



Electra Battery Materials

ONSHORING THE EV SUPPLY CHAIN

Annual and Special Meeting of Shareholders

October 24, 2023

Forward Looking Statements

All statements in this presentation other than statements of historical fact constitute “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, and “forward-looking information” under similar Canadian legislation and are based on the reasonable expectations, estimates and projections of Electra Battery Materials Corporation as of the date of this presentation. Forward-looking statements and forward-looking information 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, capital expenditures, successful development of assets, currency fluctuations, government policy and regulation and environmental regulation. In particular, forward-looking information included in this presentation includes, without limitation, the opportunity to restart the Electra refinery and targeted metrics. Generally, forward-looking statements and forward-looking information 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”, 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 and forward-looking information 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 and forward-looking information. 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, timing and amount of capital expenditures, changes in capital markets, changes in exchange rates, 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, success in obtaining any required additional financing to advance strategic priorities, and risks associated with obtaining necessary licenses or permits.

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 and forward-looking information made by, or on behalf of, the Company. There can be no assurance that forward-looking statements and forward-looking information 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 and forward-looking information 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 or forward-looking information, 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 and forward-looking information. The Company does not undertake to update any forward-looking statements or forward-looking information that are incorporated by reference herein, except in accordance with applicable securities laws.

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. 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.



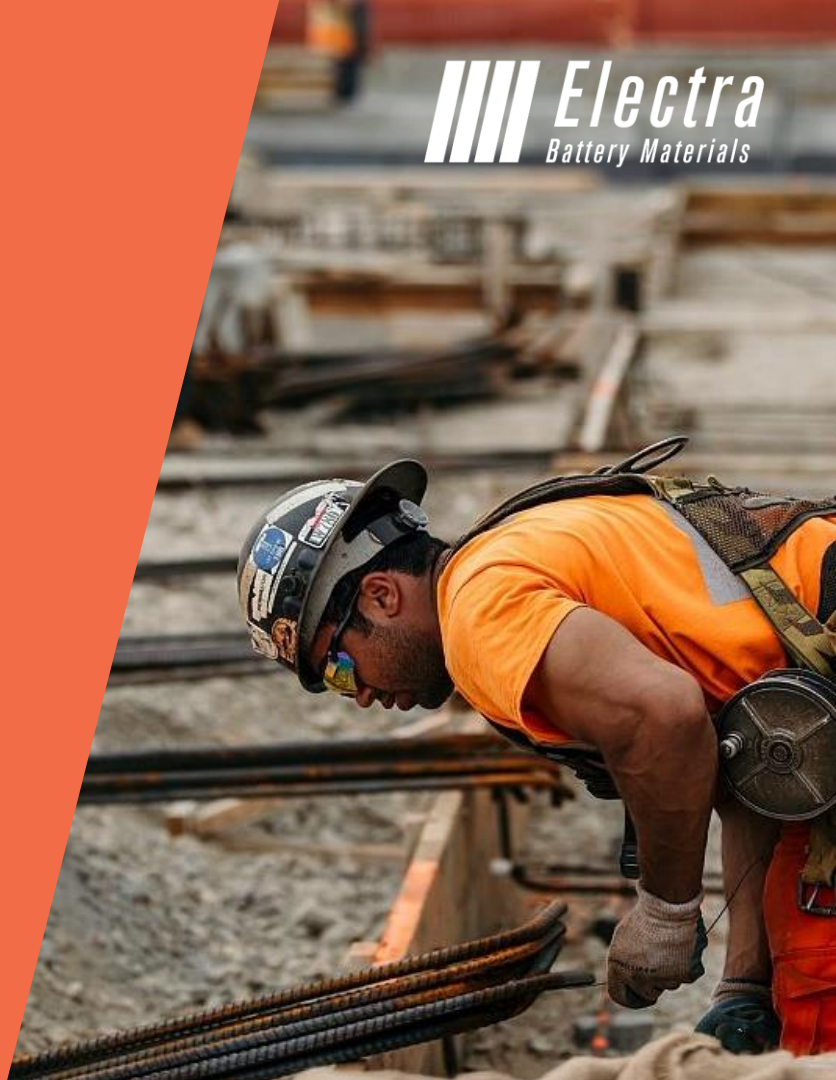
A year of progress

- Continued construction of refinery
- Launch of black mass recycling trial
- Extension of LG Energy solution contract
- MOU with Three Fires Group
- Updated mineral resources estimate for Iron Creek
- Inaugural ESG Report



