A background image showing a battery production line. In the foreground, a metal tray holds several cylindrical battery cells. In the background, more battery packs are visible on a conveyor belt, and industrial machinery is blurred. A blue semi-transparent banner is overlaid on the center of the image, containing the main title.

North America's Critical Minerals Solution

Forward looking statements

This presentation includes certain “forward-looking information” within the meaning of Canadian securities legislation and “forward-looking statements” within the meaning of U.S. securities legislation (collectively “forward-looking statements”). Forward-looking statements include, without limitation, possible events, trends and opportunities and statements, including with respect to the state of the cobalt market, global market conditions, the proposed development of the Electra Battery Materials Park, the processing of raw material feedstocks, the ability to secure financing, results of exploration activities, potential acquisitions, operations outlook, capital expenditures and allocation, statements of intention with respect to Electra’s business and operations, successful development of assets, currency fluctuations, government policy and regulation and environmental regulation. In particular, forward-looking statements included in this presentation includes, without limitation, the opportunity to restart the Electra refinery and targeted metrics, anticipated recovery and earnings levels. Generally, forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, “believes”, “suggesting” or variations of such words or state that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements. Such factors include changes in supply and demand for cobalt, nickel and other battery raw materials, the results of metallurgical and engineering studies, changes in competitive pressures, growth within the industry and contributing factors thereto, timing and amount of capital expenditures, changes in capital markets, changes in foreign exchange rates and currency fluctuations, geopolitical risks and considerations, unexpected geological or environmental conditions, changes in and the effects of, government legislation, taxation and regulations and political or economic developments, success in attracting officers for the future success of the Company’s business, dependence on management and other highly skilled personnel, success in obtaining any required additional financing to advance strategic priorities, disruptions to Electra’s technology network including computer systems and software, as well as natural events such as severe weather, fires, floods and earthquakes or man-made or other disruptions of operating systems, structures or equipment, Electra’s ability to successfully integrate new technology, business and industry trends, including the success of current and future product development initiatives, risks associated with obtaining necessary licenses or permits, as well as those factors disclosed in the Company’s current Annual Information Form, as well as other public disclosure documents, available on SEDAR+ at www.sedarplus.com.

Many of these uncertainties and contingencies can affect the Company’s actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. All of the forward-looking statements made in this presentation are qualified by these cautionary statements. 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, there may be other factors that cause results not to be as anticipated. There can be no assurance that such statements will prove to be accurate, as actual results could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. The Company does not undertake to update any forward-looking statements, except in accordance with applicable securities laws. In addition, this presentation may contain forward-looking statements attributed to third party industry sources. Accordingly, any such statements are qualified in their entirety by reference to, and are accompanied by, the information and factors discussed throughout this presentation.

This presentation contains disclosure of certain non-GAAP financial measures or ratios, including EBITDA with respect to the production projections of the Company’s Cobalt Sulfate Plant. Such measures have no standardized meaning under IFRS and may not be comparable to similar measures used by other issuers. Electra believes that these measures and ratios provide investors with an improved ability to evaluate the prospects of Electra and, in particular, the Cobalt Sulfate Plant. The Company has based its estimates and projections in this presentation on a number of key assumptions, including those set out below and elsewhere throughout this presentation. With respect to the foregoing non-GAAP measure, the assumptions on which the estimates are based may not be achieved in the event that the actual results of certain factors differ from management’s estimates, including, but not limited to, timing and adherence to the construction schedule, commissioning ramp-up curve, operating costs and recovery capabilities. As the plant is not in production, the prospective non-GAAP financial measures or ratios presented may not be reconciled to the nearest comparable measure under IFRS and the equivalent historical non-GAAP financial measure for the prospective non-GAAP financial measure or ratio discussed herein is nil\$.

