Electra Investor Call

Building North America's First Battery Materials Park

November 8, 2021

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.

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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.

Dr. Frank Santaguida, P.Geo and Mark Trevisiol, P.Eng. are Qualified Persons as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Project ("NI 43-101") and has reviewed and approved the technical content in this presentation. Both are employed as officers of Electra.

Why Electra Battery Materials?

- North America needs precursor cathode active materials (PCAM) to support new cell plants
- Electra can deliver this faster than anyone due to:
  - Existing permitted hydrometallurgical site
  - 12 months from commercial production
  - Proximity to nickel feed; established black mass sources
  - Infrastructure
  - Hydroelectric power
- Phased approach:
  1. Cobalt refinery to be commissioned in Q4 2022
  2. Battery recycling testwork and flowsheet design nearing completion; demonstration plant in 2022 with commercial production in 2023
  3. Nickel refinery in 2024-25
  4. PCAM plant partnership in 2025
- Peer-leading ESG commitments through recycling, a low carbon footprint, traceability and a shortened and secure domestic supply chain

Strategic repositioning

First Cobalt Corp.

Cobalt company

- Battery grade cobalt sulfate production
- Third-party cobalt hydroxide feed
- Iron Creek primary cobalt extraction

Products: Cobalt

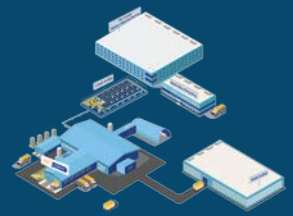
Rationale

- OEM and cell maker request for an **integrated, localised and environmentally sustainable solution** for critical raw material sourcing in North America
- North American need for **industrial hub** to convert regional nickel resources to battery grade sulfate

Electra Battery Materials Corp.

Battery materials company

- Battery grade cobalt sulfate production
- Third-party cobalt hydroxide feed
- Iron Creek primary cobalt extraction



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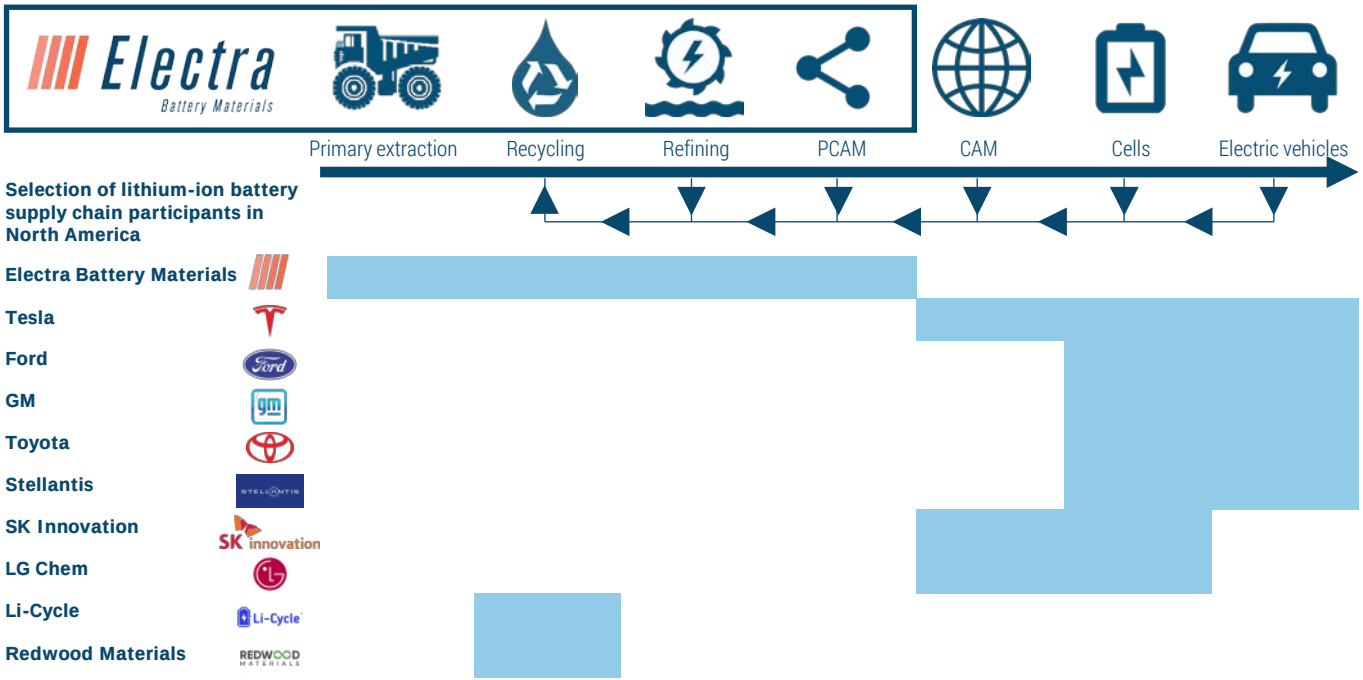
- Lithium-ion battery recycling
- Battery grade nickel sulfate production
- Third-party North American nickel raw material feed
- Battery precursor manufacturing
- International expansion

