

NEO Battery Provides Corporate Update on Product R&D, Advanced Testing, and Pathway-to-Commercialization

written by Raj Shah | July 30, 2024

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- Well Underway in Executing 5-Pillared Strategy for 2024
- Increasing Battery Value Chain Demand for NEO's Silicon Anodes
 - Commercial Relationships Materializing with Collaboration Agreements
 - Several New Relationships Established with Battery Cell & EV Manufacturers from China, Japan, India, France, and Scandinavia
- New Performance Breakthroughs with Modified Formulations & Additive Deployment
 - Commenced Graphite Anode Screening and Compatibility Testing
 - To Initiate Full Cell Testing with LFP & NCM Cathodes
- Finalizing Location in Canada through Late-Stage Discussion with Undisclosed Region

NEO Battery Materials Ltd. (“NEO” or the “Company”), a low-cost silicon anode materials developer that enables longer-running, rapid-charging lithium-ion batteries, is pleased to provide a

corporate update on the status quo and developments of NEO's proprietary silicon anode materials – NBMSiDE®, product testing plans, and pathway-to-commercialization.

Letter to Shareholders

Dear NEO Battery Materials Shareholders,

Thank you for your continued interest in and loyalty to NEO Battery Materials. Despite growing headwinds from the slowdown in the electric vehicle (EV) market, the demand for silicon anodes continues to grow. Silicon is vital in enhancing the price and performance of EV batteries. NEO has made new strides in improving our silicon anode performance with our exceptional team of battery engineers. The increasing maturity of our technology directly strengthens the Company's fundamental position and value. As discussed in the previous [Letter to Shareholders](#), management and the engineering team are well underway in executing our 5-pillared strategy for 2024.

Partnerships: Increasing Battery Value Chain Demand

In 2024, NEO Battery Materials will prioritize improving the performance and reducing the cost of NBMSiDE®. This priority will help establish commercial agreements with our working parties. Over the past 2 months, we forged collaborations with INNOX eco-M and Lotus Energy Recycling. This achievement is also a significant business development as stable, emission-friendly sources have been secured to strengthen long-term cost competitiveness.

Ongoing discussions are underway with companies under existing non-disclosure agreements (NDA). These downstream companies are conducting material evaluations, and we are shipping gradually enhanced NBMSiDE®. The growth potential of the silicon anode

market is higher than in previous years due to the increasing call from battery cell and EV manufacturers to use silicon anodes. As a result, the Company has established several new relationships throughout the battery value chain, including global manufacturers in China, Japan, India, France, and Scandinavia.

Product Development: Breakthroughs & Scaled-Up Testing

We have continued to commit investment into product R&D. Most recently, we attained a significant process innovation of scaling the production capacity to 4 tons per year without additional equipment. With our dedicated R&D team, the core research focuses are i) improving the battery cycle life and ii) maintaining a high, steady coulombic efficiency (a measure of battery capacity retention). We are achieving new performance breakthroughs by modifying formulations and deploying additives, including carbon nanotubes (CNT) and robust coating layers. We will provide a separate technical news release in early August regarding key performance developments of the NBMSiDE[®] product.

As highlighted in Pillar 3 – R&D Direction, we have commenced testing NBMSiDE[®] products with graphite anode materials. Our engineers have focused on optimizing a pure 100% silicon-based anode to demonstrate proof-of-concept. However, as conventional batteries combine silicon and graphite anodes, the R&D will now optimize NBMSiDE[®] with artificial and natural graphite anodes. NEO is testing different types of graphite anodes to screen for compatibility. These tests will be the key to moving to the following stages with battery cell and EV manufacturers.

NEO also plans to conduct full cell testing with various cathode chemistries, including nickel-cobalt-manganese (NCM) and lithium-iron-phosphate (LFP) materials. This will replicate

commercial-level battery operating conditions. Along with solid-state batteries (SSB), there has been growing interest in silicon anode adoption in LFP batteries to compensate for LFP's lower specific capacity than NCM. Sample tests are being conducted with SSB developers, and additional sample tests are planned with performance-enhanced silicon anodes.

Pathway-to-Commercialization: Finalizing Location in Canada

As discussed in Pillar 4 – Mass Production Plans & Inclination Towards Canadian Operations, the Canadian government introduced aggressive policies to attract investment from the EV and battery sectors. To serve the best interest of our shareholders, NEO has decided to initiate mass production plans in Canada. We are in late-stage discussions with an undisclosed Canadian region to finalize the location and land.

We plan to approach our pathway-to-commercialization in a capital-efficient and risk-reduced manner. Therefore, NEO will prioritize product optimization (i.e., silicon modification, graphite anode testing, and full cell testing), establish advanced commercial agreements with testing partners, and then build capacity increases in Canada. We will update our commercialization plans and timelines in a separate news release.

Closing Statement

Despite the difficult capital market situation for EV and battery-related companies and industry headwinds, management and our engineers remain enthusiastic and optimistic regarding our product, partnerships, and commercialization developments. NBMSiDE[®] retains the necessary and potent technology to stimulate EV demand through longer-running, faster-charging, and lower-cost batteries. We have diligently executed our 5-pillared

strategy for 2024 and will strive for new heights in our growth, product development, and fundamental position. As a venture technology company, NEO has successfully completed financings in a strategic and timely manner without damaging intrinsic shareholders' value. We are confident that we will continue to execute our plans.

We remain committed to our mission of commercializing our silicon anode materials and value-added projects. We sincerely thank our shareholders for their continued interest in and support of the Company.

Best regards,

Spencer Huh
Director, President & CEO

About NEO Battery Materials Ltd.

NEO Battery Materials is a Canadian battery materials technology company focused on developing silicon anode materials for lithium-ion batteries in electric vehicles, electronics, and energy storage systems. With a patent-protected, low-cost manufacturing process, NEO Battery enables longer-running and ultra-fast charging batteries compared to existing state-of-the-art technologies. The Company aims to be a globally-leading producer of silicon anode materials for the electric vehicle and energy storage industries. For more information, please visit the Company's website at: <https://www.neobatterymaterials.com/>.

On Behalf of the Board of Directors

Spencer Huh
Director, President, and CEO

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Company; (xii) the risks associated with the various environmental regulations the Company is subject to; (xiii) risks related to regulatory and permitting delays; (xiv) the reliance on key personnel; (xv) liquidity risks; (xvi) the risk of litigation; and (xvii) risk management, as described in more detail in our recent securities filings available at www.sedarplus.com. Forward-looking information is based on assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued research and development activities, no material adverse change in precursor prices and development plans to proceed in accordance with plans and such plans to achieve their stated expected outcomes, receipt of required regulatory approvals, and such other assumptions and factors as set out herein. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such forward-looking information. Such forward-looking information has been provided for the purpose of assisting investors in understanding the Company's business, operations, research and development, and commercialization plans and may not be appropriate for other purposes. Accordingly, readers should not place undue reliance on forward-looking information. We assume no obligation to revise or update these forward-looking statements except as required by applicable law.

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