NEO Battery Materials Provides Corporate Update on InterBattery 2022, Full Cell Testing with High Energy Capacity Si Anodes, and R&D Scale-Up Centre Operations

written by Raj Shah | March 31, 2022

March 31, 2022 (Source) – NEO Battery Materials Ltd. (**TSXV: NBM**) (**OTCQB: NBMFF**) ("**NEO**" or the "**Company**") is pleased to provide corporate updates on InterBattery 2022, full cell testing updates with high energy capacity NBMSiDE™, and the near completion of NEO's R&D Scale-Up Centre for continuous sample manufacturing.

1. **InterBattery 2022 Briefing and Related Activities**
   As an exhibitor, the management and engineering team of NEO Battery Materials attended InterBattery 2022 from March 17 to March 19. During the 3-day period, NEO held numerous meetings with battery-related manufacturing and materials companies that operate on both the local and international scale, and through these meetings, the industry's active interest in utilizing silicon anode materials was reaffirmed. Companies presented a specific interest in NEO's progress with the development of the South Korean Mass-Production Commercial Plant and the optimized technology and manufacturing process of NEO's Silicon Anode Materials – NBMSiDE™.With multiple companies with the intention of collaboration, joint ventures, or other cooperative agreements, NEO has undertaken NDAs and

additional processes with these parties, and among the discussed companies include global top-tier battery manufacturers and material manufacturers.

2. **R&D Achievements and Full Cell Testing Activities**
   NEO Battery Materials is advancing its silicon anode technology through a proprietary single-step manufacturing process with cost-effective silicon microparticle inputs that provides significant cost reductions and performance enhancements for the lithium-ion battery end-user. Through a mix of treatments and nanocoating materials, NEO utilizes pure metallurgical-grade silicon particles, which provide a 40-70% higher initial specific energy or capacity compared to current competitors that employ SiOx, SiC, or other composite silicon materials.Due to NEO’s advantage of retaining a higher initial capacity, on average, a 5% silicon weight loading of NBMSiDE can have the equivalent impact of a 10% loading of a competitor’s materials. Initial coulombic efficiencies (ICE) for NEO’s 100% micron-size level Si anode have exceeded the 86% level, and cycling performance presents excellent capacity retention after 300 charging/discharging cycles even with inexpensive and conventional polymer binders and super-P carbon black conductive additives.With the near completion of pouch cell manufacturing, the full cell testing process with NBMSiDE™ is in progress in South Korea, and the Company will continue to conduct continuous cycling tests to both examine and optimize performance in the full cell setting. Due to the recent rapid spread of the Omicron virus in Korea, there was a delay due to internal circumstances of the testing agency, but fortunately, NEO has received notice that the regular testing schedule will occur accordingly. The Company will shortly provide the completed production and details of the full pouch cells.
3. **R&D Scale-Up Centre Ready for Full Operation in Early**

April and Sample Testing Activities with 3rd Parties
Currently, in the final stages of construction, most of the procured equipment has been received and the commissioning of the R&D Scale-Up Centre in South Korea has been completed. From early April, efficient production, and quality assurance and management of samples will be enabled through the comprehensive control of equipment for NBMSiDE™ sample mass production, and with NEO's R&D personnel, continuous operation of the facility will occur to further enhance the production and performance of the silicon anode materials. Furthermore, NEO will perform additional R&D with graphite anode active materials to manufacture silicon-graphite composite (mixture) anodes through a short-term equipment lease.The first refined sample of NBMSiDE™ has been provided to a Europe-based battery materials company, and a second delivery is planned in April. NEO is additionally conducting sample tests with several Asia-based and European battery manufacturers.

4. **April Webinar**
   The monthly webinar will be held in the fourth week of April. Specific schedules will be provided through the next news release.

About NBMSiDE™

NBMSiDE™ is NEO Battery Materials Ltd.'s flagship silicon anode material for electric vehicle lithium-ion batteries. NBMSiDE comes in three variations, P100, P200, and C100, and is manufactured through the Company's proprietary nanocoating technology. All product lines are based on metallurgical-grade silicon microparticles and retain a high specific capacity of >2,500 mAh/g. Through the Company's South Korean intellectual property (IP) law firm, NBMSiDE™ is pending trademark approval.

About NEO Battery Materials Ltd.

NEO Battery Materials Ltd. is a Vancouver-based company focused on electric vehicle lithium-ion battery materials. NEO has a focus on producing silicon anode materials through its proprietary single-step nanocoating process, which provides improvements in capacity and efficiency over lithium-ion batteries using graphite in their anode materials. The Company intends to become a silicon anode active materials supplier to the electric vehicle industry. For more information, please visit the Company's website at: https://www.neobatterymaterials.com/.

This news release includes certain forward-looking statements as well as management's objectives, strategies, beliefs and intentions. Forward looking statements are frequently identified by such words as "may", "will", "plan", "expect", "anticipate", "estimate", "intend" and similar words referring to future events and results. Forward-looking statements are based on the current opinions and expectations of management. All forward-looking information is inherently uncertain and subject to a variety of assumptions, risks and uncertainties, including the speculative nature of mineral exploration and development, fluctuating commodity prices, the effectiveness and feasibility of technologies which have not yet been tested or proven on a commercial scale, competitive risks and the availability of financing, as described in more detail in our recent securities filings available at www.sedar.com. Actual events or results may differ materially from those projected in the forward-looking statements and we caution against placing undue reliance thereon. We assume no obligation to revise or update these forward-looking statements except as required by applicable law.

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Photos accompanying this announcement are available at

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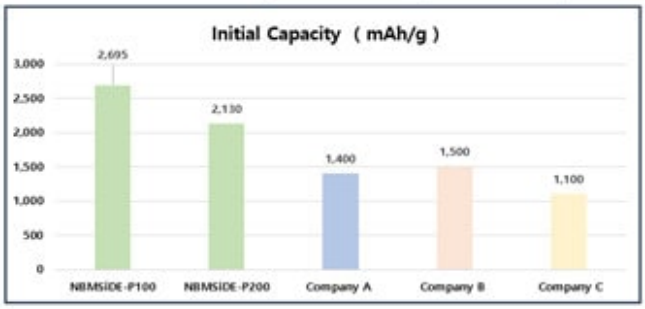
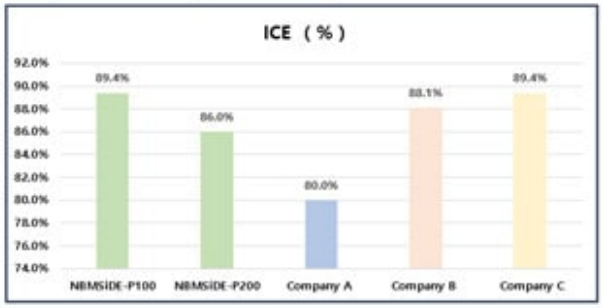
InterBattery 2022: NEO Battery Materials Exhibitor

Silicon Anode Materials Competitor Comparison Chart

Products	Initial Capacity (mAh/g)	ICE (%)	Type	Manufacturing Cost
NBMSiDE P100	2,695	89.4	Metal Si	Low
NBMSiDE P200	2,130	86.0	Metal Si	
Company A	1,400	80.0	SiOx	High
Company B	1,500	88.1	Si-C	Medium
Company C	1,100	89.4	Si-C	Medium





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