

SHAREHOLDER NEWSLETTER

### **WINTER 2025 EDITION**

Significant Progress at the Shaakichiuwaanaan Lithium Project and Landmark Strategic Investment and Alliance with Volkswagen/PowerCo

### **WELCOME**

Welcome to the first edition of our new bi-annual newsletter, designed to provide updates on what the Patriot Battery Metals team has been up to, key Project and Company milestones, as well as news, insights and market updates on the global battery materials sector—together with a snapshot of what's coming up for the group.

Despite the tough conditions
experienced in lithium markets globally,
Patriot has continued its course to
achieve some huge milestones over
the past few months, positioning
the Shaakichiuwaanaan Project as a
cornerstone asset in North America's and
Europe's emerging lithium supply chains.

These achievements highlight the Company's continued progress toward becoming a leading global producer of spodumene concentrate, putting Patriot in a strong position to unlock the significant value of this strategic asset for our stakeholders.



### PATRIOT SECURES CORNERSTONE INVESTMENT AND FORMS STRATEGIC RELATIONSHIP WITH VOLKSWAGEN AND POWERCO SE 1

Just prior to the Christmas/New Year break, Patriot Battery Metals was pleased to announce a significant cornerstone investment by global auto giant Volkswagen - through Volkswagen Finance Luxemburg S.A.investing approximately C\$69 million in the Company by acquiring a 9.9% equity stake at C\$4.42 per share, representing a 65% premium to the 30-day VWAP at the time of announcement. This strategic investment is designed to introduce a reliable and long-standing partner in the battery supply chain to the Company who will further support the development of our flagship Shaakichiuwaanaan Lithium Project in Québec, Canada. Additionally, Patriot has entered into a binding offtake commitment with PowerCo SE, Volkswagen's battery subsidiary, to supply and purchase 100,000 tonnes of 5.5 SC spodumene concentrate annually for 10 years.

We also signed a non-binding Memorandum of Understanding (MoU) to jointly explore and collaborate on shared strategic objectives, including opportunities for the future development of the Shaakichiuwaanaan Project as well as potential midstream and downstream opportunities in lithium chemicals. This collaboration is expected to further strengthen the build out of North American and European battery supply chains.

The investment by Volkswagen underscores its commitment to securing a sustainable lithium supply in North America for its electric vehicle (EV) batteries, with a focus on ESG compliance and cost competitiveness. As part of the investment agreement with Volkswagen, following release of the Company's feasibility study Volkswagen also has the opportunity to provide a funding proposal to act as a cornerstone investor for Project FID funding in return for additional offtake. Such proposal would form part of the Company's overall funding strategy for the Shaakichiuwaanaan Project and would be on terms mutually agreed.

The partnership reflects Patriot's ambition to become a global lithium leader while reinforcing Volkswagen's efforts to build a comprehensive EV ecosystem in North America.



<sup>&</sup>lt;sup>1</sup> For further information refer to the Company's press release dated 18 December, 2024.

#### RESOURCE GROWTH AND PRELIMINARY ECONOMIC ASSESSMENT (PEA)

Further resource growth was reaffirmed with an updated Mineral Resource Estimate (MRE) published on 05 August 2024 , which reaffirmed Shaakichiuwaanaan as the largest lithium pegmatite resource in the Americas and the 8th largest globally. The Shaakichiuwaanaan (CV5 & CV13) Mineral Resource Estimate (80.1 Mt at 1.44% Li<sub>2</sub>O and 163 ppm  ${\rm Ta_2O_5}$  Indicated, and 62.5 Mt at 1.31% Li<sub>2</sub>O and 147 ppm  ${\rm Ta_2O_5}$  ppm Inferred) is reported at a cut-off grade of 0.40% Li<sub>2</sub>O (open-pit), 0.60% Li<sub>2</sub>O (underground CV5), and 0.80% Li<sub>2</sub>O (underground CV13) with an Effective Date of August 21, 2024 (through drill hole CV24-526).<sup>2</sup>

On 21 August, 2024, Patriot Battery Metals announced the completion of the Preliminary Economic Assessment (PEA) for the Shaakichiuwaanaan Project.<sup>3</sup> The PEA outlines the potential for development of a high-grade lithium Project that could establish Patriot as a major supplier to North

American and European markets. The proposed twostage development strategy is targeting an impressive production rate of up to 800,000 tonnes per annum (ktpa) of 5.5 SC spodumene concentrate, potentially positioning Patriot as the 4th largest spodumene producer globally at the expected time of production and the largest hard rock production capacity in the Americas.