Products: Cobalt, Nickel, Lithium, Copper, Graphite, Precursors

North America's integrated, sustainable battery materials solution

Battery Materials Park – Unique position in North America

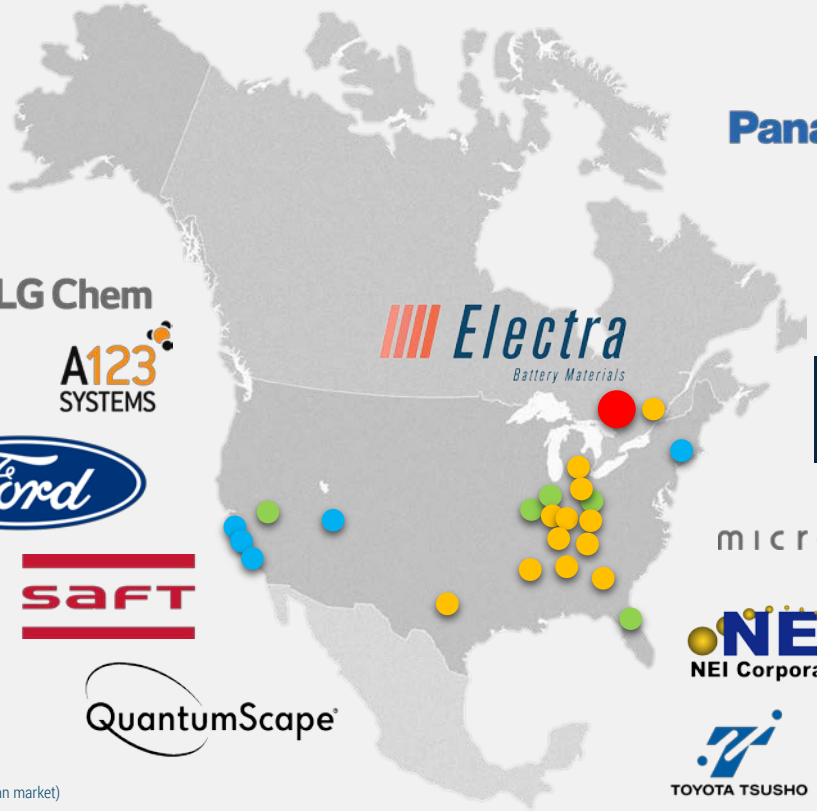
Electra's ambition is to operate in the first four stages of the battery supply chain



1. Lithium-ion battery precursor material 2. Lithium-ion battery cathode active materials
Source: Electra Battery Materials

North American battery cell pipeline exceeding 600 GWh

Lithium-ion battery pipeline sufficient to supply batteries for more than 9 million full-battery electric vehicles per year[1]



SK innovation
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solid energy
LG Chem
A123 SYSTEMS
TESLA
Envision AESC
Ford
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QuantumScape
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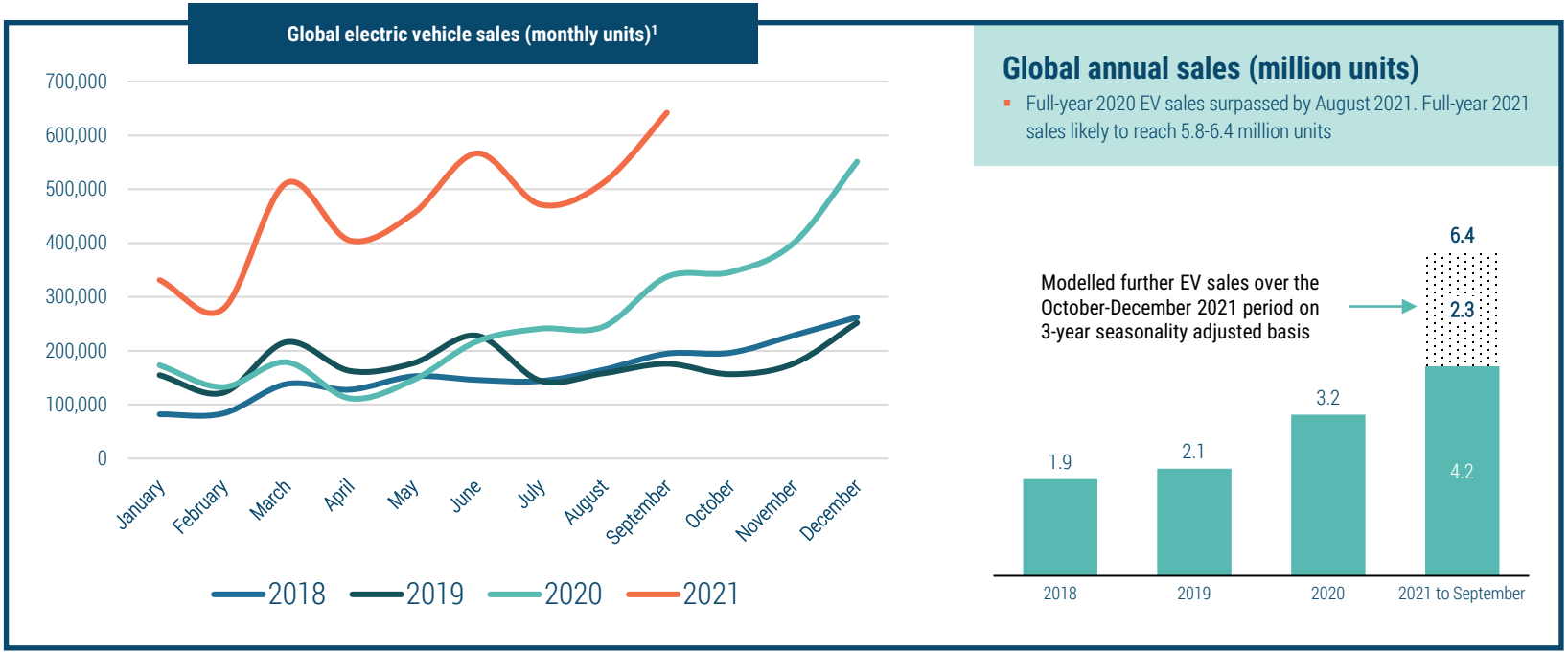
SILA NANOTECHNOLOGIES
BRITISHVOLT
microvast
RIVIAN
NEI
NEI Corporation
gm
AKASOL
TOYOTA TSUSHO
THE LION ELECTRIC CO

