

Date: December 22, 2025

USA EPA Approval Conditions Accepted for Graphene Coating THERMAL-XR®

BRISBANE, QUEENSLAND, AUSTRALIA – Graphene Manufacturing Group Ltd. (TSX-V:GMG) (“GMG” or the “Company”) is pleased to provide a business update on the commercialisation progress of THERMAL-XR® ENHANCE.

THERMAL-XR®/CoolWorx® USA EPA Approval:

The Company is excited to announce it has received and accepted the United States Environmental Protection Agency (“EPA”) consent notice approval conditions of the Pre-Manufacture Notice (“PMN”) for its THERMAL-XR® ENHANCE graphene coating product. The consent notice conditions from the EPA signify a significant milestone in bringing this product to market in the USA, offering energy savings and enhanced corrosion resistance to USA consumers and businesses alike. The EPA’s PMN program ensures the safety and environmental soundness of new chemicals and chemical substances introduced into the United States.

The first shipment of THERMAL-XR® ENHANCE will be sent to Nu-Calgon for distribution to be re-sold as “Nu-Calgon CoolWorx® powered by GMG Graphene” upon receipt of the fully signed consent notice from the EPA, which is expected early in the new year.

GMG’s Managing Director and CEO, Craig Nicol, commented: “This is a very significant milestone for the GMG business – to now get approval conditions to sell into the largest HVAC coating market in the world – the United States of America – through our distributor and partner Nu-Calgon.”

GMG’s Chairman and Non-Executive Director, Jack Perkowski, commented: “It is really great for GMG to reach this milestone – for two years, GMG and Nu-Calgon have been progressing through the EPA approval process, and it is great to finally see the consent notice approval conditions come through. This is a big step in the Company’s development because the United States is such a big market for air conditioning coatings and Nu-Calgon is a great distribution partner.”

THERMAL-XR® ENHANCE Development and EPA Approval History

Month	Significant Milestones for THERMAL-XR® powered by GMG Graphene
September 2022	GMG acquires THERMAL-XR® manufacturing intellectual property and brand rights <small>GMG ACQUIRES THERMAL-XR MANUFACTURING INTELLECTUAL PROPERTY AND BRAND RIGHTS AND GRANTS RSUs TO DIRECTORS AND OFFICERS - Graphene Manufacturing Group GMG (graphenemg.com)</small>
December 2022	Verified Improved Heat Transfer by The University of Queensland. <small>VERIFIED IMPROVED HEAT TRANSFER ON ALUMINIUM WITH THERMAL-XR® & MARKET UPDATE - Graphene Manufacturing Group GMG (graphenemg.com)</small>
February 2023	Approval from Australian Industrial Chemicals Introduction Scheme (AICIS) <small>GMG RECEIVES REGULATORY APPROVAL TO ENABLE SIGNIFICANT COMMERCIAL SALES - Graphene Manufacturing Group GMG (graphenemg.com)</small>
April 2023	Total available market for THERMAL-XR® estimated by Company to be > US\$28.4 billion <small>GMG ANNOUNCES COMMERCIALISATION PROGRESS OF THERMAL-XR® - Graphene Manufacturing Group GMG (graphenemg.com)</small>
April 2023	First order of THERMAL-XR® > \$120,000 <small>GMG ANNOUNCES COMMERCIALISATION PROGRESS OF THERMAL-XR® - Graphene Manufacturing Group GMG (graphenemg.com)</small>
May 2023	Signing of Distributors for Singapore, Thailand, Indonesia & South Korea <small>GMG SIGNS THERMAL-XR® DISTRIBUTOR AGREEMENTS IN 4 ASIAN COUNTRIES - Graphene Manufacturing Group GMG (graphenemg.com)</small>
June 2023	Independently Verified Heat Transfer & Energy Savings <small>GMG ANNOUNCES INDEPENDENTLY VERIFIED HEAT TRANSFER AND ENERGY SAVINGS RESULTS FROM THERMAL-XR® - Graphene Manufacturing Group GMG (graphenemg.com)</small>
July 2023	Signing of Nu-Calgon Distribution for North America – USA, Canada, Mexico, & Caribbean. <small>GMG APPOINTS NU-CALGON AS THERMAL-XR® DISTRIBUTOR FOR NORTH AMERICA - Graphene Manufacturing Group GMG (graphenemg.com)</small>
August 2023	Commissioning of THERMAL-XR® Coating Bulk Blend Plant <small>GMG PROVIDES COMMERCIALISATION PROGRESS OF THERMAL-XR® - Graphene Manufacturing Group GMG (graphenemg.com)</small>
October 2023	Forward Orders > AU\$ 400k – Conditional on Import Approvals for some Countries <small>GMG PROVIDES COMMERCIALISATION UPDATE ON ENERGY SAVINGS COATING THERMAL-XR® - Graphene Manufacturing Group GMG (graphenemg.com)</small>
December 2023	Commissioning of the modular Graphene Production plant <small>Graphene Manufacturing Group Commissions Modular Graphene Production Plant - Graphene Manufacturing Group GMG (graphenemg.com)</small>
January 2024	Canada Approval Department of Environment and Climate Change Canada (ECCC)



