

Building a Circular Economy for EV Batteries in British Columbia (2026)

Issue

British Columbia's rapid adoption of electric vehicles (EVs) will generate significant volumes of end-of-life batteries. Without a coordinated strategy to support recycling and second-use applications, the province risks losing valuable critical minerals, and opportunities to extend battery life through energy storage systems (ESS) and other uses. Second-life applications, such as stationary storage, represent a high-value opportunity that should be prioritized alongside recycling. Limited infrastructure, regulatory gaps, and weak market signals constrain circular economy development. Without clear policy direction and workforce readiness, B.C. risks losing economic value and supply chain competitiveness.

Integrating battery recycling into the province's *Look West* strategy is essential to unlock investment, strengthen domestic supply chains, and position B.C. as a global leader in sustainable EV lifecycle management.

Background

B.C. and Canada have been leaders in the transition to electric vehicles, with ambitious targets set for EV adoption. In B.C., the Zero-Emissions Vehicle Act (2019) was amended to reduce the 2035 zero-emission vehicle (ZEV) sales target from 100% to 75%.¹ Similarly, the federal also recently announced reductions aiming for 75% EV sales by 2035 and 90% by 2040, supported by incentives for battery electric (BEV) and plug-in hybrid vehicles (PHEV).² Globally, EV sales reached over 20 million units in 2025, showcasing strong adoption trends across different markets.³

As EV adoption continues to grow, so does the volume of batteries approaching end-of-life, posing a challenge to managing assets and recovering materials. On average, the lifespan of an EV battery ranges from 10-20 years,⁴ with degradation improving from 2.3% per year in earlier models to 1.8% today.⁵ Extreme conditions, like Northern B.C.'s cold climate, or Interior B.C.'s heatwaves, can further reduce range and accelerate the need for effective lifecycle management.⁶ To safely and efficiently process these batteries and capture full lifecycle value, B.C. will require strategically located infrastructure, such as dismantling facilities, collection hubs, diagnostic centres, recovery plants, and new transportation standards that support a circular economy.

B.C. holds significant potential to lead this sector. Lithium, nickel, cobalt, and manganese are valuable raw materials critical to both the EV and broader clean-technology sectors. Leading manufacturers like

¹ Government of British Columbia (2025). Updating zero-emission vehicle targets, expanding charging network. Accessed April 2026, [https://news.gov.bc.ca/releases/2026ECS0009-000355-%7E:text=Summary * The Province is amending the projects funded in communities throughout British Columbia](https://news.gov.bc.ca/releases/2026ECS0009-000355-%7E:text=Summary%20*%20The%20Province%20is%20amending%20the%20projects%20funded%20in%20communities%20throughout%20British%20Columbia)

² Prime Minister of Canada (2026). Prime Minister Carney launches new strategy to transform Canada's auto industry. Accessed February 2026, <https://www.pm.gc.ca/en/news/news-releases/2026/02/05/prime-minister-carney-launches-new-strategy-transform-canadas-auto>

³ Benchmark Mineral Intelligence (2026). Global EV sales reach 20.7 million units in 2025, growing by 20%. Accessed March 2026, <https://source.benchmarkminerals.com/article/global-ev-sales-reach-20-7-million-units-in-2025-growing-by-20>

⁴ BCAA (2023). How long does an electric vehicle battery last? Accessed February 2026, <https://www.bcaa.com/blog/automotive/how-long-does-an-electric-vehicle-battery-last>

⁵ JD Power (2025). How long do electric car batteries last? Accessed February 2026, <https://www.idpower.com/cars/shopping-guides/how-long-do-electric-car-batteries-last>

⁶ BCAA (2023). How long does an electric vehicle battery last? Accessed February 2026, <https://www.bcaa.com/blog/automotive/how-long-does-an-electric-vehicle-battery-last>

Mercedes-Benz have achieved a recovery rate of more than 96% for nickel, cobalt, manganese, and lithium through its battery recycling facility.⁷ Similarly, Hyundai Motor Co. has a dedicated EV battery recycling program, while also partnering with external companies like EcoPro and Lithion to build a global network of technology.⁸ The province's natural resources, skilled workforce, and industrial base create strong foundations for similar success.

The federal government has strategically positioned the nation as a global hub, investing more than \$10 billion through programs such as the Critical Minerals Research, Development and Demonstration (CMRDD) program and the Strategic Innovation Fund,⁹ targeting the full value chain from extraction to recycling. The CMRDD's extension to 2028 will accelerate the scale-up of transformative recycling technologies,¹⁰ while federal agencies like NRCan and ISED prioritize lithium, cobalt, graphite, copper, nickel, and rare earth minerals¹¹ to ensure Canada retains value through domestic processing, not simply the export of raw materials.