1. Assuming average vehicle pack size of 67kWh (2021 YTD average in North American market)
Source: Electra Battery Materials, CIC energiGUNE

Electric Vehicle and Battery Materials Market Forecast

Electric vehicle market developments

New models expected to drive strong sales in 2022; battery shortage remains limiting factor

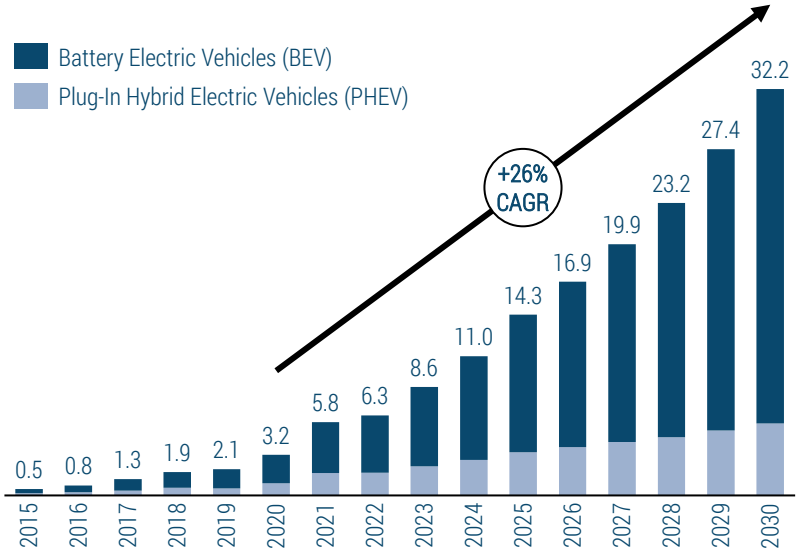


1. New Energy Vehicle (NEV) sales, including Battery Electric Vehicles (BEVs) and Plug-In Hybrid Electric Vehicles (PHEVs)
Source: Electra Battery Materials, Rho Motion

Electric Vehicles (EVs) | Extraordinary growth trajectory

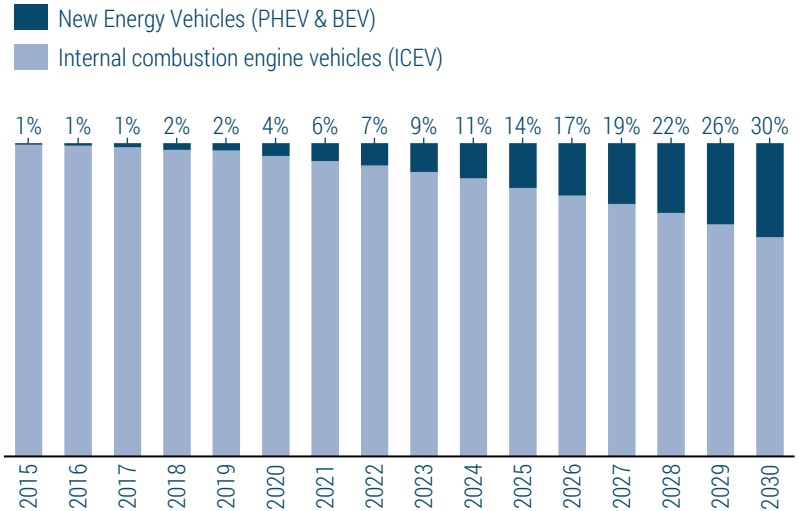
EV sales to 2030 (million units)

Global electric vehicle sales are forecast to increase ten-fold from 3.2m units in 2020 to 32.2m units in 2030.



