

# NEO Battery Achieves Near-Double Flight Time in Live Drone Field Test, Advancing Commercial Readiness of Non-Chinese Battery Platform

18.02.2026 | [CNW](#)

- Demonstrated 98% increase in average flight time versus mass-produced Chinese battery benchmark via live drone field test
- Achieved 50% faster charging rates from silicon anode integration & improved flight power efficiency at reasonable costs
- Exceeded drone customer's internal expectations and metrics on performance enhancements from customization
- Advancing to commercial readiness through pack and system-level optimization

[NEO Battery Materials Ltd.](#) ("NEO" or the "Company") (TSXV: NBM) (OTC: NBMFF), a low-cost, silicon-enhanced battery developer that enables longer-running, rapid-charging batteries for drones, robotics, and electronics, is pleased to announce the successful completion of a live surveillance drone field demonstration of its newly developed high-performance drone battery (the "NBM Drone Cell"), confirming the previously disclosed cell-level performance improvements translate directly into operational gains.

In a live flight test conducted using a Korean original equipment manufacturer (OEM) customer's commercial surveillance drone product, the NBM Drone Cell delivered a 98% increase in average flight time compared to the mass-produced Chinese battery benchmark. After multiple demonstrations, flight duration extended on average from 29.9 minutes to 59.2 minutes at equivalent operating parameters. The test was conducted at an altitude of approximately 70 feet under cold-weather conditions from -3 to -5 degrees Celsius (23 - 26 F).

The prolonged flight time was driven by NBM Drone Cell's high-performance specifications of 755 Wh and 260 Wh/kg at the pack-level, representing energy capacity and density enhancements of 55% and 29%, respectively, compared to the Chinese battery benchmark. In addition, NEO's high-quality manufacturing produced a more stable voltage profile, enabling low-voltage operation while ensuring safety against power loss and operational failure (crash). Importantly, to maintain equivalent thrust/lift and performance characteristics during flight, NBM Drone Cell packs successfully matched the discharge rate (measured in C-rate) and current (measured in ampere) performance of the benchmark battery.

A spokesperson of the South Korean drone manufacturer stated, "This live field test exceeded our internal expectations and metrics on what high-performance customization could bring for drone products. At reasonable costs, NBM Drone Cells prove that high-capacity, high-stability voltage batteries can significantly enhance drone flight time and mission endurance while maintaining high safety standards. This overall demonstration can raise the competitive edge within the industrial, emergency response, precision agriculture, and defense drone markets where extended operational durability is critical."

"Chinese manufacturers currently dominate the supply of global drone batteries. This demonstration advances NEO's mission to establish a competitive, non-Chinese battery solution for drones and unmanned systems (UAS), where supply chain and performance constraints remain key procurement considerations for OEMs, governments, and the military," expressed (Ret.) C.J. Ko, Director of NEO. "This field validation of the NBM Drone Cells establishes a robust business case for defense acquisition as NEO's technology materially extends mission capabilities without requiring drone redesigns, allowing for seamless integration into military systems."

Beyond absolute flight duration, the field test showcased improvements in efficiency metrics. Flight time-per-capacity (minutes-per-Ah) increased by approximately 28%, and flight time-per-weight improved by approximately 80%, indicating more effective energy utilization at the system-level. Moreover, silicon anode integration enabled a 50% increase in charging rates from 0.2Ah/min to 0.31Ah/min under standard conditions, with further gains of up to 150% (0.5Ah/min) achievable under ultra-fast charging protocols.

With initial field validation completed, NEO is advancing towards NBM Drone Cell prototype-to-commercial readiness by developing a battery management system (BMS) software and optimizing pack-level casing materials to further enhance energy density and safety.

thermal performance. The Company will expedite structured customer and government evaluations for commercial interest and expand engagement with drone and UAS manufacturers in the U.S. and NATO countries.

Drone and UAS applications represent a key catalyst segment within the global lithium-ion battery market, which was estimated to be approximately US \$9.1 billion in 2025 and is projected to exceed US \$29 billion by 2032<sup>1</sup>. As defense, industrial, and commercial UAV (unmanned aerial vehicle) usage scales, battery technology must evolve to meet rigorous performance requirements. Concurrently, advances in faster-charging architecture and complex BMS are broadening the drone/UAS market, enabling safer operations and more efficient energy utilization. As a result, the synergy between drone platform advancement and battery innovation will be a major driver of sustained growth across both markets.

#### Appointment of Nancy Zhao as Chief Financial Officer

The Company is pleased to welcome Ms. Nancy Zhao back as Chief Financial Officer. The Company would like to further thank Daniel Lim for fulfilling this role for the past two years.

