

ASX RELEASE

29 January 2025

Excellent Progress on US-Based Technology Demonstration Plant

- **Design Progress:** Process and mechanical design criteria on track for **completion by end of February 2025**, with key engineering milestones achieved to advance towards long-lead equipment procurement thereafter.
- **Site Selection:** Extensive search underway across Gulf Coast USA for a suitable commercial premises, with several areas already shortlisted & initiatives afoot to secure existing industrial site to expedite timelines.
- **Targeted Operations:** Start-up of the inaugural plant remains on track for Q4 2025.
- **Strategic Site Focus on Texas, USA:** Pro-business environment, streamlined permitting, skilled workforce, world-class infrastructure, and strong legacy in chemical processing provide unparalleled advantages.
- Engagement with technology parks & development authorities across Gulf Coast States to explore potential infrastructure support & incentives, aligned with **advanced manufacturing & STEM job creation initiatives**.
- MTM is also actively evaluating U.S. Government funding programs designed to **accelerate the reshoring of critical materials & advanced manufacturing**, supporting domestic supply chain security and innovation.
- **Regulatory Advantages:** Anticipated favourable conditions under the new Trump Administration to support critical metals extraction and onshoring initiatives, particularly in pro-business Gulf Coast States.
- **Operational Leadership:** CEO Michael Walshe is currently in Texas with US President Steve Ragiel & MTM's partner KnightHawk Engineering for plant design review, strategic planning and site adjudication sessions.

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MTM Critical Metals Limited (“MTM” or the “Company”) (ASX: **MTM**; OTCQB: **MTMCF**) is pleased to provide an interim update on the progress of the 1-ton-per-day (1 TPD) Flash Joule Heating (FJH) Demonstration Plant, which is a critical milestone in the Company’s commercialisation strategy for its advanced critical metals extraction technology. The first plant is provisionally planned for Houston, Texas, USA.

The Company is pleased to report that the process and mechanical design criteria for the Demonstration Plant is on target for completion by the end of February 2025. Remaining detailed design elements will be finalised over the ensuing weeks in the optimisation phase, with procurement activities set to commence in March for long-lead item and run in parallel. Plant start-up remains on schedule and is provisionally planned for Q4 2025.

MTM Managing Director & CEO, Michael Walshe, said: *“The demonstration plant is a key enabler for several strategic partnerships that MTM is actively pursuing, and for **advancing our ambition to re-shore metals like gallium, back to America**. It will greatly enhance our ability to demonstrate the commercial scalability of our technology, reinforcing our position as a preferred partner for feedstock supply and offtake agreements.*

“We are actively engaging with technology parks and development authorities across several Gulf Coast states to explore opportunities for leveraging pre-existing facilities and securing incentive funding support. These efforts align with the region’s strong focus on advanced manufacturing and STEM job creation, fostering greater support for initiatives like ours and potentially accelerating the plant’s development and operational success.

*“The US ‘onshoring of manufacturing’ movement continues to gain traction, with anticipated strong support from the Trump Administration for critical and strategic technology metals, including gallium, germanium, indium, and rare earth elements (REEs). **MTM is well-positioned to capitalise on this policy direction, providing a secure and sustainable supply chain solution for these vital materials using homegrown American technology**”.*

Site Selection and Development Investigations

MTM's management team is actively evaluating locations for its Demonstration Plant, with a strong focus on Texas and the Gulf Coast region, and preliminary plans centred on Houston. Renowned for its pro-business environment, the region offers a compelling combination of advantages, including streamlined permitting, access to world-class infrastructure, and a deep talent pool specialising in engineering and advanced technologies.

The Gulf States extensive history as a global leader in energy and industrial processing, coupled with its ongoing transformation into a hub for technology innovation, positions it as an ideal location for MTM's facility. The region's established logistics network—encompassing major ports, rail, and highways—ensures seamless integration into domestic and international supply chains, while its supportive business ecosystem fosters collaboration across industries. These factors make it an unparalleled choice for scaling advanced critical metals recovery technologies like Flash Joule Heating.

To further accelerate the project, MTM is engaging with key stakeholders, including regional development authorities and industrial park operators. These discussions are aimed at potentially securing infrastructure support and financial incentives that will enhance the project's economic and operational viability. **MTM's strategic ambition is to leverage the Gulf Coast states' strengths to establish a world-class metal processing facility addressing critical supply chain challenges, while creating high quality STEM employment from Texas, USA born-“tough tech”.**

Targeted Start-Up Date

MTM is on schedule to provisionally commence operations at the demonstration plant by Q4 2025. This milestone is a critical step in advancing the Company's broader strategic objectives to scale its Flash Joule Heating technology. The demonstration plant will validate the technology at scale, providing potential clients with tangible proof of its efficiency and capabilities. It will also serve as a key enabler for securing commercial contracts, including partnerships for feedstock supply and product offtake.