EV market penetration to 2030 (%)

Global EV market penetration rates forecast to rise from 4% in 2020 to 30% by 2030.

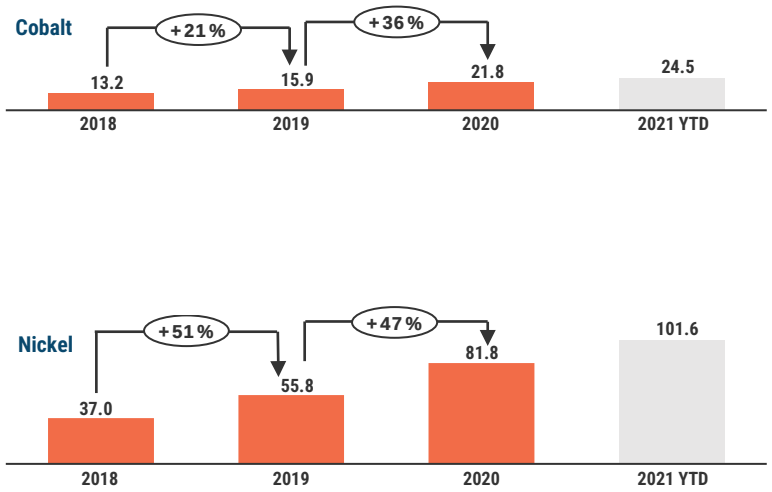


Source: Electra Battery Materials, BNEF

Cobalt and Nickel Demand

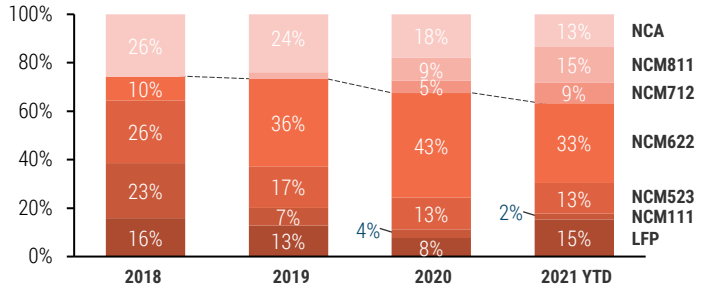
Higher energy density chemistries lead to stronger nickel than cobalt growth

Global: Key materials demand from NEV segment, 2018-2021 to September (tonnes)[1]



Distribution of cell chemistries

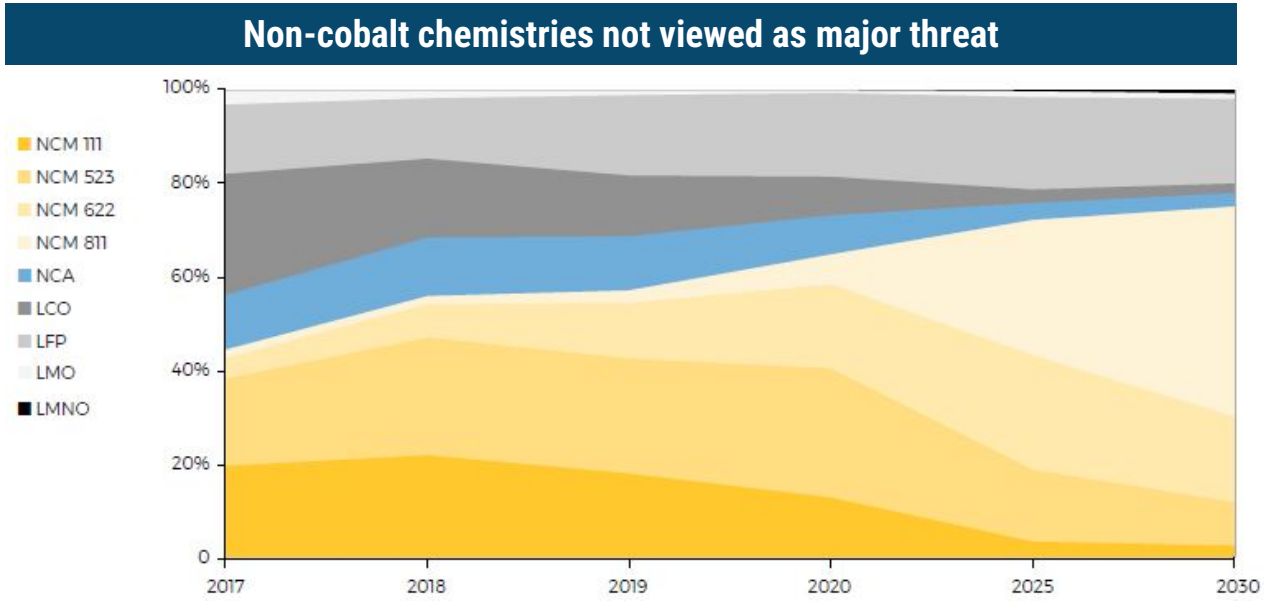
- Nickel-cobalt bearing lithium-ion batteries remain dominant chemistry
- Cobalt demand growth from electric vehicle segment healthy, but outpaced by nickel demand growth due to higher nickel chemistries becoming more popular
- Lithium-iron-phosphate (LFP) batteries will remain relevant in entry-level, short-range vehicles but NCA/NCM chemistries will continue to dominate in the future