Graphene Manufacturing Group

GMG BUSINESS UPDATE | THERMAL-XR®

January 2024	Launch of Nu-Calgon CoolWorx® powered by GMG Graphene at Chicago AHR Expo 2024. Launch of Nu-Calgon CoolWorx® powered by GMG Graphene at Chicago AHR Expo 2024.
April 2024	GMG Provides Commercialisation Update on Energy Savings Coating THERMAL-XR® GMG Provides Commercialisation Update on Energy Savings Coating THERMAL-XR®
December 2024	GMG Reaches Market Commercialisation Milestone on Energy Savings Coating THERMAL-XR® GMG Reaches Market Commercialisation Milestone on Energy Savings Coating THERMAL-XR®

About THERMAL-XR® ENHANCE powered by GMG Graphene:

THERMAL-XR® ENHANCE coating system is a unique method of improving the conductivity of corroded heat exchange surfaces and improving 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 potential power reduction.

THERMAL-XR® ENHANCE is now patented for 20 years in Australia and is expected to be patented in other countries around the world.

About GMG:

GMG is an Australian based clean-technology company which develops, makes and sells energy saving and energy storage solutions, enabled by graphene manufactured via in house production process. GMG uses its own proprietary production process to decompose natural gas (i.e. methane) into its natural elements, carbon (as graphene), hydrogen and some residual hydrocarbon gases. This process produces high quality, low cost, scalable, 'tuneable' and low/no contaminant graphene suitable for use in clean-technology and other applications.

The Company's present focus is to de-risk and develop commercial scale-up capabilities, and secure market applications. In the energy savings segment, GMG has initially focused on graphene enhanced heating, ventilation and air conditioning ("HVAC-R") coating (or energy-saving coating) which is now being marketed into other applications including electronic heat sinks, industrial process plants and data centres. Another product GMG has developed is the graphene lubricant additive focused on saving liquid fuels initially for diesel engines.

In the energy storage segment, GMG and the University of Queensland are working collaboratively with financial support from the Australian Government to progress R&D and commercialization of graphene aluminium-ion batteries ("G+Al Batteries"). GMG has also developed a graphene additive slurry that is aimed to improve the performance of lithium-ion batteries.

GMG's 4 critical business objectives are:

1. Produce Graphene and improve/scale cell production processes
2. Build Revenue from Energy Savings Products
3. Develop Next-Generation Battery
4. Develop Supply Chain, Partners & Project Execution Capability

For further information please contact:

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Cautionary Note Regarding Forward-Looking Statements

This news release includes certain statements and information that may constitute forward-looking information within the meaning of applicable Canadian securities laws. Forward-looking statements relate to future events or future performance and reflect the expectations or beliefs of management of the Company regarding future events. Generally, forward-looking statements and information can be identified by the use of forward-looking terminology such as “intends”, “expects” or “anticipates”, or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “should”, “would” or will “potentially” or “likely” occur. This information and these statements, referred to herein as “forward-looking statements”, are not historical facts, are made as of the date of this news release and include without limitation, the energy savings and enhanced corrosion resistance of the THERMAL-XR® ENHANCE graphene coating product, intentions as to the first shipment of THERMAL-XR® ENHANCE, expectations for receipt of a fully signed consent notice from the EPA.

Such forward-looking statements are based on a number of assumptions of management, including the receipt of a fully signed consent notice from the EPA. Additionally, forward-looking information involves 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 that GMG does not receive or receive on a timely basis the fully signed consent notice from the and the risk factors set out under the heading “Risk Factors” in the Company’s annual information form dated November 4, 2025 available for review on the Company’s profile at www.sedarplus.ca.

Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements or forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements and forward-looking information. Readers are cautioned that reliance on such information may not be appropriate for other purposes. The Company does not undertake to update any forward-looking statement, forward-looking information or financial out-look that are incorporated by reference herein, except in accordance with applicable securities laws.