The PEA also indicated strong preliminary financial metrics, with an after -tax net present value (NPV) of \$2.9 billion CAD and an internal rate of return (IRR) of 34%, underlining the Project's potential economic robustness, with a LOM (life-of-mine) of 24 years. This underscores Shaakichiuwaanaan's importance as a long-term source of high-grade lithium for the growing electric vehicle market.



<sup>&</sup>lt;sup>2</sup> For further information refer to the Company's press release dated 5 August 2024. Mineral Resources are not Mineral Reserves as they do not have demonstrated economic viability. The mineral resource estimate in this release was reported by the Company in accordance with ASX Listing Rule 5.8 on 5 August, 2024. The Company confirms that, as of the date of this announcement, it is not aware of any new information or data verified by the competent person that materially affects the information included in the announcement and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed. The Company confirms that, as at the date of this announcement, the form and context in which the competent person's findings are presented have not been materially modified from the original market announcement.

<sup>&</sup>lt;sup>3</sup> For further information refer to the Company's press release dated 21 August 2024. The production target and forecast financial information derived from the production target referred to in this release was reported by the Company in accordance with ASX Listing Rules 5.16 and 5.17 on 21 August, 2024. The Company confirms that, as of the date of this announcement, all material assumptions and technical parameters underpinning the production target in the original announcement continue to apply and have not materially changed.



### EXPLORATION TARGET HIGHLIGHTS DISTRICT-SCALE OPPORTUNITY

In conjunction with the PEA release, Patriot also announced a maiden Exploration Target, which outlines the potential for additional tonnage of approximately 146 to 231 Mt at 1.0 to 1.5% Li<sub>2</sub>O. This Exploration Target, which is exclusive of the current MRE, highlights the district-scale opportunity within the Shaakichiuwaanaan Property.

The potential quantity and grade of the Exploration Target are conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the Exploration Target being delineated as a Mineral Resource. The Exploration Target has been determined based on the interpretation of a consolidated dataset of surface rock sample descriptions and assays, outcrop mapping and descriptions, drill hole logs and core sample assays, geophysical surveys, and remote sensing data. The Company intends to test the validity of the Exploration Target over a several year period, starting in 2025, through systematic diamond drilling of the known spodumene pegmatite clusters and corridors between and proximal.

As the Company gears up for further exploration in 2025, these results provide a clear pathway for continued growth and resource expansion.

# STRONG PARTNERSHIPS WITH INDIGENOUS COMMUNITIES

Patriot has also deepened its relationships with the Cree Nation of Chisasibi, recently renaming the project **Shaakichiuwaanaan** as proposed by the Cree elders. The name, which means "climbing a hill or a mountain," reflects the project's proximity to significant geographical features and honors Cree culture.

Over 200 consultation activities have been conducted since 2022, with significant community involvement in project operations, from drilling to civil works. The project has also seen over 100 First Nations workers contributing to its development in 2024.

As part of this partnership, environmental monitoring and data collection have been led by local Cree enterprises, ensuring that development aligns with the community's values and environmental stewardship.

<sup>&</sup>lt;sup>4</sup> For further information refer to the Company's press release dated 5 August 2024.

### MARKET SEGMENT FOCUS



Source: Fastmarkets

# THE ACCELERATING DECLINE IN EV BATTERY MANUFACTURING COSTS

The cost of producing electric vehicle (EV) battery cells has continued to drop at a remarkable pace. According to data from Fastmarket, the average cost of battery cells using NMC712 and NMC622 cathodes fell from \$135 per kWh in January 2023 to \$59.2 per kWh in August 2024. The same phenomenon is seen in the lithium iron phosphate( LFP) cells market, with improvements in material yields and manufacturing processes have also contributed to this decline<sup>1</sup>.

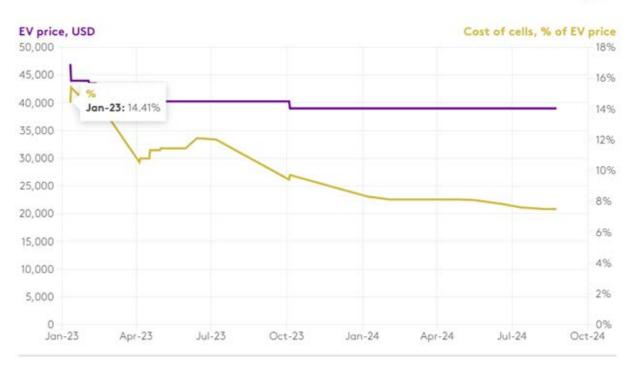
This represents a steep drop in battery costs, which has been key in driving down the overall cost of electric vehicles. The cost of the cells in the Tesla Model 3 Base model in August 2024 was 7.5% of the price of the EV, down from 15% at the start of 2023<sup>2</sup>.