1. Based on NEV sales rather than production; actual demand numbers higher due to length of battery supply chain. Source: Electra Battery Materials, Rho Motion

Lithium-ion Battery Market Share by Chemistry

- High-nickel NCM batteries forecast to remain dominant
- NCM chemistries will continue to contain cobalt
- Innovation in nickel-cobalt cells ongoing; energy densities in NCM cells will remain significantly higher than alternative commercial cell chemistries



Source: Benchmark Minerals, September 2021; Nickel Institute June 2020

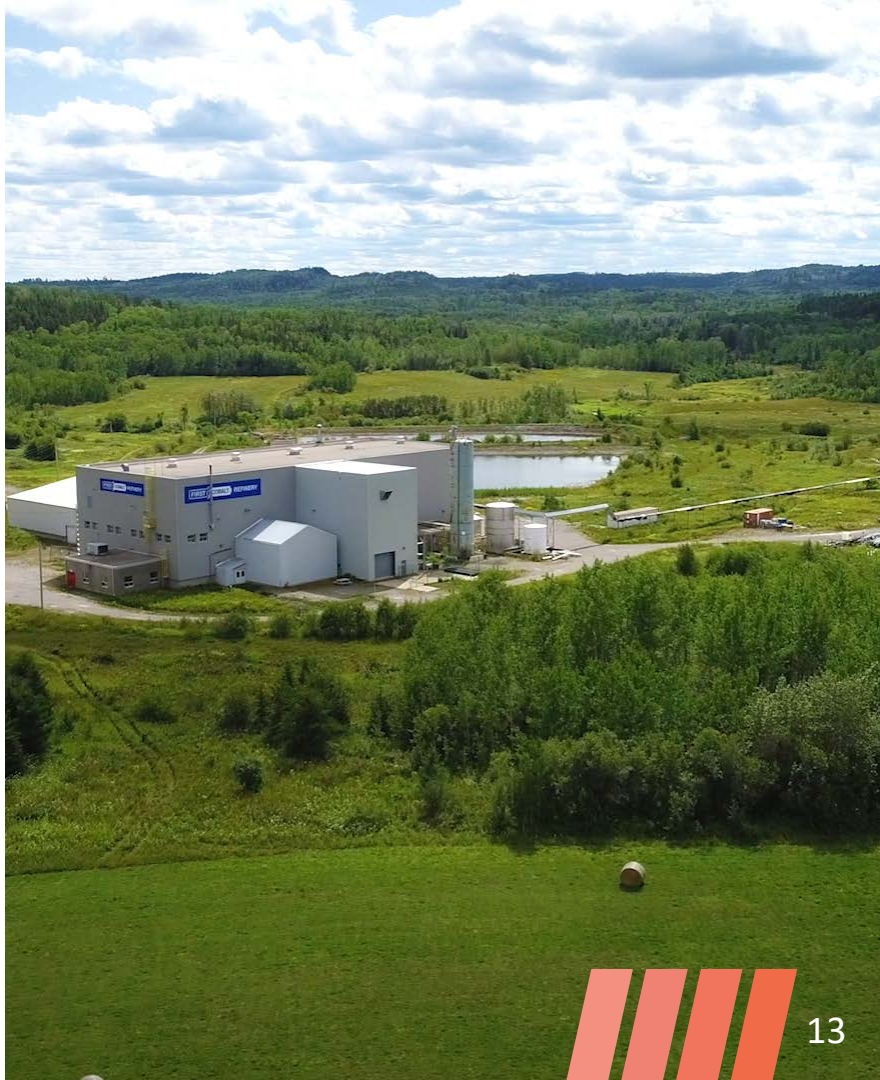
Strategic Asset

Strategic Asset

- Hydrometallurgical facility with a 10-year operating history
- Only facility of its kind in North America, capable of supplying the electric vehicle market
- Located in Ontario, Canada, a location with exceptional infrastructure and labour force in place
- Modular design to grow with the EV market
- 51% lower GHGs than Chinese peers, in part owing to hydroelectric electricity grid
- Work commenced to commission lithium-ion battery recycling line in 2023