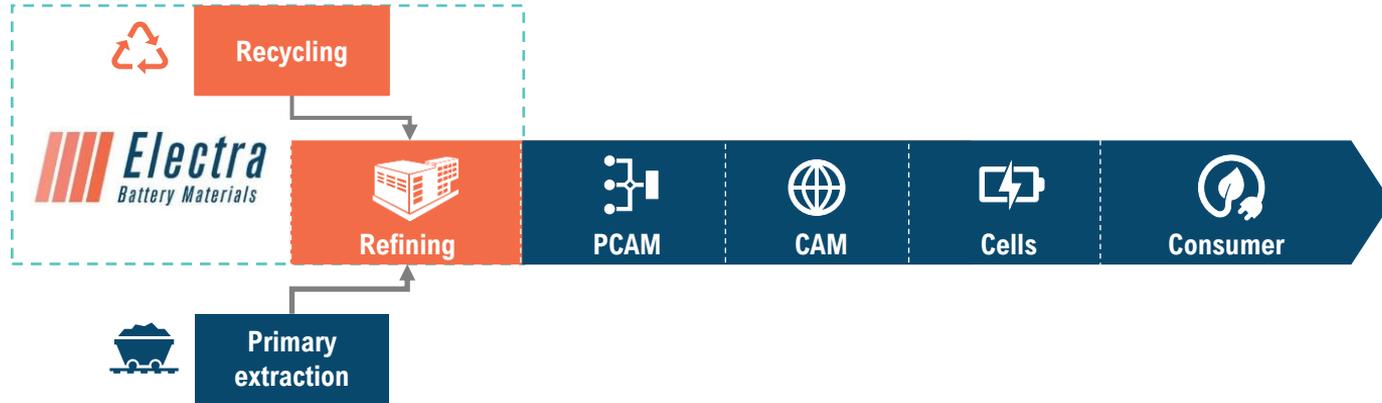
Electra anticipates that subsequent events and developments may cause their views to change and Electra specifically disclaims any obligation to update these forward-looking statements, except as required by applicable law. This presentation does not contain all information that a prospective investor may require. It is an overview only and does not contain all the information necessary for investment decisions. Timelines used in this presentation are for the purpose of aiding management in the planning and implementation of the projects and are not based on a detailed assessment of project requirements. Consequently, the timelines are subject to material revision as subsequent technical reports and assessments are completed. Future phases of the project are contingent upon completion of preceding phases. This presentation includes market and industry data which was obtained from various publicly available sources and other sources believed by the Company to be true. Although the Company believes it to be reliable, the Company has not independently verified any of the data from third-party sources referred to in this presentation, or analyzed or verified the underlying reports relied upon or referred to by such sources, or ascertained the underlying assumptions relied upon by such sources. The Company does not make any representation as to the accuracy of such information. Nothing in this presentation should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.



Battery Materials, Made in North America

- **Leading North American Battery Materials** → Developing a secure, sustainable domestic critical minerals supply chain
- **Strategically Located** → Operating in proximity to U.S. and Canadian supply chain partners
- **Integrated Battery Materials Refining** → Advancing cobalt sulfate production as well as future nickel and recycling capabilities
- **Key Partnerships** → Award from U.S. DoD and offtake agreement with LG Energy Solution
- **Strong Growth Potential** → Positioned to capitalize on rising demand for EVs and battery storage
- **Experienced Leadership** → Proven management team with expertise in battery metals, mining, and refining

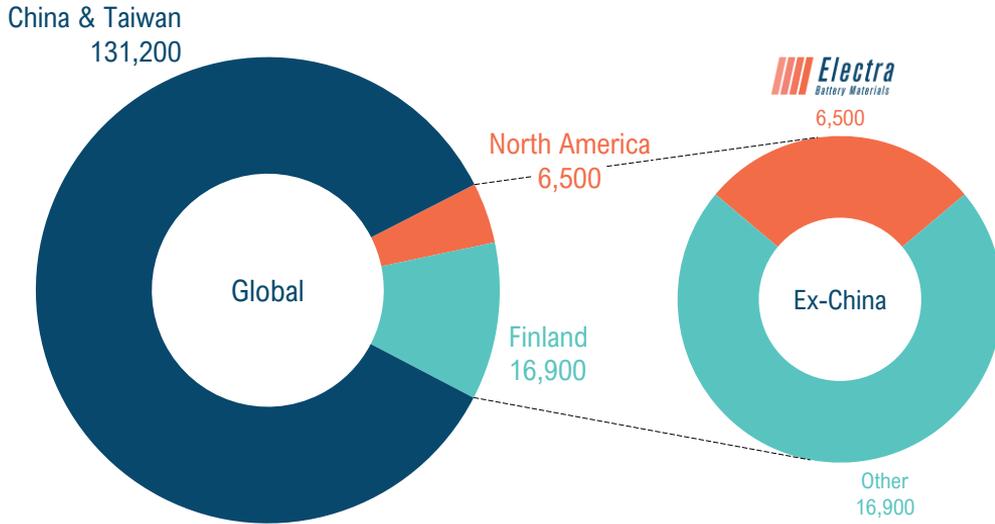
Electra is the midstream link between raw material & lithium batteries