FIGURE 1: Evolution of battery cell prices 2023-2024 Average cell cost trend, China\* NCM-622 (pouch), NCM-811 (prismatic), NCA (cylindrical), LFP (prismatic) Average cell cost, \$/kWh 145 135 125 115 105 95 85 75 NCA 65 NCM-712 55 NCM-622 45 Jul-24 Jon-23 Apr-23 Jul-23 Oct-23 Jan-24 Арг-24

FIGURE 2: Cost of battery cell relative to car cost

#### Cost of li-ion cells relative to EV price (USA), Telsa Model 3 Base





Source: Fastmarkets

This price drop, the steepest in recent years, has positioned LFP batteries as a game-changer in the global EV market. LFP batteries are not only cheaper but also benefit from a simplified supply chain, as they do not rely on materials like nickel and cobalt. These cost advantages are helping drive down the overall cost of manufacturing electric vehicles, making them more affordable.

In addition, China's aggressive ramp-up of production capacity for LFP batteries, coupled with innovations like cell-to-pack (CTP) technology, has reduced inefficiencies and improved energy density. With LFP now accounting for around 50% of global passenger EV battery sales, the shift towards lower-cost battery chemistries is a crucial factor driving the global adoption of electric vehicles . In terms of lithium usage for EVs, LFP and nickel-cobalt-manganese (NCM) chemistries represent the two largest groups for the cathodes, accounting for 87% of battery cathodes in 2024. The LFP is the largest at 48% market share and NCM at 39% market share. For lithium demand, they are using equal intensities of lithium, both at 0.74 kg of LCE (lithium carbonate equivalent) per kWH³.





#### REACHING COST PARITY BETWEEN EVS AND ICE VEHICLES

The decline in battery costs is speeding up the timeline for cost parity between electric vehicles (EVs) and internal combustion engine (ICE) vehicles. While China is already leading the way—60% of EVs sold there in 2023 were cheaper than their ICE counterparts—other regions are catching up quickly<sup>4</sup>. BNEF projects that cost parity will be reached by 2030 in most major EV markets as battery costs continue to fall.

The lower cost of LFP batteries plays a vital role in this trend. In regions like Southeast Asia, where the adoption of affordable EVs has surged, lower battery costs are making EVs an attractive option for a wider consumer

base. Furthermore, the continued decline in battery prices is expected to drive up EV sales, potentially adding up to 2 million additional EVs annually in China between 2024 and 2035.

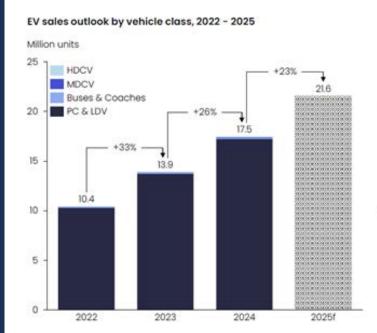
Cost parity is critical not only for consumer adoption but also for automakers' strategic planning. Major manufacturers like Tesla and BYD are already capitalizing on this shift, offering more affordable models across various segments. As EVs reach price equivalence with ICE vehicles, consumers are expected to increasingly opt for electric options, particularly as governments phase out subsidies and incentives over the coming years<sup>5</sup>.

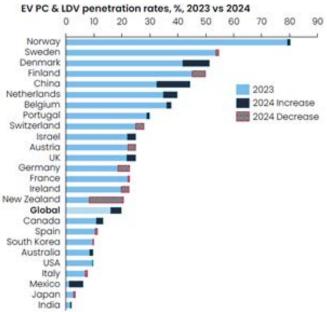
### THE IMPACT ON EV VS. ICE ADOPTION RATES

The impact of these cost declines on EV adoption rates cannot be overstated. Global EV sales surged to nearly 17.5 million in 2024, representing almost 20% of all new vehicle sales and 26% growth YoY<sup>6</sup>. As battery prices continue to drop, particularly with LFP technology driving down costs in key markets, EV sales are projected to reach 21.6 million in 2025, a 23% growth<sup>7</sup>. China remains the leader, but Europe and the United States are also significant growth, thanks to lower battery prices and expanding charging infrastructure. Europe had a difficult 2024, with many jurisdictions phasing out subsidies for EV purchases. This year, a step change in the emissions standards within the EU will force OEMs to both produce and sell more EVs to avoid fines<sup>8</sup>.