However, regulatory uncertainty remains a major barrier. Environment and Climate Change Canada (ECCC) has confirmed that provinces and territories are responsible for end-of-life EV battery management,¹² with batteries currently shipped to recycling facilities in Ontario, Quebec, and British Columbia, but due to limited domestic processing capacity, a significant portion must still be offloaded to facilities in the United States and Asia.¹³ Offloading batteries to facilities outside the province not only reduces Canada's ability to capture full economic value and scale a domestic circular supply chain, but it also circumvents second-use applications, such as grid storage or industrial repurposing that could extend battery lifecycles locally.

In B.C., companies such as Saltworks Technologies are advancing innovative solutions for treating industrial wastewaters and refining lithium,¹⁴ while Moment Energy is repurposing EV batteries to extend battery utility by up to 10 years, effectively enabling a circular economy.¹⁵ This growing cluster of electrochemical and clean-tech firms is supported by significant provincial-federal partnerships, including the \$195-million investment in Northwest B.C.'s infrastructure, designed to better connect mining operations with midstream processing and recycling hubs.¹⁶

⁷ Nickel Institute (2025). Critical minerals driving EV performance: a consumer guide to EV batteries – part 1. Accessed February 2026, <https://nickelinstitute.org/en/blog/2025/august/critical-minerals-driving-ev-performance-a-consumer-guide-to-ev-batteries-part-1>

⁸ Ibid, 2025.

⁹ Government of Canada (2022). Impact Report: Strategic Innovation Fund. Accessed February 2026, <https://ised-isde.canada.ca/site/ised/en/programs-and-initiatives/strategic-response-fund/impact-report>

¹⁰ Government of Canada. Critical Minerals Research, Development and Demonstration Program. Accessed February 2026, <https://www.canada.ca/en/campaign/critical-minerals-in-canada/federal-support-for-critical-mineral-projects-and-value-chains/critical-minerals-research-development-and-demonstration-program.html>

¹¹ Government of Canada. Canadian Critical Minerals Strategy. Accessed February 2026,

<https://www.canada.ca/en/campaign/critical-minerals-in-canada/canadian-critical-minerals-strategy.html#a3>

¹² Alexandra Mae Jones (2025). Canada had big EV battery recycling plans, but without regulations it's the 'Wild West,' expert warns. CBC News. Accessed February 2026, <https://www.cbc.ca/news/climate/ev-battery-recycling-regulation-1.7547790>

¹³ Krista Hessey (2023). How electric vehicles are sparking a battery recycling revolution. Accessed February 2026,

<https://globalnews.ca/news/9405696/electric-vehicle-battery-recycling/>

¹⁴ Saltworks. Industrial Water + Lithium. Accessed February 2026, <https://www.saltworkstech.com/>

¹⁵ Moment Energy. Repurposing – Unlock a new revenue stream through EV battery repurposing. Accessed February 2026, <https://www.momentenergy.com/repurpose>

¹⁶ Government of Canada (2024). Canada and B.C. Invest in Infrastructure Upgrades to Support Critical Minerals Development in Northwest B.C. and Create Jobs Across the Province. Accessed February 2026, <https://www.canada.ca/en/natural-resources->

B.C. had previously announced in 2021 that EV batteries would be added to its Extended Producer Responsibility (EPR) program by 2026, requiring automakers to arrange for battery recycling or reuse.¹⁷ However, the province has not since advanced that decision, leaving EV batteries outside the EPR framework.¹⁸ This gap contributes to what industry experts call “the Wild West” of EV battery management, where inconsistent oversight and unclear obligations deter investments from the private sector.¹⁹

Meanwhile, industry-led initiatives, such as Quebec’s EV Battery Recovery Program coordinated by Call2Recycle, have demonstrated that organized collection and processing of end-of-life batteries, including reuse, second-life applications, and recycling back into raw materials are achievable.²⁰ Internationally, frameworks like the EU’s Battery Passport (2023) provide a digital system designed to ensure transparency, sustainability, and traceability throughout the entire battery value chain.²¹ This regulation showcases that regulatory certainty can drive investment and innovation.

Without a comprehensive regulatory and economic strategy, B.C. risks:

- Lower recovery rates of critical minerals, limiting domestic supply for EV and clean-technology manufacturing.
- Missed economic value in terms of jobs, investments, and downstream manufacturing links tied to battery materials.
- Loss of first-mover advantage to jurisdictions with clearer and more advanced regulatory frameworks (e.g. EU, Quebec).
- Investor uncertainty, which slows the development of recycling facilities and circular economy innovations.

