NEO Battery Materials Upscales Pilot Plant to Semi-Commercial Scale Facility for Proprietary Silicon Anode Materials

written by Raj Shah | August 31, 2021

August 31, 2021 (Source) – NEO Battery Materials Ltd. (**TSXV: NBM**) (**OTC Pink: NBMFF**) ("**NEO**" or the "**Company**") is pleased to announce that the Company has upscaled the capacity of production from the pilot plant to a semi-commercial scale facility for silicon anode materials manufactured through NEO's proprietary nanocoating process.

NEO's semi-commercial plant project is now finalized to produce 120 tons per year, and this is a 12-fold increase from the original capacity (~10 tons per year). Assuming a ratio of 9:1 for graphite to silicon in the anode (a 10% silicon loading), 120 tons per year produced by NEO's semi-commercial plant is sufficient to supply 40,000 electric vehicles (EVs). The Company is currently in the effort of increasing the silicon content in the anode component by over a 20% loading as a short-term project through controlling volume expansion and solid-electrolyte interphase (SEI) growth. This direction implies that NEO is approaching a 100% silicon anode as the final goal.

NEO has proceeded with this decision to rapidly respond to the demands and requirements of different customers within the lithium-ion battery supply chain for electric vehicles. The ability to upscale the plant size positively indicates the mass production viability of NEO's silicon anodes. After construction and once processes are optimized, the semi-commercial plant will be able to be readily converted into a commercial-scale facility

without substantial modifications.

Mr. Spencer Huh, President and CEO of NEO, commented, “All of the progress are exceeding our expectations and predicted timeline as our team is diligently accelerating our commercialization process. Based on internal sample testing results and the optimization of our manufacturing process, we have validated the ability to upscale from a pilot to a semi-commercial scale facility. Between all management, advisors, and engineers, there is unanimous agreement and great confidence for the mass adoption of NEO’s silicon anodes by the industry. Using the prototype testing results by our NDA partners, we can optimize our processes and material design for a more robust and convincing commercial plant.”

Dr. J. H. Park, Director and Chief Scientific Advisor of NEO, added, “The location of the semi-commercial facility is being narrowed down, and the area is expected to be approximately 55,000 square feet with numerous South Korean battery cell and material manufacturers in the proximity. The space of the plant site considers the installation of at least 5 mass-production lines when the semi-commercial plant is fully converted into a commercial facility. With regards to sample testing, the results and due diligence will take on average a month, but we are actively shortening the period through expanding the production capacity of our prototype anodes. We have recently ordered two additional equipment to meet continual demands from third parties.”

Appointment of Mr. Suk Joong Hwang as Project Manager

Mr. Suk Joong Hwang, Member of the Scientific Advisory Board, has been appointed as the project manager for the semi-commercial plant project. Mr. Hwang has over 20 years of experience in process engineering in the chemical and polymer industry. He specializes in scaling up products from the lab to

mass production through pilot and semi-commercial plants.
Mr. Hwang commented, “We are extremely pleased and excited to start NEO’s semi-commercial plant project. From my experience with different projects, the commercialization of NEO’s silicon anodes is nearby. The plant will be designed and constructed for versatility to flexibly respond to and satisfy customers’ detailed needs and specifications. In addition to capacity, the semi-commercial plant will retain the identical technical precision and optimized process as a mass-production commercial facility. The PDP (Process Design Package), which will be completed with the plant’s installation, will be standardized for international use, and this will enable the swift completion and success of future commercial plants in North America.”

About NEO Battery Materials Ltd.

NEO Battery Materials Ltd. is a Vancouver-based resource company focused on battery metals and materials. The Company has staked new mining claims in Golden, BC, along a strike with a quartzite bed, targeting silica in the quartzites for a total of 467 hectares. NEO is also focusing on developing silicon anodes, which provide improvements in capacity and efficiency over lithium-ion batteries using graphite in their anode materials. The Company intends to become an integrated silicon producer and anode materials supplier to the electric vehicle industry. For more information, please visit the Company’s website at: https://www.neobatterymaterials.com/.

On behalf of the Board of Directors

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