Our facilities can process material from mines, and recycled material from battery manufacturing, to produce saleable materials that go into lithium batteries.

Electra is building value as the sustainable, traceable, and FEOC-free link in the supply chain, producing secure, lower carbon materials in North America.

Will be 100% of North American supply of battery grade cobalt

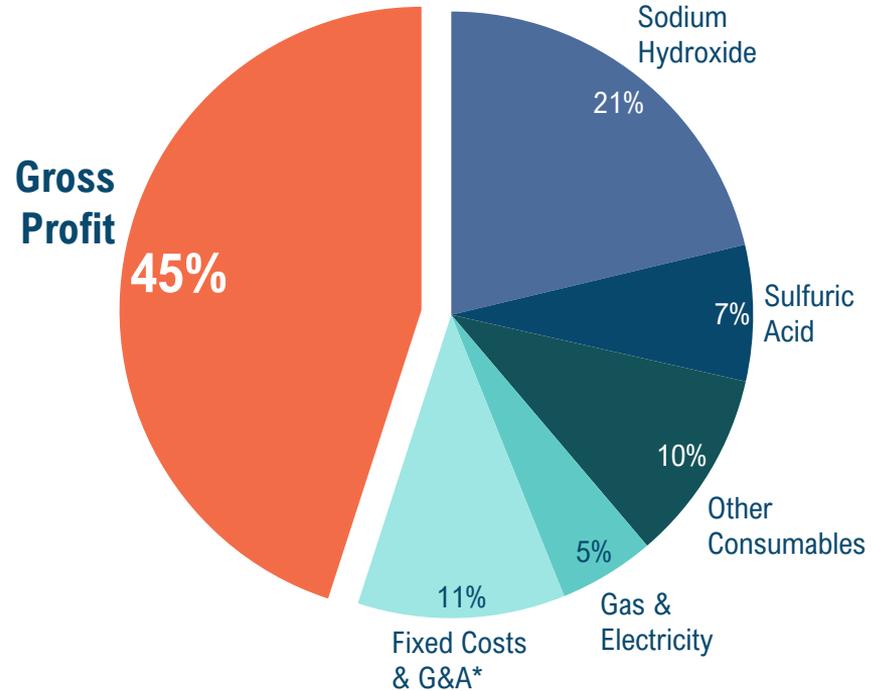


Battery grade sulfate capacity (t Co) (2023)

- Electra's cobalt sulfate supply will be integral to Precursor Cathode Active Materials (PCAM) plants being constructed in North America
 - Demand expected to reach up to 180,000t cobalt by 2030*
- Finland hosts the only significant cobalt sulfate refining outside of Asia; most is consumed in Europe
- Once fully commissioned, Electra's cobalt sulfate production will be ~27% of the ex-China market share
 - China has already instituted export bans and tight controls on certain rare earths and critical minerals

Generous profit margins & free cash flow

- 100+ year operating life
- Toll model
- Lower risk commercial strategy
- Considerations in place to accommodate fluctuations on sodium hydroxide and sulfuric acid pricing
- Potential to unlock operational efficiencies following ramp up