A circular EV battery could be a cornerstone opportunity within B.C.’s *Look West* strategy. *Look West* aims to diversify the economy, grow clean-tech and advanced manufacturing sectors, and build a resilient workforce.²² A comprehensive EV battery circular-economy strategy directly aligns with these goals by enabling industrial investment, training the next generation of skilled workers, supporting clean growth, and anchoring a new value chain around critical minerals and battery lifecycle management.

[canada/news/2024/07/canada-and-bc-invest-in-infrastructure-upgrades-to-support-critical-minerals-development-in-northwest-bc-and-create-jobs-across-the-province.html](https://www2.gov.bc.ca/assets/gov/environment/waste-management/recycling/recycle/extended_producer_five_year_action_plan.pdf)

¹⁷ Government of British Columbia (2021). Advancing Recycling in B.C. Extended Producer Responsibility Five-Year Action Plan, 2021-2026. Page 5. Accessed February 2026, https://www2.gov.bc.ca/assets/gov/environment/waste-management/recycling/recycle/extended_producer_five_year_action_plan.pdf

¹⁸ Government of British Columbia (Last updated 2025). Recycling Regulation: Environmental Management Act – Schedule 3. Accessed February 2026, https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/449_2004#Schedule3

¹⁹ Alexandra Mae Jones (2025). Canada had big EV battery recycling plans, but without regulations it’s the ‘Wild West,’ expert warns. CBC News. Accessed February 2026, <https://www.cbc.ca/news/climate/ev-battery-recycling-regulation-1.7547790>

²⁰ Ibid, 2025.

²¹ Hiden Analytical (2025). Powering Transparency: How the EU Battery Passport is Transforming the Battery Industry. Accessed February 2026, <https://www.hidenanalytical.com/blog/powering-transparency-how-the-eu-battery-passport-is-transforming-the-battery-industry/#:~:text=Powering%20Transparency:%20How%20the%20EU%20Battery%20Passport%20is%20Transforming%20the%20Battery%20Industry&text=The%20European%20Union's%20Battery%20Regulation,global%20benchmark%20for%20sustainable%20manufacturing.>

²² Government of British Columbia (2025). Look West: Jobs and Prosperity for a Stronger BC and Canada. Accessed February 2026, <https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/look-west-strategy/lookwest.pdf>

Canada's policy direction is already aligned with these objectives through the federal Critical Minerals Strategy, which identifies circularity, value-added processing, workforce development, and enabling infrastructure as national priorities.²³ However, the Strategy's implementation remains uneven, particularly in scaling commercial reuse and recycling capacity, and building the infrastructure corridors needed to move critical minerals from extraction sites to processing and end-of-life recovery hubs. The recommendations below serve as practical, industry-aligned mechanisms to operationalize the Strategy and strengthen both British Columbia and Canada's position across the full battery supply chain.

THE CHAMBER RECOMMENDS

That the Provincial Government:

1. *Develop a provincial EV battery recycling and circular economy strategy* – establish clear time-bound targets (including recovery rates, second-life utilization rates, and recycled-content requirements), compliance requirements, and performance metrics for the collection, transport, processing, recycling, and second-life applications of end-of-life EV batteries, including regional infrastructure planning and capacity assessments.
2. *Integrate EV batteries into the Extended Producer Responsibility (EPR) framework* – implement mandatory recovery, enforceable reuse, and recycled regulatory uncertainty and material reuse standards for battery producers with reporting requirements and enforcement mechanisms to reduce regulatory uncertainty and support investment in recycling infrastructure.
3. *Support workforce and investment development* – provide technical training programs for battery reuse, battery recycling, and critical mineral processing and offer financial or regulatory incentives to attract recycling facilities that create local jobs and integrate recovered materials into provincial clean-technology supply chains.
4. *Attract private investment in battery recycling and second-use infrastructure* – provide incentives and regulatory pathways to support dismantling hubs, collection centres, recovery plants, diagnostic centres, and critical-mineral processing facilities, closing the supply-chain gap and maximizing B.C.'s EV lifecycle value while advancing *Look West* goals.

Submitted by the Surrey & White Rock Board of Trade

²³ Government of Canada. Canadian Critical Minerals Strategy. Accessed February 2026, <https://www.canada.ca/en/campaign/critical-minerals-in-canada/canadian-critical-minerals-strategy.html#a3>