Numerous achievements against a backdrop of unfavorable market conditions

Refinery project update



June 2021





September 2023



September 2023

 *Electra*

October 2023

Updated refinery project economics

Updated project costs:
US\$113 to \$121.8M

US\$55.7 to \$62M in
funding is required

- Completed re-baseline engineering report on refinery project timelines and costs
- Report prepared by EPCM contractor
- Review completed by 3rd party-estimator
- Increased costs driven by inflation, expansion scope, equipment delays and supply chain disruptions
- Updated project economics have de-risked refinery project

Refinery project next steps

- Accelerate focus on project funding
- Continue to receive long-lead items
- Limit capital expenditures
- Shift construction work to owners' team
- Continue black mass recycling trial



Battery recycling



Process to recover high value elements in batteries



Recovery of high value elements contained in shredded lithium-ion batteries



Black mass typically contains nickel, cobalt, lithium, copper, and graphite



Recovered elements are processed and refined



Recycling process produces multiple marketable products



Keys to recovery are effective hydrometallurgical process and low carbon emissions

Electra launched large-scale trial in December 2022

Plant scale recycling trial is ongoing

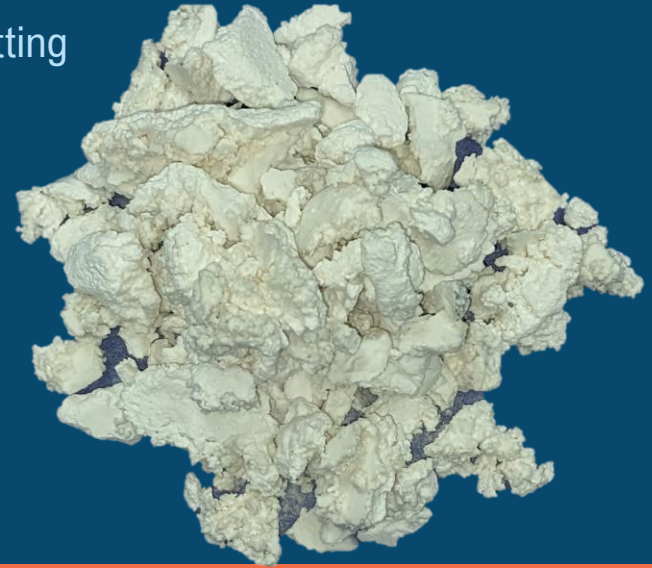
- Large plant scale trial is underway at refinery complex
- Using proprietary hydromet process previously tested
- Objective is to recover high value metals for resale
 - Nickel, cobalt, lithium, manganese and graphite
- Critical success factors for trial
 - Effectiveness of process
 - Recovery rates



Success will pave the way for commercialization

Trial results have exceeded expectations

- Recovery rates are at or superior to results achieved in lab setting
- First recovery of nickel-cobalt MHP via hydromet process
- Lithium-carbonate production is a potential game changer
- First customer shipment of nickel-cobalt MHP
- Strong interest in trial results from various stakeholders
- Catalyst to form JV with Three Fires



Results and compelling economics pave the way to re-prioritize focus

Next steps with black mass trial

- Ongoing optimization of hydromet process
- Optimize flow sheet
 - Metsim (material balance)
 - Process flow diagrams
 - Early process engineering
- Identify long-lead delivery items
- Update scoping study
- Develop summary report
- Determine path to commercialization



Build on successes achieved to date

Strategic developments & outlook



Electra
Battery Materials



Electra's strategic blueprint



Cobalt sulfate production in Ontario



Black mass recycling



Cobalt sulfate production in Bécancour



Addition of nickel and manganese sulfate production in Ontario



Expansion of production capabilities

- Electra has a multiprong strategy
- Underpinned by battery materials complex in Ontario
- Includes expansion to Bécancour, Que
- Includes expansion to nickel and manganese production
- Strategy provides optionality and value creation
- Complex provides room for growth

Multi-phase strategy to onshore the EV supply chain

Enhanced agreement with LG Energy Solution



- 5-year strategic supply agreement
- 19,000 tonnes of battery grade cobalt
- Deliveries to start in 2025
- Represents 80% of refinery output during term
- Value of agreement is approximately US\$617M*