Commercial arrangements in place



- 100% of feedstock requirements will be met through agreements with Eurasian Resources Group (ERG) and Glencore, two global leaders in ethical cobalt production
- Electra will supply LG Energy Solution with 19,000 tonnes of battery grade cobalt over a five-year period, representing up to 80% of Electra's production
- Commercial interest expressed of approximately 14,000 tonnes per year of cobalt contained in sulfate, more than 2x Electra's expected capacity

Refinery construction ready for completion

US\$20M

Of funding committed by
U.S. Department of Defense

100+ years
asset life



US\$250M
replacement value

600+ acres
of land



Electra

NASDAQ: ELBM | TSX.V: ELBM

30% capacity increase planned with minimal capital expenditure

Site currently permitted to produce 5,000t cobalt contained in sulfate

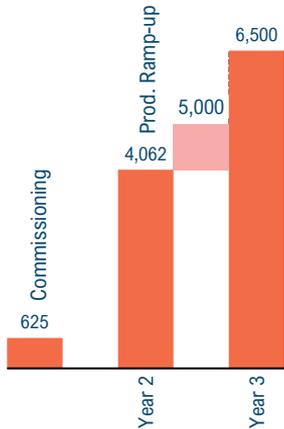
- Plant to be commissioned for 5,000t cobalt
- Permit amendments for further expansion expected to take approximately 12 months

Crystallizer circuit has been sized to 6,500t cobalt to remove future bottleneck

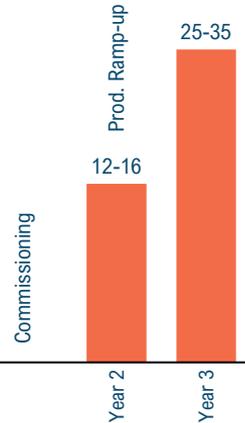


Cobalt Sulfate Plant – Production and EBITDA Profile^{1,2}

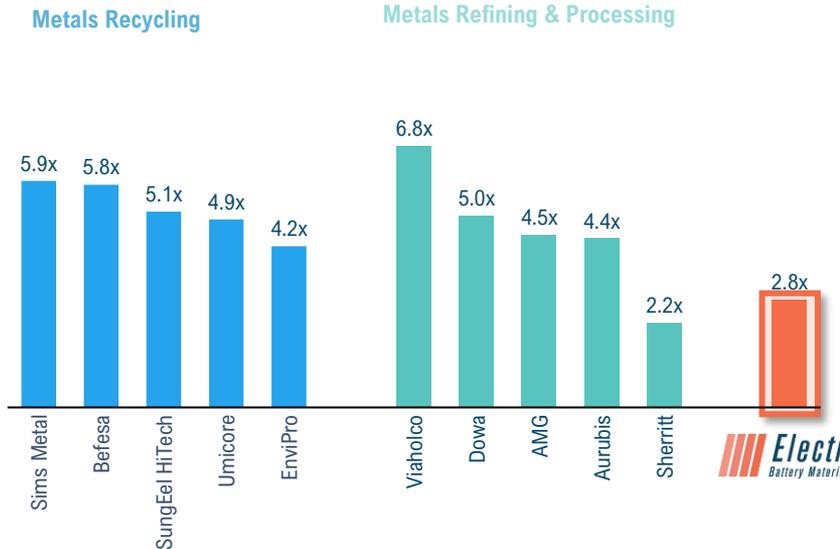
Production
(cobalt in metric tonnes)



EBITDA
(USD millions)



Share Price to EBITDA



Key Assumptions

100% Toll Agreement

Excludes corporate G&A
(Stand-Alone Asset Assumption)

2% annual inflation target rate applied to all revenue and cost line items

Operating costs and recoveries in line with internal technical estimates (commercially sensitive)⁴



NASDAQ: ELBM | TSX.V: ELBM

¹ Bloomberg street consensus estimates; based on 2026E EBITDA, and 2025E EBITDA where 2026E figures are unavailable

² Commissioning in year 1 following completion of construction, with ramp up to 5,000 tpa run rate by year 2-3 and 6,500 tpa run rate in year 3.

