FIREBIRD COMPLETES EQUIPMENT COMMISSIONING FOR ADVANCED LMR CATHODE ACTIVE MATERIALS

Highlights

- **Firebird has received, installed and commissioned its proprietary cathode active materials (CAM) equipment** at its wholly owned China pilot plant, to produce advanced lithium-manganese-rich (LMR) CAM.
- **LMR CAM production scheduled for February 2026**, with customer samples planned for H2 2026 to support ongoing technical engagement, evaluation and qualification programs.
- **Firebird's LMR development program is being co-funded by strategic partner Taza Metal Technologies (Taza),** which has committed to fund 50% of the LMR research and development activities, further de-risking Firebird's capital outlay.
- LMR CAM targets materially higher energy density than conventional LFP, with performance characteristics comparable to certain high-nickel cathode chemistries, while substantially reducing nickel and cobalt content **through high manganese substitution (≥50% Mn)** using high-purity manganese sulphate monohydrate (HPMSM).
- **Firebird has established a world-leading, integrated pathway from manganese concentrate through HPMSM to LMFP, LMR and NCM CAM, which will be demonstrated at its Australian Demonstration Plant (ADP) in 2026.**
- **The ADP will provide a world-first capability** to produce and demonstrate LMR, NCM and LMFP CAM within a single integrated facility.

Manganese Battery Market Update

- **Major OEMs, including Ford and GM, have announced plans to commercialise LMR** cathodes for next-generation EVs by 2030, while LMFP adoption continues to grow across EV and ESS markets.
- Beyond EVs, LMR development is being accelerated by emerging high-energy applications**, including eVTOL aircraft and humanoid robotics.**

Figure 1. Recently commissioned LMR reactor vessel at Firebird's China pilot plant.

Firebird CEO, Mr Ron Mitchell, commented:

"Commissioning our LMR cathode active material equipment is a key milestone in delivering Firebird's ore-to-cathode strategy and validating our integrated pathway from manganese concentrate through HPMSM to advanced CAM products. This program positions us to demonstrate the production of high-energy, manganese-rich cathode materials that can reduce reliance on nickel and cobalt while meeting the performance, safety and cost requirements of next-generation EV and energy storage markets. Deploying this process at our Australian Demonstration Plant in 2026 will allow us to showcase LMR, NCM and LMFP CAM in a single facility and deepen engagement with global customers seeking secure, sustainable supply of advanced battery materials."

Further to the Company's ASX announcements dated 30 July 2025 and 3 September 2025 Australian-owned Firebird Metals Limited (ASX: FRB, Firebird or the Company) is pleased to provide the following update on the installation and commissioning of cathode active material (CAM) equipment for the production of advanced lithium-manganese-rich (LMR) cathode materials at its wholly owned China pilot plant. The Company has completed commissioning activities, with initial LMR CAM production scheduled to commence in February 2026 and customer sampling planned for the second half of 2026 to support ongoing technical engagement, evaluation and qualification programs.

This development represents a key milestone in advancing Firebird's vertically integrated, ore-to-cathode strategy, underpinned by a world-leading processing pathway from manganese concentrate through high-purity manganese sulphate monohydrate (HPMSM) to LMFP, LMR and NCM CAM. Firebird's proprietary synthesis know-how, energy-efficient process design and high-efficiency kiln platform position the Company to deliver manganese-rich cathode materials that offer the potential for materially higher energy density than conventional LFP, while significantly reducing reliance on nickel and cobalt.

As previously announced on 3 September 2025, Firebird's LMR development program is being co-funded by strategic partner Taza, which has committed to fund 50% of the LMR research and development activities. Taza is one of only three companies outside China currently producing HPMSM and this co-funding structure materially reduces Firebird's capital exposure while accelerating the advancement and validation of its LMR technology platform, and reflects growing external interest in manganese-rich cathode chemistries.

Momentum for manganese-rich cathodes continues to build globally, driven by demand for safer, lower-cost and higher-performance battery chemistries across electric vehicle

(EV) and energy storage system (ESS) markets. In parallel, Firebird is progressing plans to deploy and demonstrate this equipment set and synthesis process at its Australian Demonstration Plant (ADP) in 2026, which is intended to provide a world-first capability to produce and demonstrate LMR, NCM and LMFP CAM within a single integrated facility.

Why LMR Matters

LMR cathode technology is widely anticipated to deliver a range of **performance, cost and supply-chain advantages** relative to conventional lithium-ion cathode chemistries, supporting growing interest from OEMs and battery manufacturers.