Cathode materials require extremely high purity levels – it all starts here

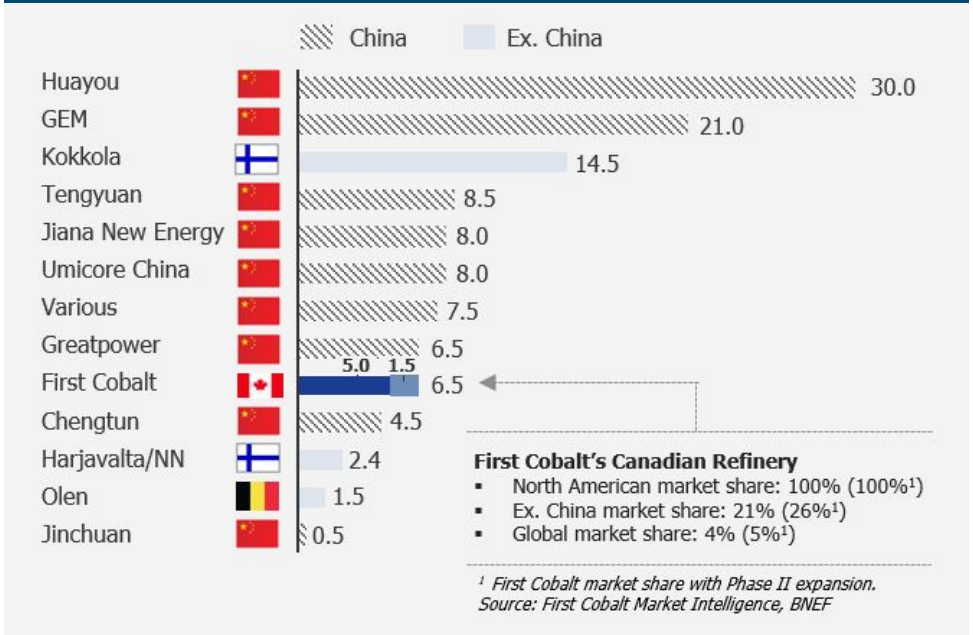
Source: Electra Battery Materials



Phase 1 – Battery Grade Cobalt Sulfate

- China dominates global cobalt sulfate production with 80% market share
- Finland hosts the only significant cobalt sulfate refining outside Asia
- Electra Battery Materials will be the world's second largest non-Chinese battery grade sulfate refinery, and the only refinery in North America
- Electra Battery Materials will account for 26% of ex. China cobalt sulfate production by 2023

Global battery grade sulfate capacity, 2023 (kt Co)



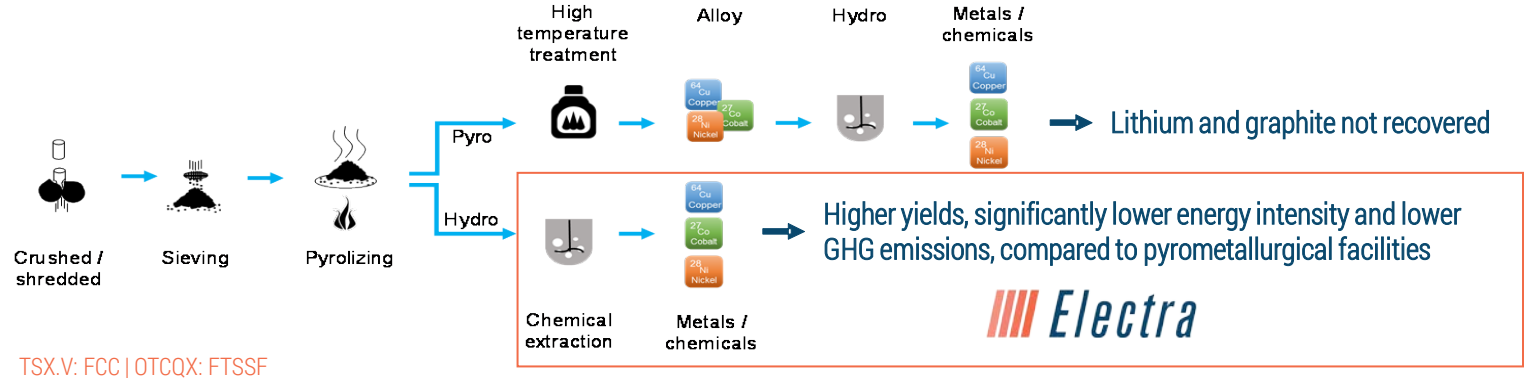
1. Based on 2022 forecast, when Electra's refinery commences operations.
Source: Electra Battery Materials, BNEF.