³ Electra's forward multiple based on management year 3 estimated EBITDA, reflecting when run-rate operations are expected to be achieved

⁴ Refer to the Forward-Looking Statements slide for additional commentary on operating cost and recovery assumptions.



The first of its kind

Existing refinery, infrastructure,
and permits

Hydrometallurgical facility with an operating history, and only facility of its kind in North America in construction to supply the electric vehicle market with cobalt sulfate.

Fully permitted site, located in Ontario, Canada, with exceptional infrastructure and labour force in the region.

Technically derisked with successful flowsheet testing, proven construction engineering and technology solutions.

Building an ethical, sustainable supply chain



51% lower refinery CO₂ emissions¹ &

40% lower CO₂ freight emissions



Removes
~1.0M²
combustion engines from
the road every year¹



**Responsible
Mineral Initiative**
traceability, commitment
to ethical supply chain

We take a proactive, risk-based approach to environmental management, with robust measures that help ensure we minimize our environmental impact, while ensuring the viability of the environment for future generations. We strive to process natural resources responsibly, setting clear expectations for ourselves and our suppliers regarding environmental, social, and governance performance.



NASDAQ: ELBM | TSX.V: ELBM

1. Based on a peer comparison life cycle assessment conducted by Minviro Ltd.;

2. Assuming 50kWh per unit high-nickel NCM

Source: Electra Battery Materials Corporation

The Future of North America's Critical Minerals Supply Chain



Pipeline of projects for a resilient supply chain



Recycling

Feasibility study underway for scalable, industrial operation

Aki Battery Recycling to provide shredded black mass feedstock



North American Nickel

Potential for North American battery grade nickel sulfate refinery capacity



Idaho Cobalt Properties

Opportunity to onshore North American cobalt supply



Bécancour Cobalt Processing

Opportunity for battery grade cobalt sulfate (metal dissolution) in Quebec



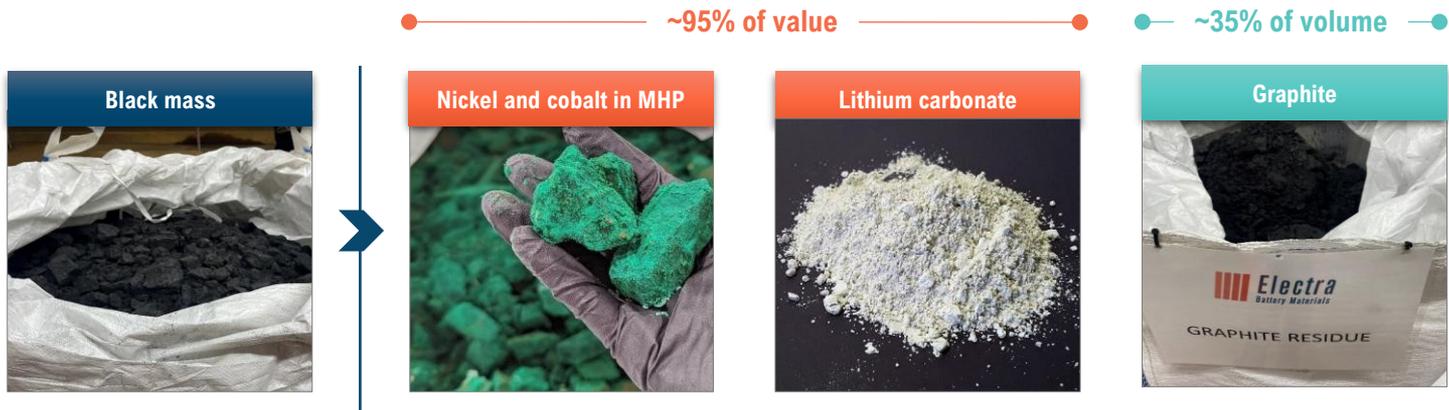
Positioned to close the loop in North America

Year-long demonstration process has successfully proven capable of producing saleable materials from Black Mass

Black Mass is produced when batteries reach the end of their useful life, or as waste from battery manufacturing process