Ms. Zhao is a seasoned accounting and business executive with a CPA, with over 10 years of experience in both public and private companies. She has extensive coverage and expertise in various industries, covering manufacturing, mining, technology, entertainment, marketing, and real estate. As part of compensation to Ms. Zhao, the Company has granted incentive stock options (the "Options") to acquire an aggregate of 120,000 common shares and has issued 150,000 restricted stock units (the "RSUs") in accordance with the Company's Omnibus Equity Incentive Plan. Subject to the terms of the Option agreement and vesting provisions, all Options were granted at an exercise price of \$0.59 with an expiry date on February 17, 2031. Subject to the terms of the RSU agreement, all RSUs will vest after a 12-month period.

1. Source: Global Market Insights: Drone Battery Market Size - By Battery, Capacity, Drone Type, Application & Forecast to 2032 (<https://www.gminsights.com/industry-analysis/drone-battery-market>).

#### About NEO Battery Materials Ltd.

NEO Battery Materials is a Canadian battery technology company focused on developing and producing silicon-enhanced lithium-ion batteries in drones, unmanned aerial vehicles (UAV), robotics, unmanned systems, electronics, electric vehicles, and energy storage systems for AI data centers. With a patent-protected, low-cost manufacturing process, NEO Battery enables longer-running and ultra-fast charging batteries and provides end-to-end battery solutions from materials selection, cell architecture, and process optimization. The Company aims to be a globally-leading producer of high-performance lithium-ion battery components and materials, building a secure, robust battery supply chain in North America. For more information, visit the Company's website at: <https://www.neobatterymaterials.com/>.

#### On Behalf of the Board of Directors

Spencer Huh  
Director, President, and CEO

This news release includes certain forward-looking statements as well as management's objectives, strategies, beliefs and intentions. All information contained herein that is not clearly historical in nature may constitute forward-looking information. Generally, such forward-looking information can be identified notably by the use of forward-looking terminology such as "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "plans", "believes", or variations of such words and phrases or state that certain actions, events or results "may", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is subject to known and unknown uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: stock prices; the general global markets and economic conditions; the possibility of write-downs and impairments; the risks associated with the research and development of battery-related technologies; the risk associated with the effectiveness and feasibility of battery material, electrode, and cell technologies that have not yet been tested or proven on commercial scale or in real-world operating conditions; the risks associated with battery-related manufacturing process scale-up, including material consistency, consistent material, component, and cell quality, production yields, and process reproducibility at a pilot, semi-commercial, and commercial scale; the risks associated with compatibility of existing battery chemistries, formulations, components, or configurations; the risks associated with entering into and maintaining collaborations, joint ventures, partnerships, or commercial relationships with battery cell manufacturers, original equipment manufacturers, and various companies in the global battery and downstream end-user supply chain; the risks associated with the failure to develop and produce commercially viable battery-related products; the risks associated with the Company's technologies and products not meeting performance requirements or customer specific requirements; the risks that prototype and pilot-scale products do not advance into commercially produced products or translate into commercial products.

orders; the risk associated with battery components and cell purchase orders and offtake supply that may not be fulfilled on time, or at all as actual revenue realization depends on delivery schedules, achievement of technical milestones, and customer acceptance and validation; the risk associated with losing official vendor registration or status with existing customers; the risk upon delivery of prototype and commercial products; the risks associated with constructing, completing, securing, and financing pilot, semi-commercial, and commercial battery materials, components, and cell manufacturing facilities including Canadian and South Korean facilities; the risks associated with potential delays or increased costs with site preparation, procurement and installation, and facility commissioning; the risks associated with integrating silicon anode material production, electrode manufacturing, and cell assembly within a single operational cluster or the Company's business portfolio; the risks associated with supply chain disruptions or cost fluctuations in raw materials, processing chemicals, and additive prices; production costs and commercial viability; the risks associated with uninsurable risks arising during the course of research, development and production; competition faced by the Company in securing experienced personnel, contracts and sales, financing; access to adequate infrastructure and resources to support battery materials, components, and cell research and development activities; the risks associated with changes in the technology regulatory regime governing the Company; the risks associated with the timely execution of the Company's strategies and business plans; the risks associated with the lithium battery industry and end-users' demand and adoption of the Company's silicon anode technology and battery products; the adoption and integration challenges, including the difficulty of incorporating silicon anodes and silicon battery products into battery manufacturers and OEMs' systems; the risks associated with the various environmental and political regulations the Company is subject to; risks related to regulatory and permitting delays; the reliance on key personnel; liquidity risks; the risk of litigation; risk management; and other risk factors as identified in the Company's recent Financial Statements and MD&As and recent securities filings for the Company which are available on [www.sedarplus.ca](http://www.sedarplus.ca). Forward-looking information is based on assumptions management believes to be reasonable at the time such statements are made, including but not limited to the R&D and commercialization activities, no material adverse change in precursor, raw material, equipment, and relevant technology development and commercialization 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 may 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. Forward-looking information is made as of the date of this presentation, and the Company does not undertake to update such forward-looking information except in accordance with applicable securities laws.

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Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/722803--NEO-Battery-Achieves-Near-Double-Flight-Time-in-Live-Drone-Field-Test-Advancing-Commercial-Readiness-of-New-Technology>

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