Phase 2 – Lithium-ion Battery Recycling

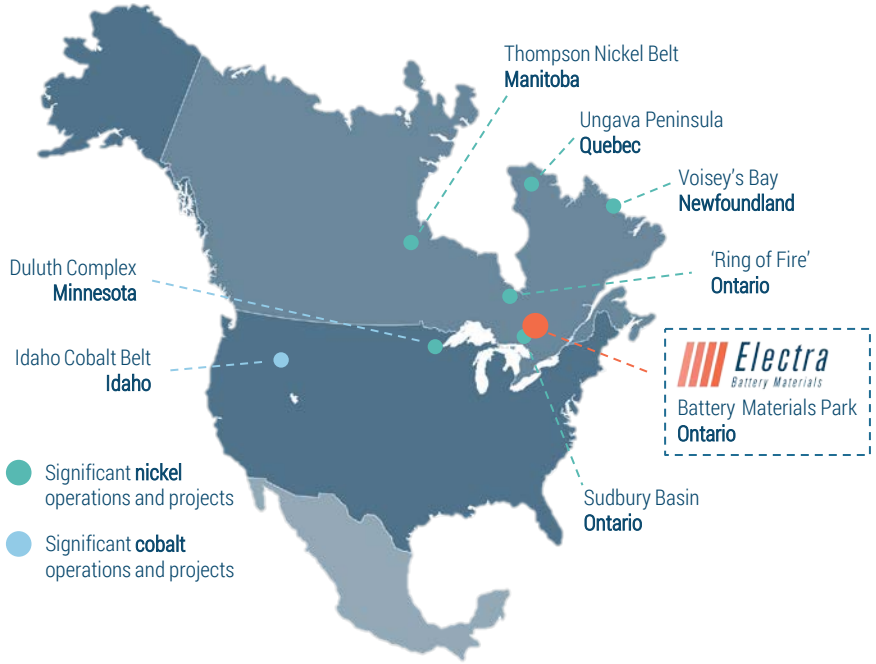
Logistics of battery recycling

Source: Electra Battery Materials

Hydrometallurgical refining of Black Mass is superior to pyrometallurgy



Phase 3 – Battery Grade Nickel Sulfate

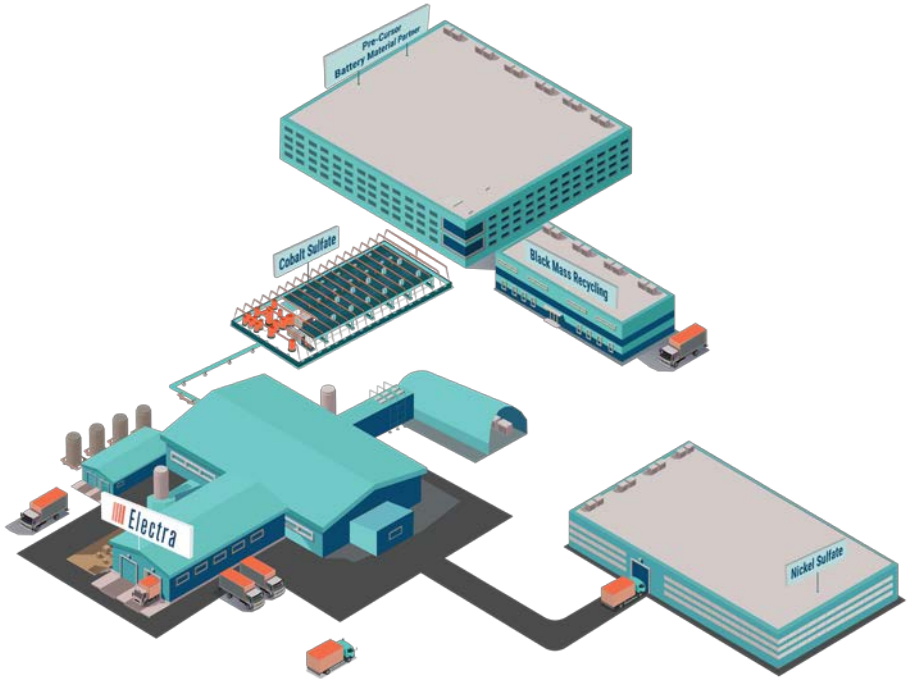


Vertical integration opportunities in North America

- Sufficient nickel and cobalt supply potential in North America to fully sustain region's long-term requirements
- Electra's Battery Materials Park strategically located, with Canadian government support
- Mining industry support by OEMs will fast-track North American nickel and cobalt supply, pushing down long-term raw material costs through economies of scale
- Battery Materials Park built-in flexibility to process both domestic and international raw materials

Source: Electra Battery Materials, USGS

Phase 4 – Precursor Cathode Active Materials (PCAM)



Battery Materials Park concluded with PCAM production

- Sulfate plants constructed at optimal industrial permitting and raw material feed intersect
- Precursor plants 'attracted' to sulfate location as a result of lower raw material feed costs