Demonstrated recycling capacity

- Successfully demonstrated production of saleable materials from black mass, derived from battery manufacturing scrap or end-of-life batteries throughout 2023, using a low-GHG hydrometallurgical method
- Achieved first North American recovery of nickel-cobalt MHP and technical grade lithium carbonate using this process, also recovering manganese and graphite
- Secured C\$5M in government funding in 2024 to scale the process and potentially enable broader implementation
- Feasibility study underway, expected to be complete in mid-2025



The link to closing the loop: Aki Joint Venture



The first wave of battery scrap will come from cell manufacturing plants

The Aki Battery Recycling joint venture will source and process lithium-ion battery waste into black mass at a state-of-the-art facility in southern Ontario

Planned Stellantis/LGES and VW/PowerCo battery plants are located on traditional lands of Three Fires' First Nations shareholders

Advanced battery shredding will recover key minerals like lithium, nickel, and cobalt, reducing EV supply chain emissions and reliance on foreign sources for critical materials.



Three Fires Group

- Lead the capital resourcing
- Secure land for the future facility



- Technical and commercial expertise
- Refine black mass from future Aki facility





North American nickel sulfate

- There are **no nickel sulfate refineries in North America** today
- Nickel is the most abundant mineral in NCM and NCA cathodes
- Electra has completed a government-sponsored nickel sulfate refining scoping study
- Three nickel source options developed derive CAPEX and OPEX estimates for the facility and under the following conditions
 - (1) Battery grade nickel sulfate plant without a PCAM production facility
 - (2) Battery grade nickel sulfate plant with integrated PCAM production facility
- Work was undertaken to quantify GHG estimates to allow for comparisons against internationally recognized benchmarks

Opportunity for ‘Made in America’ critical minerals

- Idaho Cobalt Belt is America’s best opportunity to onshore cobalt supply and reduce reliance on China
 - Largest unmined cobalt resources in the U.S.*
- 53Mlbs of Cu and 14Mlbs of Co produced historically from the Belt
 - Blackbird Mine historic resource 7Mt at 0.74% Co and 1.15% Cu
- Electra’s Idaho properties similarly contain significant Co-Cu resources open for expansion and new additional resources
- High grade deposits amenable to underground mining with a minimal environmental footprint
 - 10-year exploration permit secured in 2024, including Iron Creek project, covering 91 designated drill pad locations and hundreds of potential drill targets



Idaho Copper Cobalt Properties

- Several cobalt/copper/gold deposits and prospects within Electra’s consolidated Idaho Copper Cobalt Properties (over 70,000 ha in size)
- Exploration drilling to expand resources at Iron Creek and is open in all directions

Iron Creek

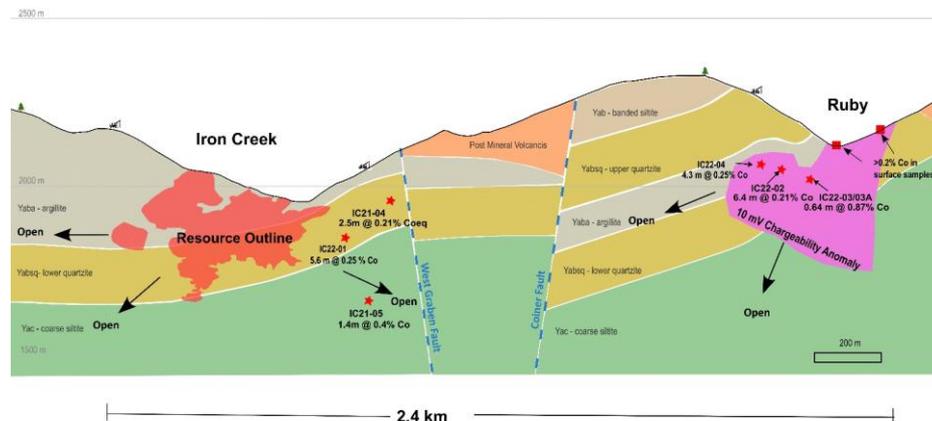
Mineral Resources Estimate updated March 2023

