

HPQ Silicon Affiliate – Novacium’s GEN2 Advanced Silicon-Based Anode Material Delivers Superior Performance at 50 Cycles

- Testing results at 50 cycles of GEN2 material show an overall capacity improvement of approximately 30% compared to the graphite benchmark and 14% better compared to Gen 1 material, without any noticeable cycle degradation ^[1].

Montreal, Canada, June 12th, 2024 — [HPQ Silicon Inc.](#) (“HPQ” or the “Company”) ([TSX-V: HPQ](#)) ([OTCQB: HPQFF](#)) ([FRA: O08](#)), a technology company specializing in green engineering of silica and silicon-based materials is pleased to announce the latest battery milestones achieved by its France-based affiliate, NOVACIUM SAS (“Novacium”). This announcement highlights the remarkable results obtained during the initial 50-cycle tests of 18650 industrial batteries made with Novacium’s non-optimized second-generation advanced silicon-based anode material.

“These results continue to showcase our ability to produce a blend of graphite and advanced silicon anode material that can be seamlessly integrated into existing anode manufacturing facilities, improving overall battery performance,” stated Dr. Jed Kraiem, Ph.D., COO of Novacium. “As we continue improving our material and its performance, our work will also focus on assisting HPQ in becoming a North American and European manufacturer of next-gen engineered silicon-based anode materials.”

UNLOCKING ENHANCED BATTERY PERFORMANCE WITH SILICON BASE ANODE MATERIALS

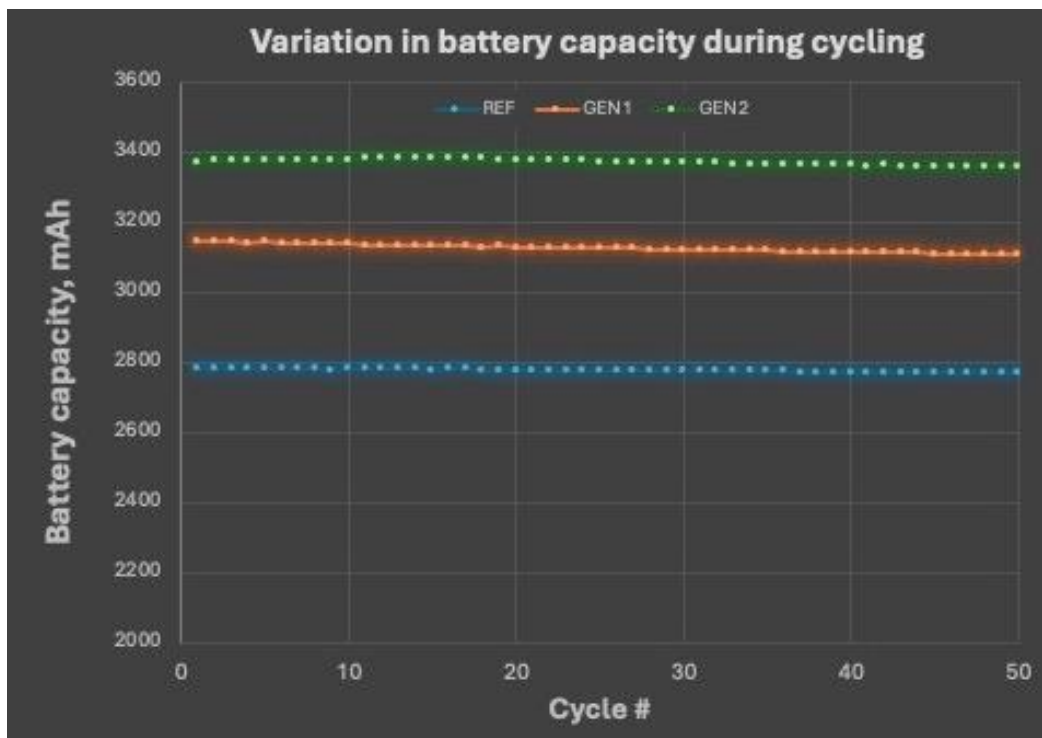


Figure 1) The blue line shows average capacity of 100% graphite batteries, the orange line shows average capacity of GEN1 batteries, and the green line shows average capacity of GEN 2, all measured in milliampere-hours (mAh) ^[1]

The figure above illustrates the progression in battery capacity over 50 cycles. The blue line represents the average capacity of three (3) 18650 batteries with 100% graphite at around 2,775 mAh. The orange line shows the average capacity of three (3) 18650 batteries using Novacium GEN1 materials at around 3,174 mAh. Finally, the green line depicts the average capacity of three (3) 18650 batteries using Novacium GEN2 materials at around 3,379 mAh.

These results indicate that during the first 50-cycle test, the batteries made with Novacium non-optimized GEN2 materials continue to show approximately a 30% improvement compared to the graphite benchmark and about a 14% improvement compared to the batteries made with Novacium GEN1 materials.