FIGURE 3: Global near-term passenger EV sales and EV share of new passenger-vehicle sales by market, outlook (BEV and PHEV)





Source: Rho Motion



The affordability of EVs due to declining battery costs is reshaping the global automotive market. Countries like Brazil and Thailand have seen their EV market shares rise to 3% and 10%, respectively, as more affordable EV models enter the market°. This growth is expected to accelerate, with EVs projected to account for one in three vehicles on the road in China by 2030 and nearly one in five in the U.S. and Europe<sup>10</sup>.

#### **BESS DEMAND GROWTH SURGING**

The Battery Energy Stationary Storage (BESS) demand has made new highs in 2024, with just over 200 GWh of installed capacity globally in 2024, increasing **53% YoY**<sup>11</sup>. Importantly, the US-Canada markets are showing aboveglobal growth rates, with a **66% growth rate** YoY for 2024. Rho Motion is expecting another 68% growth rate in GWh for BESS for 2025.

This subset of the battery segment is getting increasingly more important in terms of absolute demand. To give some context, an almost 350 GWh of battery demand for BESS in 2025 would represent more than the total battery demand for EVs as recently as 2021, almost half of the 2023 EV GWh demand, and a 16x growth in demand for the BESS market since 2020<sup>12</sup>!

FIGURE 4: BESS installed capacity outlook by storage type, new additions



Source: Rho Motion





# GLOBAL GROWTH OF LITHIUM DEMAND

The rapid decline in battery costs, especially for LFP cells, is driving unprecedented growth in global lithium demand. Lithium remains a critical raw material for most battery chemistries, and the Global Critical Minerals Outlook 2024 projects that lithium demand will grow approximately threefold by 2030 and ninefold by 2040 under the International Energy Agency's (IEA) Net Zero Emissions scenario<sup>13</sup>.

The surge in demand for EV batteries, along with batteries for grid storage applications, is pushing lithium consumption to new heights. In 2024 alone, lithium demand increased by 30%, driven largely by the growing EV and BESS markets<sup>11-14</sup>.

As lithium demand grows, supply constraints and geopolitical risks around critical mineral sourcing are becoming more prominent. Despite increased lithium production from regions like Latin America and Australia, supply chain bottlenecks are a looming concern. While the market is expected to remain in oversupply in the very short term, industry analysis reveals this situation should be temporary, with the market falling back in deficits as soon as 2026<sup>15</sup>.

The rise in demand in North America and Europe is also leading to increased investment in lithium mining and refining projects globally, with a focus on securing more diversified and **Western world facing supply chain** sources of this vital mineral. Patriot can be part of this solution with its Shaakichiuwaanaan project.



#### **WHAT'S IN STORE FOR 2025**

Patriot is gearing up for a big year ahead in 2025!

Amongst the more important events for us will be an updated resource statement, expected to be completed around April. The Company is also currently very focused on completing the Feasibility Study (FS), which should be completed in calendar Q3.

In combination with the FS, we will complete the environmental work which will be used to submit the Environmental and Social Impact Assessment (ESIA) . This, together with the FS, will be submitted to the authorities and kick start the COMEX process.

Throughout the winter, we have be actively drilling at the Project. With the in-fill drill program on the cornerstone CV5 Deposit now behind us, we will return to more exploration-focused drilling on the CV13 Pegmatite, specifically targeting the high-grade Vega Zone, which continues to offer exciting exploration upside. We will also test a number of other targets. A recent discovery of a cesium zone at the Project could potentially become a very important source of by-product credits eventually. Cesium is incredibly rare to find in potentially economic grades and scale, and can be worth as much as gold in its refined form. The Company will continue to develop this opportunity in the coming months and pending overlimit analysis are received.

Needless to say, we are very excited to go back to more of a "pure exploration" kind of drilling campaign, with the potential to expand the high-grade Vega Zone and successfully growing the resource of Shaakichiuwaanaan like we did in the past. We will be focusing our drilling efforts in the high-grade Vega Zone, combining blue sky drilling potential with a smaller drill campaign, which will have significantly less costs, as the CV5 infill drilling is now completed for the Feasibility Study purpose. We believe these efforts, combined with the cesium discovery, has the potential to create a lot of value for Patriot shareholders. We look forward to providing regular updates on this drilling progress, as results come to hand.

