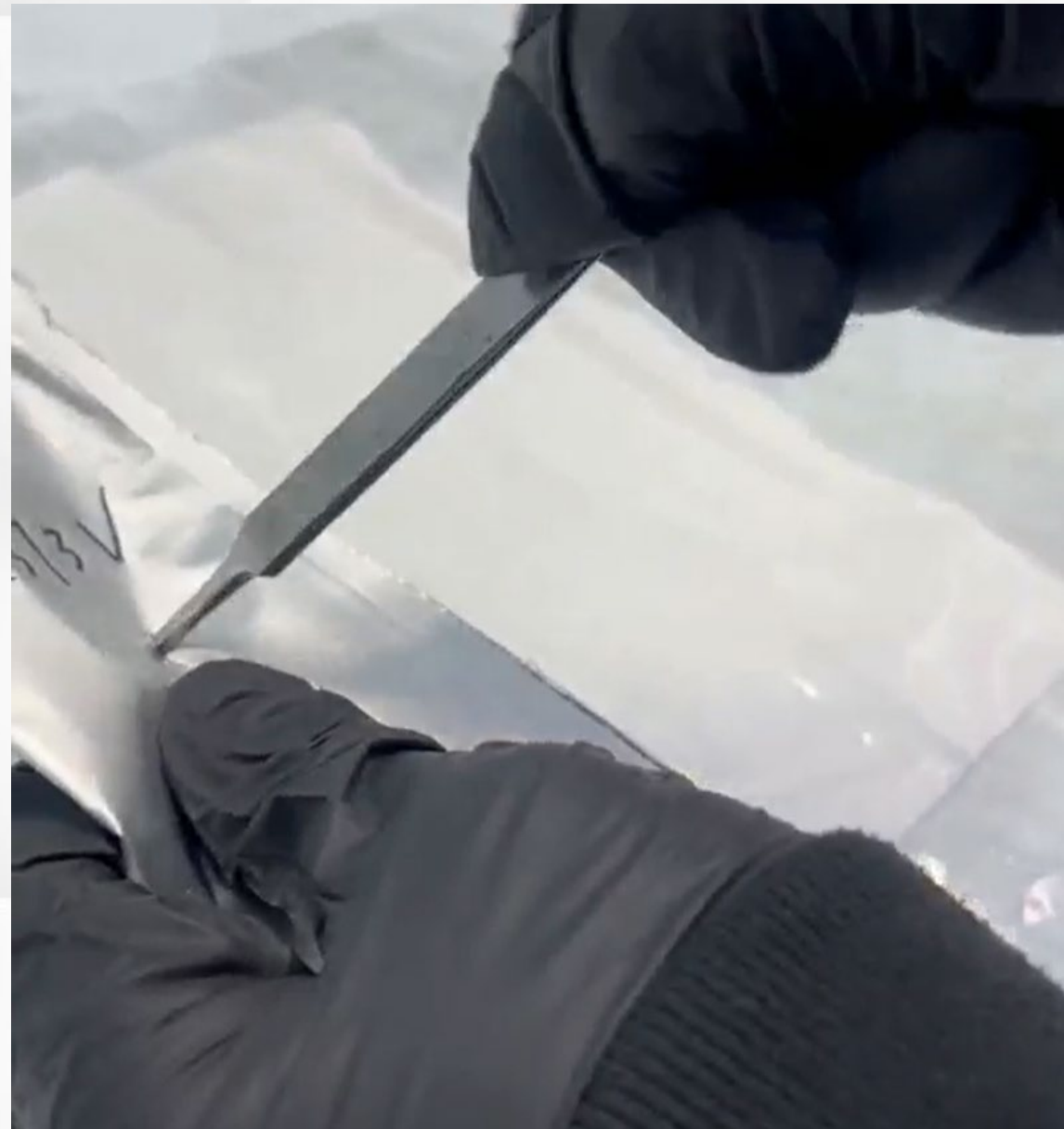
LTO : 1.8 Nominal Volts

reduced 0.8 volts across discharge capacity



G[®] CELLS INITIAL BATTERY SAFETY TESTS

INITIAL TESTING DONE BY GMG:



WHEN COMPARED TO
LITHIUM CELLS TESTED:

G[®] CELLS DO NOT EXPLODE
WHEN PENETRATED WITH A
NAIL.

G[®] CELLS DO NOT CATCH FIRE
WHEN PUT INTO WATER.