Two-year extension and increase in amount of product shipped by 12K tonnes

Battery waste recycling with First Nations group

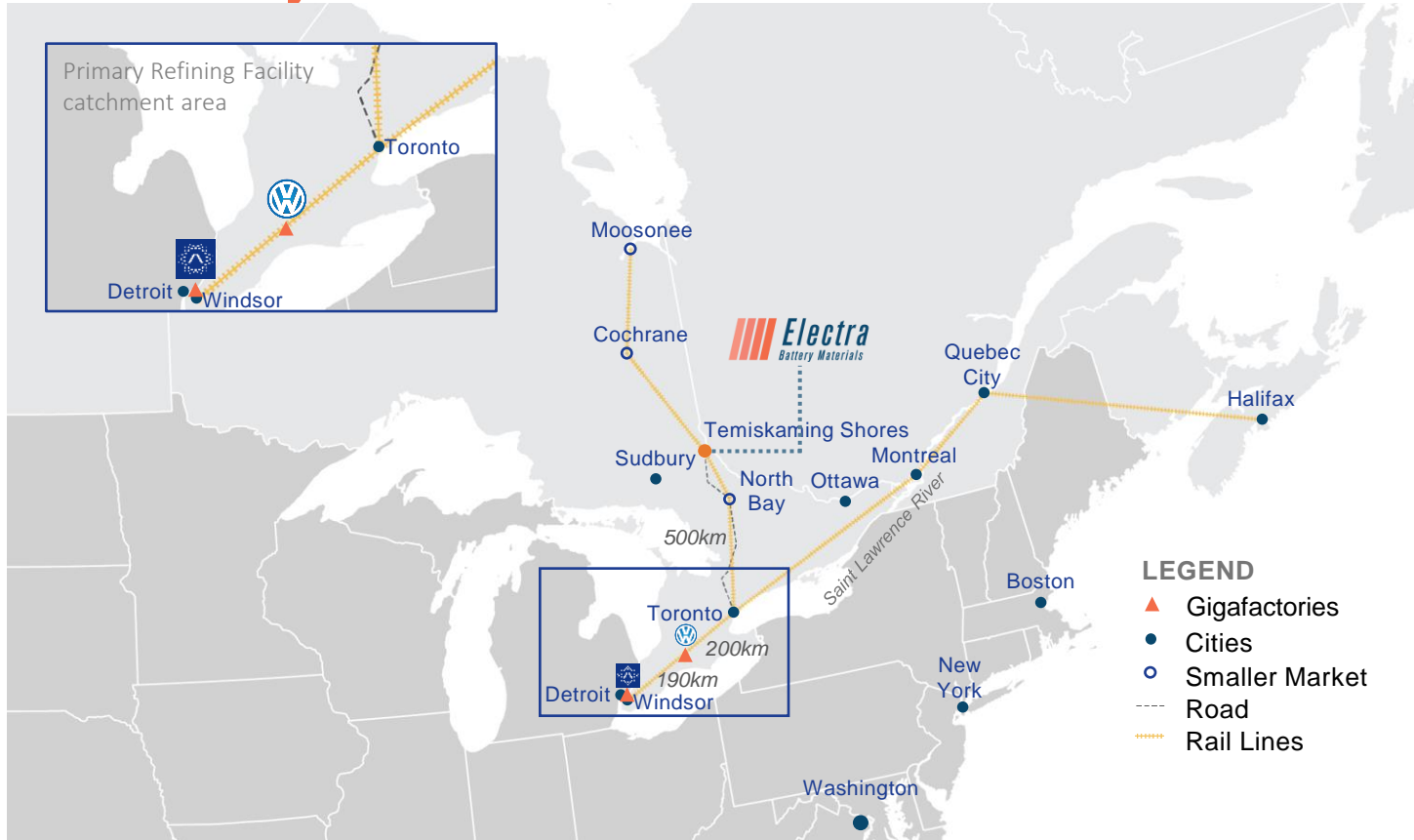
- Three Fires is a First Nations owned investment group focused on generating wealth for its members
- Announced plans to form JV with Electra in May
- Committed to strategic investment in Electra
- Planned Stellantis and VW battery plants sit on Three Fires traditional lands
- Launched 'north-south' business alliance to create linkage between raw materials in Northern Ontario and EV manufacturers in the south



Three Fires Group

Key driver in accelerating battery recycling strategy

Area of focus for joint venture with Three Fires



Near-term milestones

H2 2023

- Ongoing delivery of long-lead items
- Summary report of black mass trial
- Government funding decisions

H1 2024

- Permitting at Iron Creek
- Strategic partnerships
- Bécancour prefeasibility study



Multiple value creation catalysts



Questions?



Electra Battery Materials

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TSX-V: ELBM

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