


SUMMARY REPORT: MAY 2022



Creating a Bold Transformative Vision for Canada's Battery Metals Industry



PREPARED BY

The Battery Metals Association of Canada
and the Energy Futures Lab

ABOUT THE BATTERY METALS ASSOCIATION OF CANADA

BMAC

**Battery Metals
Association of Canada**

The Battery Metals Association of Canada (BMAC) is a national non-profit association and trade organization of entrepreneurs, explorers, developers and producers of battery metals and materials, who have joined together to support a rapidly changing energy landscape.

ABOUT THE ENERGY FUTURES LAB

The Energy Futures Lab is an Alberta-based coalition of diverse innovators and leading organizations working to accelerate the transition to the energy system the future requires of us. With stakeholder insights from across the energy system, the EFL is collaboratively developing solutions for a low-emission and socially equitable energy future.



OVERVIEW

How could a strong and robust battery metals value chain be a platform that helps build a stronger, more prosperous and healthier Canada?

In 2020, electric vehicle (EV) sales rose by 43%. This increase presents a significant opportunity for the Canadian economy and a number of existing or emerging industries. While lithium extraction is often used as a leading example to describe how Canada might contribute to this emerging market, a robust battery metals value chain includes many additional resources, processes and technologies. Bringing these together is key to building a stronger, more healthy and prosperous Canada.

The purpose of this summary is to capture output from a series of workshops co-hosted by the Battery Metals Association of Canada and the Energy Futures Lab, in which **participants from sectors along the electric vehicle value chain came together to create a bold, transformative vision for Canada's battery metals industry.**

BMAC and the EFL believe that by shifting focus beyond individual players, significant value can be captured along the entire electric vehicle value chain. In this sense, cross-sectoral collaboration can play a key role in helping unlock the EV opportunity in Canada. But enabling successful collaboration requires buy-in, and buy-in requires a vision - which is why this series of workshops focused first and foremost on creating a **shared vision** as well as **key focus areas** that will help drive change, inspire action and bring clarity to an otherwise complex and interconnected system.

WORKSHOPS AT A GLANCE

When asked why they were attending, workshop participants offered a range of answers. One participant cited the importance of developing nickel and envisioned Canada as a leading producer, while others expressed interest in everything from battery recycling to creating a more transparent and sustainable value chain. The diversity of answers represented the varied interests, expertise and challenges faced by participants from a nascent industry.

Participants joined from a range of sectors and industries including mining, manufacturing, end use, recycling, academia, consulting, government and NGOs.

Through a series of discussions, a number of key themes began to emerge. By revisiting shared challenges and opportunities related to the broader value chain, a shared vision began to crystallize.

In this report, we capture how conversation over the course of three workshops highlighted the importance of products, people, places and processes in the broader value chain.



KEY TAKEAWAYS

WE NEED TO CLEARLY IDENTIFY WHAT WE'RE AIMING TO CREATE

First and foremost, participants asked themselves: what products are we trying to create? While the *Creating a Bold Transformative Vision for Canada's Battery Metals Industry* workshop series focused specifically on the electric vehicle industry rather than broader electrification efforts, the probing didn't stop there. For example, many asked: are we simply supplying raw materials for batteries or are we also supplying battery systems? How far up the value chain are we going to participate? While Canada's resources already include many of the raw materials required for lithium ion batteries, such as lithium, nickel, graphite, cobalt and manganese, the majority of participants agreed that Canada can and should look beyond the export of raw materials to offer more, including unique talent and expertise, as well as technological innovation.

GOVERNMENT, INVESTORS AND WORKERS ALL HAVE A ROLE TO PLAY

A robust value chain will not create itself. As such, the role of various players in shaping this value chain was discussed at length. In particular, consensus was reached around the importance of working beyond Canada, to also account for markets in other North American regions. **Integrating Canadian industries into existing markets will require strong federal leadership and relationship-building with the United States. Looking beyond regional approaches to instead develop a federal strategy can lay the groundwork for a successful pan-Canadian effort.** Another important consideration revolves around Canada's workforce. Participants explored what "well paid" or "worker well-being" might mean in the context of our energy future. Finally, while cost considerations remained a critical part of the conversation, participants felt that responsible investing and strong commitments to ESG performance could help shape a compelling value proposition for the battery metals industry. Attracting investors is absolutely essential, so ensuring the offering aligns with investor sentiment is key to the industry's success.

