

Electra Completes Feasibility Level Study on Battery Recycling Facility

Toronto, Ontario – (June 5, 2025) – **Electra Battery Materials Corporation (NASDAQ: ELBM; TSX-V: ELBM)** (“Electra” or the “Company”) is pleased to announce completion of a feasibility level Class 3 Engineering Study for the construction of a modular battery recycling facility adjacent to its cobalt sulfate refinery north of Toronto.

The facility will be designed to recover lithium, nickel, cobalt, manganese, and graphite from lithium-ion battery manufacturing scrap and end-of-life batteries using Electra’s proprietary hydrometallurgical process. This process was developed and validated through a year-long pilot program that treated black mass sourced from an industry partner.

The next phase of work, funded in part by Natural Resources Canada, will involve operating the recycling process under continuous and semi-continuous conditions to simulate commercial-scale throughput.

“We are advancing a clear pathway to a closed-loop, domestically sourced battery materials supply chain,” said Trent Mell, CEO of Electra. “Cobalt recovered at the recycling facility will feed directly into our adjacent cobalt sulfate refinery, which is already in advanced construction, and other critical minerals will be returned to the battery supply chain. This integration strengthens North America’s energy security and positions Electra as a first mover in the continent’s emerging battery ecosystem.”

Strategic Synergy with Cobalt Refinery and Aki Battery Recycling

The study outlines how black mass will be refined at the new facility to produce key battery materials, including lithium, nickel, cobalt, manganese, and graphite. The cobalt stream will serve as feedstock for Electra’s permitted cobalt sulfate refinery, which has received financial backing from both the Government of Canada and the U.S. Department of Defense.

Electra’s partnership with Aki Battery Recycling, a joint venture with the Three Fires Group, will provide a reliable and secure supply of black mass feedstock. Aki, a majority Indigenous-owned recycling venture, is building a battery collection and shredding operation focused on responsible recycling of lithium-ion battery manufacturing scrap. This upstream supply chain security supports both Electra’s near-term demonstration efforts and long-term commercial ambitions.

“Through Aki, we are building a robust pipeline to process battery manufacturing scrap and end-of-life batteries that can be converted into value added materials right here in Ontario,” said Mell. “Together with our partners, we are aligning innovation, sustainability, and Indigenous economic development to meet global demand for critical minerals while ensuring the battery supply chain is built on shared prosperity and long-term stewardship.”

Collaboration and Commercial Path Forward

Electra plans to present the results of the engineering study to downstream partners, including battery manufacturers and OEMs, who have expressed interest in participating in the project. Their input will help determine the optimal scale of the facility and influence project timing, capital requirements, and potential offtake arrangements.

The study was completed in partnership with Green Li-ion, whose modular technology underpins the recycling process. Several process modifications and enhancements were developed during the collaboration, resulting in proprietary improvements that strengthen Electra's competitive position in the recycling value chain.

Critical Minerals and National Security

Electra supports North American energy independence in response to growing global competition, particularly in the face of China's dominance in critical mineral processing and battery supply chains. As gigafactory timelines evolve and the battery market rapidly expands, Electra's leadership in refining cobalt and other critical materials will be a key contributor to this transformation.

Electra's integrated black mass refining program aligns with strategic priorities in Canada and the United States. Cobalt plays an essential role not only in electric vehicles and grid storage, but also in military-grade batteries, communication systems, and backup power, where reliability under extreme conditions is non-negotiable.

Advanced battery storage systems also depend heavily on cobalt-containing chemistries for their energy density, thermal stability, and long cycle life. These systems are used to stabilize renewable energy inputs, support remote or off-grid communities, and provide critical backup for hospitals, data centers, and industrial infrastructure.

By recycling critical minerals domestically, with batteries already in North America, Electra is helping to close the loop on strategic minerals that are currently largely exported to Asia for processing.

Aki Battery Recycling

Aki Battery Recycling, Electra's joint venture with the Three Fires Group, is building a shredding and preprocessing facility to convert lithium-ion battery waste into black mass. The partnership provides economic benefits to Indigenous communities and meaningful participation in the battery supply chain, while securing a sustainable supply of raw material for Electra's refining operations.

Together, Electra and Three Fires Group are committed to building a resilient, secure, and inclusive battery materials supply chain in North America.

About Electra Battery Materials

Electra is a leader in advancing North America's critical minerals supply chain for lithium-ion batteries. Currently focused on developing North America's only cobalt sulfate refinery, Electra is executing a phased strategy to onshore critical minerals refining and reduce reliance on foreign supply chains. In addition to establishing the cobalt sulfate refinery, Electra's strategy includes nickel refining and battery recycling. Growth projects include integrating black mass recycling at its existing refining complex, evaluating opportunities for cobalt production in Bécancour, Quebec,

and exploring nickel sulfate production potential in North America. For more information, please visit www.ElectraBMC.com.

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