

Electra Initiates Feasibility Study for Battery Recycling Refinery

Toronto, Ontario – (January 28, 2025) – **Electra Battery Materials Corporation (NASDAQ: ELBM; TSX-V: ELBM)** (“**Electra**” or the “**Company**”) is pleased to announce the commencement of a feasibility level engineering study to build a battery recycling refinery adjacent to its cobalt refinery north of Toronto. The study will build on the technology and expertise accumulated during a year-long black mass recycling trial, whereby Electra produced technical grade lithium and a nickel and cobalt product from end of life lithium batteries.

Electra is establishing relationships with North American battery makers, offering a closed-loop partnership to return critical minerals back into the domestic supply chain. Currently, most black mass produced from battery scrap is shipped to Asia for refining, depriving automakers of the ability to control their critical minerals supply chain. Electra’s joint venture with the Three Fires Group, Aki Battery Recycling, will build a pretreatment facility for battery scrap, with the resulting black mass material shipped to Electra for refining.

“Having developed a proprietary hydrometallurgical process, this feasibility study is a critical step in advancing towards a commercial recycling facility,” said Mark Trevisiol, Electra’s Vice President of Project Development. “It builds on the knowledge gained from our previous 40-tonne demonstration plant and allows us to optimize our processes for a scalable commercial operation. As a first mover in North American cobalt sulfate production, we are leveraging our expertise in the domestic refining of black mass and further solidifying our leadership in sustainable battery material solutions.”

Dr. George Puvvada, Electra’s Vice President of Metallurgy & Technology, added, “At Electra, we are applying in-house innovation and technology in an incremental fashion to our existing hydrometallurgical process. This approach is about leveraging a strong, established foundation and the expertise of our experienced team to minimize risk. By doing so, we enhance efficiency, create higher-value products, and reinforce our position at the forefront of the battery materials sector.”

Electra has retained Green Li-ion to assist with the engineering and feasibility studies. Green Li-ion is a U.S.-based company in the business of providing engineered services and recycling technology solutions. Green Li-ion also has an operating black mass processing facility in Atoka, Oklahoma. Subject to the outcome of the feasibility study among other considerations, Electra may elect to purchase processing equipment through Green Li-ion for operation at Electra’s Refinery Site in Ontario.

“Electra’s core strategy is to reduce North America’s reliance on critical minerals from China by building a reliable and resilient domestic supply chain,” said Electra CEO, Trent Mell. “Through our proprietary hydrometallurgical process, tailored to meet the needs of a growing recycling market, we have consistently demonstrated the capability to produce high-quality, saleable products, including technical-grade lithium carbonate, nickel-cobalt MHP, and graphite.”

Black mass, the material remaining once lithium-ion batteries or battery scrap material are shredded and all casings separated, contains high-value elements, including lithium, nickel, cobalt, manganese, copper, and graphite, which can be recovered and recycled to make new batteries. In 2023, Electra commenced the processing of 40 tonnes of black mass at its refining complex north of Toronto to trial its proprietary recycling process. In June of 2024, the Company received C\$5 million from Natural Resources Canada to accelerate the next phase of its recycling project – demonstration on a continuous basis that the Company’s hydrometallurgical black mass process is scalable, profitable, and can be implemented at other locations.

Electra’s immediate priority is to complete construction of North America’s first battery grade cobalt refinery. The Company’s longer-term vision includes battery recycling and nickel production, thereby onshoring additional critical mineral refining processes needed for the North American electric vehicle battery supply chain.

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 within North America. For more information, please visit www.ElectraBMC.com.

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