A BATTERY METALS VALUE CHAIN MUST CONSIDER ITS GEOGRAPHY

Geographically optimizing locations for facilities will be key to ensuring the success of a battery metals value chain in Canada. Co-location could also help strengthen a circular economy in Canada by ensuring the value chain is sequenced and built in a way that makes it easy for industries to recycle their products. Furthermore, a pan-Canadian approach is required to avoid siloing regional or provincial efforts.

ENABLING A SUCCESSFUL SUPPLY CHAIN REQUIRES MORE THAN JUST TECHNOLOGY

Building out the battery metals value chain and a thriving EV industry will require more than technological competence. Rather, participants advocated for the creation of a more sustainable value chain, one that accounts for human and environmental rights and invites responsible investing. Yet, to get there, government leadership must play a role. By supporting innovative policy development through approaches like “sandboxes,” the federal government can help create a policy environment that enables risk and innovation in a nascent, but fast growing industry.



A further objective of these workshops was to crystallize a **vision and identify **priority next steps** for BMAC to action as the industry moves forward - coming together in a way that advances the value chain as a whole, and acting as architects of the future together.**

INTRODUCING BMAC'S KEY FOCUS AREAS...

1) Create a platform for Coordination, Cooperation and Collaboration

- Increase coordination across the battery metals value chain at a provincial and federal level.
- Provide opportunities that increase the connectedness and cooperation of the system, including supportive and responsive advocacy where appropriate.
- Identify gaps in the system and address voices missing from the table.
- Coordinate to avoid duplication of effort.

2) Spearhead a National Strategy

- Prioritize alignment and improve coordination across geographic regions and provinces.
- Focus on policy and incentives from the highest level of government to:
 - Develop a clear policy roadmap.
 - Spearhead the development of a national critical minerals strategy that includes government-industry collaboration.

...AND SHARED VISION

In 2042, Canada's battery metals value chain is a significant contributor to Canada's prosperity and the global energy transition. We know that we have been successful if the Canadian battery metals value chain:

- 1) ...is a sought-after supplier of **battery metals and of value added, finished goods** and exportable technologies that meet our decarbonization needs domestically and supports world markets.
- 2) ...sets **world-leading ESG standards** and transparency for the global industry in responsible and sustainable mining.
- 3) ...contributes significantly to the **social and economic well-being** in the communities we work in and the equity seeking groups we work with.
- 4) ...**attracts, builds and retains talent** through research, development & deployment.
- 5) ...serves to build and grow the value chain as a whole to **expand opportunities for all**.
- 6) ...collaborates **North American-wide** to commit to investment across nations in battery metal/mineral extraction and processing.
- 7) ...recycles and reuses materials and components as part of a **geographically-optimized circular economy** connected to the rest of North America.

CONCLUSIONS

ACCELERATING MOMENTUM REQUIRES SUPPORT, CROSS-COLLABORATION

BMAC and the Energy Futures Lab believe that through cross-sectoral collaboration, Canada can capture significant value along the entire electric vehicle supply chain. To enable this, a pan-Canadian approach is required to capitalize on regional strengths and align industries. There is a compelling value proposition for the battery metals industry that integrates seamlessly into existing Canadian markets with a growing value-chain industry **ecosystem** already in place.

Attracting investors is absolutely essential, so ensuring the offering aligns with investor appetites is key to the industry's success and fulfills the sentiment for responsible investing and strong ESG commitments. Now is the time to animate the solutions required to meet the needs of the people and stakeholders involved, and to shape policy to enable the initiation of innovation in this fast growing industry.

Canada is at a pivotal point in unlocking the EV opportunity; the current landscape is prime ground for the development of a unifying national strategy to meet net-zero targets - and **BMAC's *Clean Competitiveness Roadmap* does just that.** In partnership with the Transition Accelerator, Accelerate and The Energy Futures Lab, this **in-depth report will be available mid-2022.**



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