Favourable Regulatory Environment & Departmental Support

Under the anticipated policy framework of the new Trump Administration, MTM expects favourable regulatory conditions for critical metals extraction initiatives. The administration's focus on strengthening domestic supply chains for critical minerals and promoting innovative technologies is expected to support the rapid deployment of projects such as MTM's FJH Demonstration Plant.

MTM is actively evaluating U.S. government funding Opportunities, including programs from the **Department of Energy (DOE)** and the **Department of Defense (DOD)**, aimed at accelerating the reshoring of critical materials and advanced manufacturing. The DOE's recent \$725M initiative to enhance domestic processing and manufacturing of battery-critical materials, along with the DOD's use of the Defense Production Act to fortify critical supply chains, underscores the growing federal commitment to reducing reliance on foreign sources, strengthening U.S. industrial capacity, and securing supply chains for critical and strategic materials¹.

By leveraging these opportunities, the Company aims to position itself as a leader in advanced manufacturing and critical metals innovation. With a U.S.-invented technology and U.S.-centric operations, MTM is well-positioned to support domestic supply chain resilience and technological advancement.

¹ U.S. Department of Energy (DOE) (2025), 'DOE issues notice of intent for funding to strengthen domestic critical materials processing', *U.S. Department of Energy*, <https://www.energy.gov/mesc/articles/doe-issues-notice-intent-funding-strengthening-domestic-critical-materials-processing>.

U.S. Department of Defense (DOD) (2025), 'DOD leverages Defense Production Act to galvanize critical supply chains', *U.S. Department of Defense*, <https://www.defense.gov/News/News-Stories/Article/Article/3985393/dod-leverages-defense-production-act-to-galvanize-critical-supply-chains/>.

On-the-Ground Presence

MTM Managing Director and CEO Michael Walshe is currently in Texas, USA, alongside MTM's US President, Steve Ragiel and the KnightHawk Engineering team. The visit includes operational and strategic planning sessions and process design reviews to ensure the project progresses smoothly and in alignment with the Company's commercialisation goals. MTM remains committed to delivering its 1 TPD FJH Demonstration Plant on schedule and achieving key milestones that position it as a leader in US-centric sustainable critical metals extraction technology.

The Bigger Picture

This facility serves as a cornerstone of MTM's commercialisation strategy, capitalising on the unmatched industrial ecosystem and pro-manufacturing policy environment of Texas and neighbouring Gulf Coast states to deliver cutting-edge metal processing technology. The region's strong alignment with federal initiatives to re-shore critical mineral supply chains, coupled with growing geopolitical focus on securing domestic access to technology metals, provides a uniquely supportive climate for advanced manufacturing projects like ours. By establishing this demonstration plant in a region renowned for industrial innovation and logistical excellence, MTM is well-positioned to contribute to a sustainable and secure supply chain for these essential materials.



Fig 1. Conceptual artist's impression of the FJH Demonstration Plant

This announcement has been authorised for release by the Board of Directors.

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ABOUT MTM CRITICAL METALS LIMITED

MTM Critical Metals Limited (ABN 27 645 885 463), is an ASX & OTCQB-listed company with management teams in Perth, Western Australia, and Texas, USA, and specialises in advanced metal recovery technologies. MTM's 100%-owned USA subsidiary **Flash Metals USA Inc** is based in Texas, USA. MTM possess exclusive licensing rights to the innovative *Flash Joule Heating technology*, a cutting-edge metal recovery and mineral processing method developed by esteemed researchers at Rice University, USA. Additionally, MTM holds exploration assets prospective for niobium (Nb), rare earth elements (REE), and gold, strategically located in Western Australia and Québec.

- Flash Joule Heating (FJH) is an advanced electrothermal process that enhances metal recovery and mineral processing compared to traditional methods. By rapidly heating materials in a controlled atmosphere, FJH efficiently extracts metals like lithium from spodumene, gallium from scrap, and gold from e-waste, among others. This technology has the potential to revolutionise metal recovery by reducing energy consumption, reagent use, and waste, offering a more economical and environmentally friendly alternative.
- MTM's West Arunta Nb-REE exploration assets are situated in one of Australia's premier exploration hotspots, where over \$60 million has been invested by ASX-listed companies such as WA1 Resources, Encounter Resources, Rio Tinto (in JV with Tali Resources), and IGO Limited. MTM also holds tenements in other key mineral regions across Western Australia, including the Mukinbudin Nb-REE Project, East Laverton Gold & Base Metals Project, and Mt Monger Gold Project. In Québec, the Pomme Project is a highly promising carbonatite intrusion rich in REE and niobium, located near the world-class Montviel deposit.

To learn more, visit:

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PREVIOUS DISCLOSURE

The information in this announcement is based on the following MTM Critical Metals Limited ASX announcements, which are all available from the MTM Critical Metals Limited website www.mtmcriticalmetals.com.au and the ASX website www.asx.com.au.

Date	Description
30 October 2024	Progress Update on 1 TPD Demonstration Plant

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original ASX announcements and that all material assumptions and technical parameters underpinning the relevant ASX announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original ASX announcements.

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