- **Higher energy density potential:** LMR cathodes may deliver **higher energy density than LFP**, with performance characteristics comparable to certain high-nickel systems, while using materially less nickel and cobalt.
- **More resilient raw material mix:** Higher content manganese substitution can reduce exposure to **constrained and higher-risk** nickel/cobalt supply chains, aligning with OEM de-risking and ESG objectives.
- **Safety profile:** Manganese-rich cathodes are generally associated with **improved thermal stability** relative to high-nickel chemistries, supporting suitability for EV and ESS applications.
- **Manufacturing compatibility:** LMR can be produced through **evolutionary changes** to established cathode manufacturing processes, supporting faster adoption without new cell architectures.
- **Rapid technical progress:** Advances in **doping, surface coatings, particle engineering and electrolyte optimisation** are improving historical challenges such as cycle life and voltage retention.
- **Clear market fit:** LMR is well suited to **cost-sensitive EV platforms and grid-scale storage**, positioning it between LFP and high-nickel chemistries across cost, performance and safety.

During the recent Advanced Automotive Battery Conference (AABC), held in Las Vegas from 8–11 December 2025, General Motors delivered a presentation in which it publicly stated its preference for LMR battery technology, citing its higher operating voltage, improved energy density, and lower overall cell cost (Figure 2).

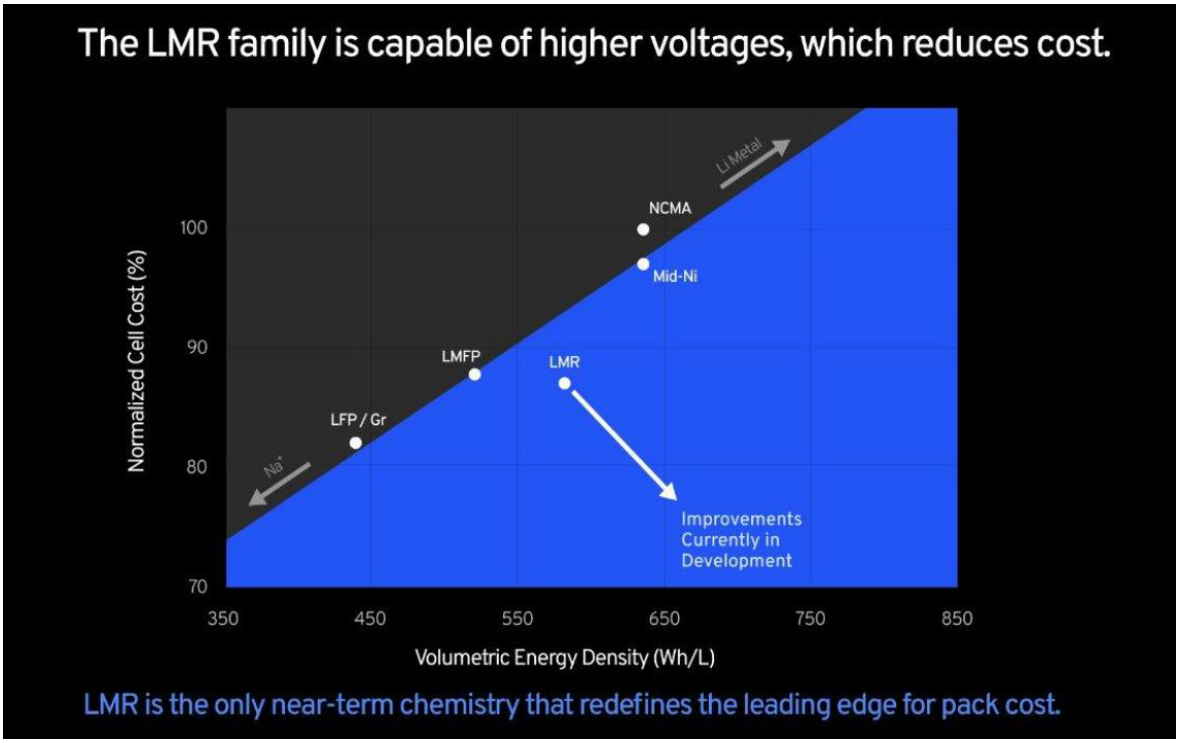

Figure 2. Slide from General Motor's presentation at the 25th Advanced Automotive Battery Conference (AABC) Dec 2025.