DELIVERING MINIMAL BATTERY DEGRADATION AT 50 CYCLES

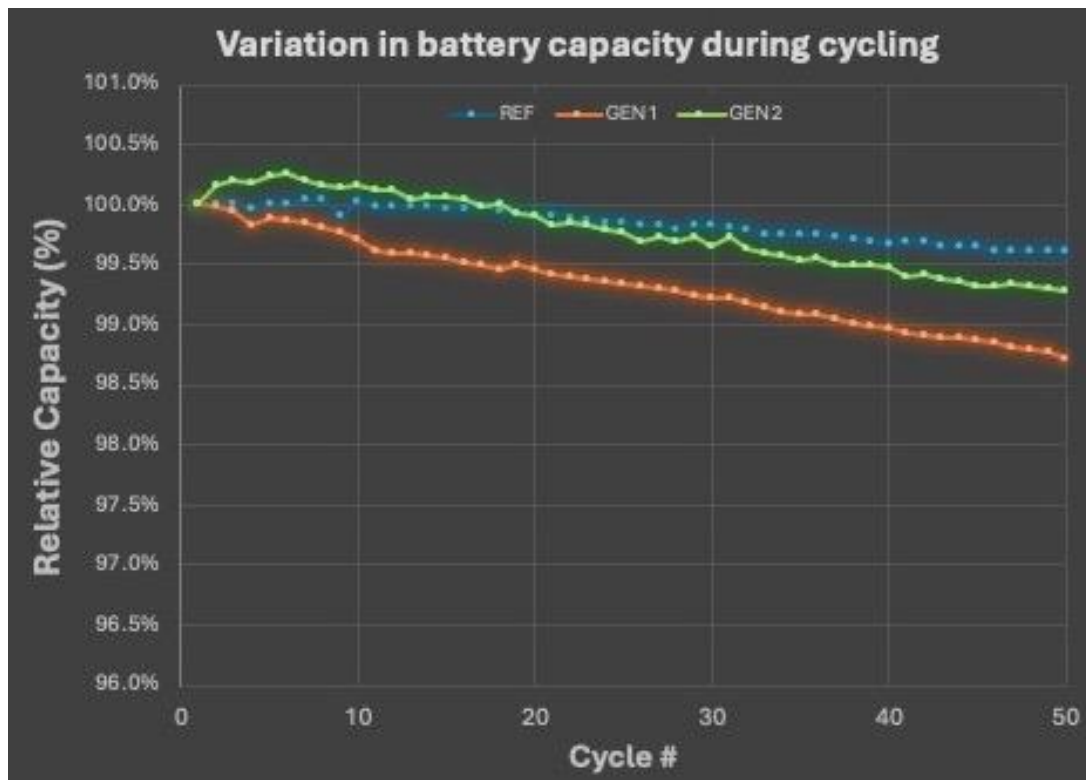


Figure 2) The blue line shows the relative capacity of 100% graphite batteries, the orange line shows the relative capacity of GEN1 batteries, and the green line shows relative capacity of GEN 2, over 50 cycles ^[1].

Results from Figure 2 continue to demonstrate a minimal increase (about 1%) in measurable cycle degradation during the first 50 cycles. The blue line represents the average relative capacity of three (3) 18650 batteries with 100% graphite; the orange line shows the average relative capacity of three (3) 18650 batteries made using Novacium GEN1 materials, and the green line depicts the average relative capacity of three (3) 18650 batteries using Novacium GEN2 materials.

“Novacium’s non-optimized second-generation engineered silicon anode material continues to deliver results that surpass those obtained with Novacium GEN1 materials. These promising results have real-world applications,” stated Mr. Bernard Tourillon, President and CEO of HPQ Silicon Inc. and NOVACIUM SAS. *“These achievements open new doors for HPQ as we strive to become a manufacturer of next-gen engineered silicon-based anode materials in jurisdictions that support these types of initiatives.”*

REFERENCE SOURCES

- [1] Novacium technical team analysis of the data from the ongoing charging and discharging cycle tests conducted at a world-leading university, the name of which is kept confidential for competitive reasons.

About NOVACIUM SAS

Novacium is an HPQ - affiliated company started in Q3 2022. This green technology startup is based in Lyon, France and is a partnership with HPQ and three of France’s leading research engineers, Dr. Jed

KRAIEM PhD, Novacium's Chief Operating Officer (“COO”), Dr. Oleksiy NICHIPORUK PhD, Novacium's Chief Technical Officer (“CTO”), and Dr. Julien DEGOULANGE PhD, Novacium’s Chief Innovation Officer (“CIO”). Novacium is a new Research and Development company which allows the researchers to develop their own technology in high added value fields connected to renewable energy, and allows HPQ Silicon Inc, a Canadian company, to expand the depth and reach of its technical team to help develop its silicon and new renewable energy projects.

About HPQ Silicon

[HPQ Silicon Inc. \(TSX-V: HPQ\)](#) is a Quebec-based TSX Venture Exchange Tier 1 Industrial Issuer.

HPQ is developing, with the support of world-class technology partners [PyroGenesis Canada Inc.](#) and [NOVACIUM SAS](#), new green processes crucial to make the critical materials needed to reach net zero emissions.

HPQ activities are centred around the following four (4) pillars:

- 1) Becoming a green low-cost (Capex and Opex) manufacturer of Fumed Silica using the **FUMED SILICA REACTOR**, a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.
- 2) Becoming a producer of silicon-based anode materials for battery applications with the assistance of NOVACIUM SAS.
- 3) HPQ SILICON affiliate NOVACIUM SAS is developing a low carbon, chemical based on demand and high-pressure autonomous hydrogen production system.
- 4) Becoming a zero CO₂ low-cost (Capex and Opex) producer of High Purity Silicon (2N+ to 4N) using our **PUREVAP™ “Quartz Reduction Reactors” (QRR)**, a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.

For more information, please visit [HPQ Silicon web site](#).

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