Ruby

Drilling at Ruby demonstrated additional resource potential

CAS

Mineralization at CAS distinct (gold-rich)



Category	Tonnes	Cobalt (%)	Cobalt (Mlbs)	Copper (%)	Copper (Mlbs)	NSR Value (US\$)
Indicated	4,451,000	0.19	18.4	0.73	71.5	123.65
Inferred	1,231,000	0.08	2.1	1.34	36.5	118.48



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Mineral Resource Estimate updated in Company press release dated March 10, 2023, with an NSR cut-off of US\$87.00



Bécancour cobalt sulfate opportunity

- Co-locating with precursor makers in Quebec
- Strategic location - allocated near Vale's nickel sulfate plant (also metal dissolution)
- GM, POSCO, Ford, and others are building facilities in “battery valley”
- Government support, with strong relationship with Investment Quebec
- Electra uniquely positioned to build this refining capacity
- Targeting Phase I metal dissolution line of up to 2ktpa cobalt contained in sulfate, with Phase II of 5-10ktpa
- Attractive economics of processing with Electra, including cost savings through direct integration with POSCO facility

Core Strategic Benefits

- Refining capacity secured in a friendly jurisdiction
- 100% hydroelectric electricity supply
- Supplemental supply from Electra's Ontario site in case of Bécancour bottleneck

The team

Management



Trent Mell
Founder & CEO



Marty Rendall
CFO



Mark Trevisiol
P.Eng
Vice President,
Project Development



Michael Insulán
PhD
Vice President,
Commercial



Heather Smiles
Vice President, Investor
Relations & Corporate
Development



Dr. George Puvvada
P.Eng., PMP, PhD
Vice President,
Metallurgy and
Technology

Directors



John Pollesel
Chairman
CEO,
Boreal Agrominerals
Inc



Trent Mell
Director
Founder & CEO,
Electra



Alden Greenhouse
Director
Vice President, Critical
& Strategic Minerals,
Agnico Eagle Mines



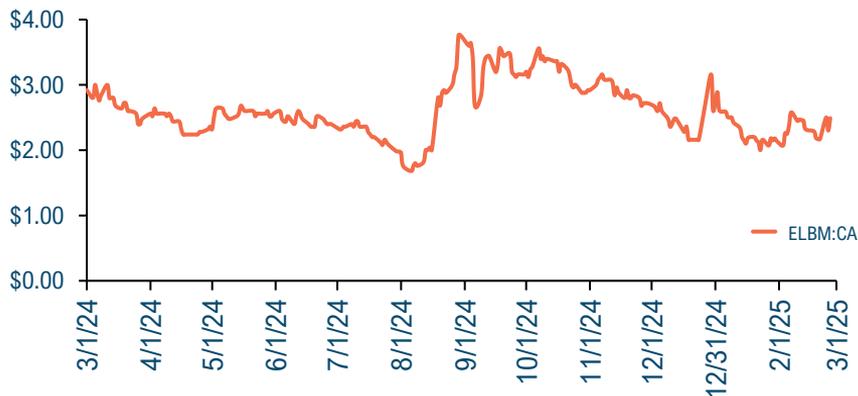
Gov. Butch Otter
Director
Retired, Governor of
Idaho ('07-'19)



Susan Uthayakumar
Director
MD, Chief Energy and
Sustainability Officer,
Prologis

Capital structure

Share Price (TSX-V: ELBM)



Capitalization and Market Facts¹

Ticker – NASDAQ & TSX-V:	ELBM
Shares Outstanding	14.8M
52 Week Range	C\$1.66 - \$3.92
Current Share Price	C\$2.49 / US\$1.74
Average 30 Day Volume ²	46,000
Market Cap	C\$37M / US\$26M

Analyst Coverage



1. As of 1/15/25. Source TMX
2. Combined on the NASDAQ and TSX-V



NASDAQ : ELBM | TSX.V : ELBM

Heather Smiles, VP Investor Relations & Corporate Development
Info@ElectraBMC.com
+1 416 900 3891