Battery Materials Park

- Sulfates
- P-CAM
- Recycling

Battery and EV Park

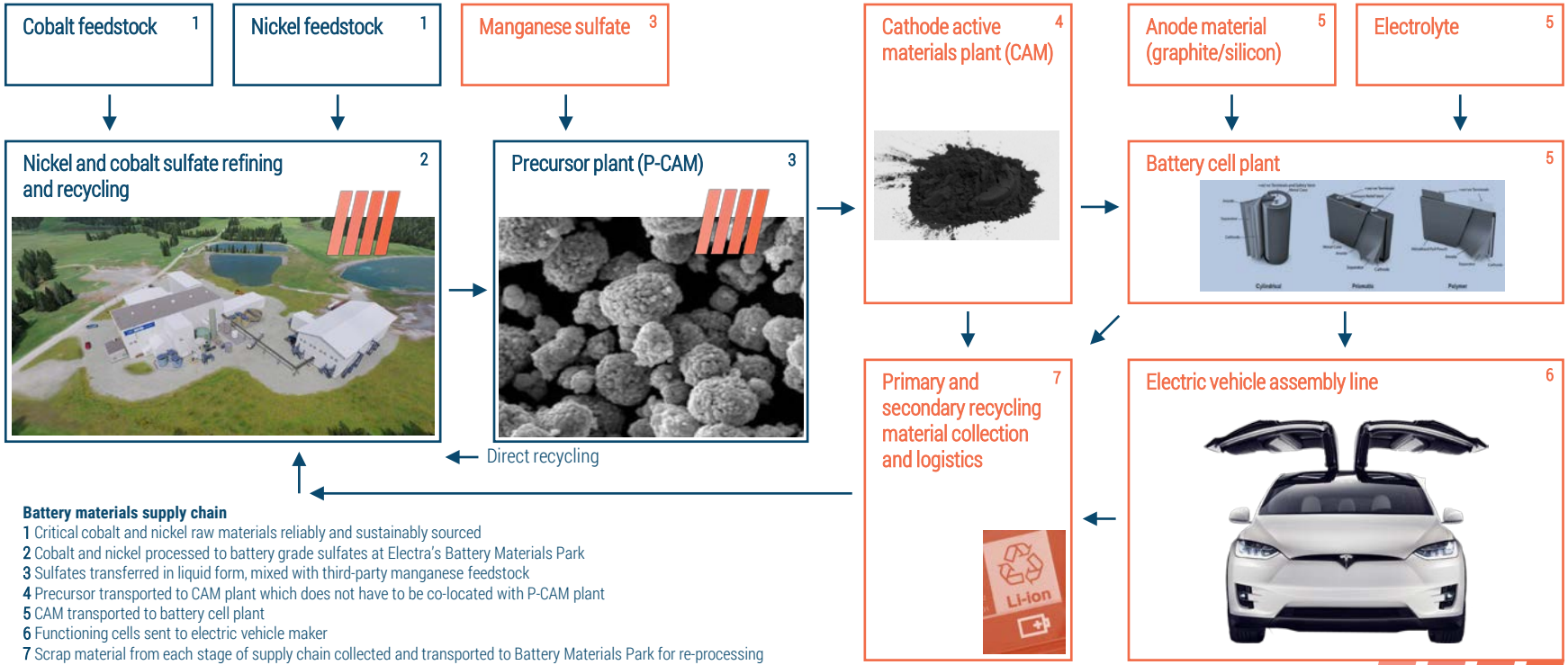
- CAM
- Cells
- Electric vehicles

Harjavalta Industrial Park (Finland)

Quzhou Industrial Park (China)

Source: Electra Battery Materials

Battery Materials Supply Chain



Battery materials supply chain

1 Critical cobalt and nickel raw materials reliably and sustainably sourced
2 Cobalt and nickel processed to battery grade sulfates at Electra's Battery Materials Park
3 Sulfates transferred in liquid form, mixed with third-party manganese feedstock
4 Precursor transported to CAM plant which does not have to be co-located with P-CAM plant
5 CAM transported to battery cell plant
6 Functioning cells sent to electric vehicle maker
7 Scrap material from each stage of supply chain collected and transported to Battery Materials Park for re-processing

Source: Electra Battery Materials

Low Environmental Footprint

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. In line with our overall approach to responsible mining, the 'zero harm' principle will guide our approach to environmental management.

At Iron Creek, underground ore sorting is one example of how we are working to reduce our environmental footprint (concentrates the ore for shipping and processing, fewer trucks on the road and less processing energy = lower greenhouse gas emissions).

51%
lower CO_2 emissions[1]

73%
lower water consumption[1]

30%
lower eutrophication potential[1]

Removes ~1,500,000[2]
combustion engines from the road every year[1]

CO_2 reduction of
3m tonnes/year[1]

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.

Source: Electra Battery Materials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