[PLEASE CLICK TO SEE VIDEO](#)



Graphene Manufacturing Group

Battery testing G[®] CELLS fully charged to ~ 3.37 Volts (4 layer 167 mAh cells)

**Initial internal GMG testing*

G CELLS BATTERY PERFORMANCE- TEMPERATURE

POUCH CELL
SAMPLES



WHEN COMPARED TO LTO CELLS TESTED:
G® CELLS HAVE 87% HIGHER ENERGY DENSITY
G® CELLS HAVE 6 TIMES LESS RESISTANCE
G® CELLS INCREASE TEMPERATURE 5 TIMES LESS

EXPECTED
PLASTIC
BATTERY
PACK DESIGN



6 Minute Fast Charging Performance	Energy Density (Wh/kg)	Energy Efficiency (%)	Temperature Increase Above Ambient Temperature of 25 (deg C)	Resistance (Ohm)
G® CELLS (after 393 cycles)	58	94%	4	0.005
LTO (after 82 cycles)	31	64%	19	up to 0.030

G® CELLS EXPECTED TO NOT NEED THERMAL MANAGEMENT



G[®] CELLS BATTERY ADVANTAGES

POTENTIAL APPLICATIONS



DIESEL ENGINE REPLACEMENT

(high load & power requirements)

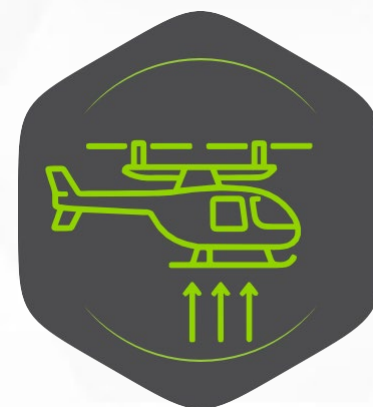


ENERGY STORAGE

(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/kg¹** (compared to **101 Wh/kg** for GMG's latest G+Al Battery when charged in 60 minutes at 1C)

→ Sales of LTO Batteries in **2025 : US\$5.6 billion²**

→ Sales of LTO Batteries expected to grow at **16.9%** per annum to an estimated **US\$ 12.5 billion by 2030²**

→ The major manufacturers of LTO batteries include **Toshiba, Gree, Microvast and CATL²**



Graphene Manufacturing Group

Sources:

1. <https://www.grepow.com/blog/battery-energy-density.html>
2. [Lithium Titanate Oxide Battery Market Size, Share & 2030 Growth Trends Report](#)

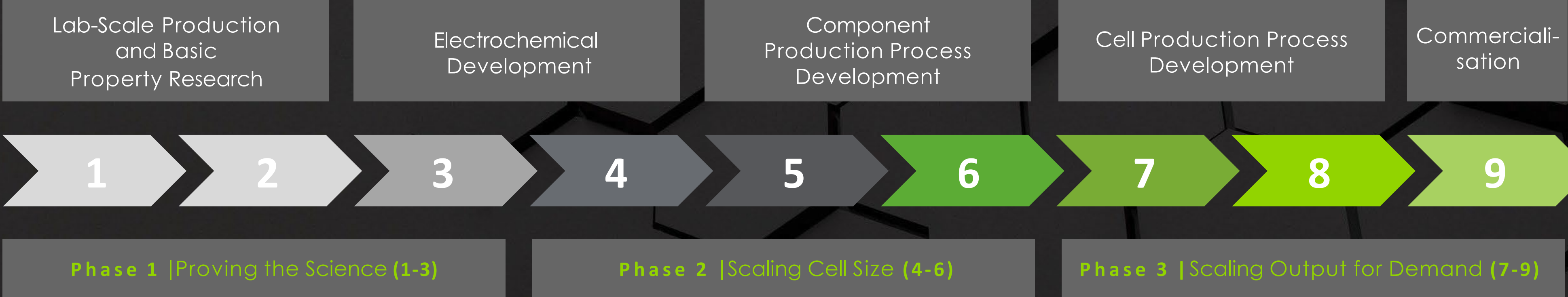
BATTERY TECHNOLOGY

READINESS LEVEL (BTRL)

GMG Progress

G+Al Battery has progressed to BTRL 4

GMG is currently optimizing electrochemical behaviour for pouch cells



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

COLLABORATION:

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

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



BATTERY CELL EXPECTED ROADMAP