Firebird will adopt this proprietary process flow at its Australian Demonstration Plant (ADP), scheduled for deployment in Australia in 2026. The Company's process flow for LMR and CAM production is illustrated in Figures 3. LMR and LMFP are anticipated to be highly sought after key materials for the next generation of battery chemistries applied in the electric vehicle and energy storage markets. Product samples, produced from the ADP, will be supplied to a number of global Western customers as Firebird continues to build local capability in the production of advanced battery materials.

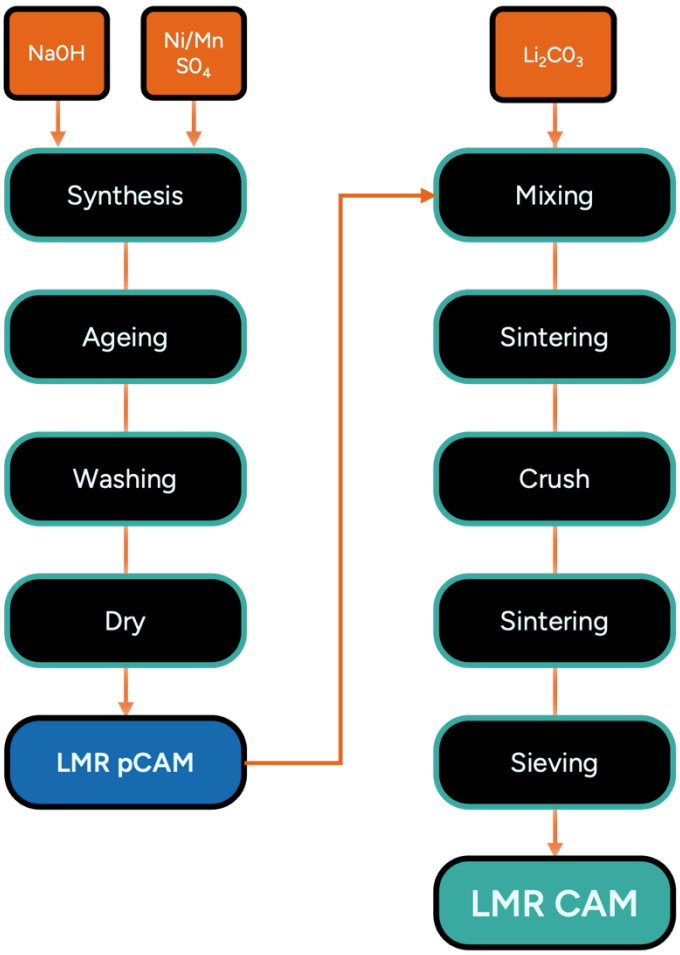

Figure 3. Firebird's LMR CAM production process flow.

This announcement has been authorised for release by the Board of Firebird Metals Limited.

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About Firebird Metals Limited (ASX:FRB)

Firebird Metals is an integrated manganese technology company positioned in the EV and energy-storage markets.

The Company's state-of-the-art lab and research facility demonstrate full flow-sheet capability, from manganese ore to finished battery active cathode materials. Firebird pairs downstream processing know-how with proprietary technologies, including a high-efficiency kiln and advanced crystallisation, targeting lower cost and energy use and enabling near-term revenue via equipment sales and licensing.

Firebird is advancing an lithium manganese iron phosphate (LMFP) and lithium manganese rich (LMR) pathway to near-term production of high-purity manganese sulphate and an LMR program for next-generation cathodes.

Firebird also holds 234 Mt of manganese resources in Western Australia, led by Oakover (176.7 Mt at 9.9% Mn, including Indicated 105.8 Mt at 10.1% Mn[1]) and Hill 616 (57.5 Mt at 12.2% Mn[2]). The Company has the flexibility to source manganese ore through third-party suppliers and stockpiles, with mining optionality retained within its broader portfolio.

JORC Compliance Statement

This announcement contains references to Mineral Resource Estimates, which have been reported in compliance with Listing Rule 5.8 and extracted from previous ASX announcements as referenced.

The Company confirms that it is not aware of any new information or data that materially affects the information previously reported and that all material assumptions and technical parameters underpinning the Mineral Resource Estimates continue to apply and have not materially changed.

[1] See ASX announcement dated 23 March 2023: Indicated Resource of 105.8Mt at 10.1%; Inferred Resource of 70.9Mt at 9.6% for global Resource of 176.7 Mt at 9.9% Mn.

[2] See ASX announcement dated 1 December 2021: Inferred Resource of 57.5 Mt at 12.2% Mn.