Thank you for your continued support of Patriot Battery Metals.

#### - Ken Brinsden

<sup>4</sup> For further information refer to the Company's press release dated 2 March 2025.





# PATRIOT ON THE AIRWAVES AND IN THE NEWS

**Strategic Partnership Webinar** 

RECENT/UPCOMING INVESTOR ENGAGEMENT AND CONFERENCES

BMO Global Metals, Mining, & Critical Minerals Conference

- February 24th to 26th, 2025

#### **PDAC**

- March 2nd to March 5th, 2025

**Euroz Hartley Rottnest Conference** 

- March 10th to 12th, 2025

**Macquarie Australia Conference** 

- May 6th to 8th, 2025

Canaccord Genuity Global Metals & Mining

- May 20th to 22nd, 2025

Mining of the North

– June 3rd to 5th, 2025

Fastmarkets Lithium Supply & Battery Raw Materials

– June 23rd to 26th, 2025

- 1.2 (Electric vehicle economics: How lithium-ion cell costs impact EV prices, Krishna, Fastmarket, 2024)
- <sup>3, 8, 11</sup> (Rho Motion: What to watch in 2025, 2025)
- <sup>4, 5, 9, 10</sup> (Global EV Outlook 2024, IEA, 2024)
- Rho Motion, EV Battery Outlook Q1 2025, 2025
- (Global Critical Minerals Outlook 2024, IEA, 2024)
- <sup>2</sup> Rho Motion, BESS Outlook Q1 2025, 2025.
- Lithium Forecast Q4 2024, Benchmark, 2024.

#### **LEGAL NOTICE**

This newsletter does not constitute an offer to sell or a solicitation of an offer to buy any of the securities of Patriot Battery Metals. Some of the information provided in this newsletter has been aggregated from various sources, does not represent Patriot Battery Metals' opinion and Patriot Battery Metals disclaims any responsibility as to the accuracy of such information as well as any obligation to update or revise such information. This newsletter contains forward-looking statements. All statements other than statements of present or historical facts are forward-looking. Forward-looking statements involve known and unknown risks, uncertainties and assumptions and accordingly, actual results and future events could differ materially from those expressed or implied in such statements. Furthermore, forwardlooking statements are based upon certain assumptions and other important factors that, if untrue, could cause the actual results, performance or achievements of the Company to be materially different from future results, performance or achievements expressed or implied by such statements. You are hence cautioned not to place undue reliance on forward-looking statements. Forwardlooking statements include words or expressions such as "what's coming up", "emerging", "progress", "toward", "becoming", "will", "further", "development", "expected", "to become", "could", "targeting", "potentially positioning", "growing", "intends", "pathway", "continued", "demand", "eventually" and other similar words or expressions. Factors that could cause future results or events to differ materially from current expectations expressed or implied by the forward-looking statements include the timing of completion of the updated Mineral Resource estimate and Feasibility Study; the estimation of Mineral Resources and the realization of such mineral estimates; the outcomes of the PEA; the Exploration Target, including the scale of potential remaining to be assessed; the potential that Volkswagen may agree to provide additional financing to the Company in the future in return for additional offtake on terms to be agreed; the potential that Volkswagen may agree to provide additional financing to the Company in

the future in return for additional offtake on terms to be agreed; the timing of recovery of the lithium market; and the potential of cesium. There can be no assurance that forward-looking statements will prove to be accurate. Key assumptions upon which the Company's forward-looking statements are based include that proposed exploration and mineral resource estimate work on the Project will continue as expected, the accuracy of reserve and resource estimates, the classification of resources between inferred and indicated and the assumptions on which the reserve and resource estimates are based, long-term demand for spodumene supply, and that exploration and development results continue to support management's current plans for Project development and expectations for the Project.

Although the Company believes its expectations are based upon reasonable assumptions and has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. As such, these risks are not exhaustive; however, they should be considered carefully. Readers are directed to carefully review the detailed risk discussion in the Company's most recent Annual Information Form filed on SEDAR+, which discussion is incorporated by reference in this newsletter, for a fuller understanding of the risks and uncertainties that affect the Company's business and operations.

The forward-looking statements contained herein are made only as of the date hereof. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except to the extent required by applicable law. The Company qualifies all of its forward-looking statements by these cautionary statements.

