

Panasonic Energy Partners with NOVONIX for Sustainable Synthetic Graphite Supply in EV Battery Production

Off-take agreement with NOVONIX advances Panasonic Energy's commitment to carbon footprint reduction and resilient supply chain in North America

Osaka, Japan – February 9, 2024 – Panasonic Energy Co., Ltd., a Panasonic Group Company, today announced it has signed a binding off-take agreement with the leading battery materials and technology company [NOVONIX Limited](#) ("NOVONIX"; Queensland, Australia) for the supply of synthetic graphite, the main component of the anodes of lithium-ion batteries used in electric vehicles (EVs). In line with Panasonic Energy's Medium- to Long-term Strategy to strengthen its North America-focused supply chain and reduce its environmental impact, the synthetic graphite will be utilized by Panasonic Energy's EV battery manufacturing facilities in the U.S., with shipments scheduled to start in 2025 from NOVONIX's facility in Tennessee.



NOVONIX's proprietary graphitization furnaces

By 2031, Panasonic Energy aims to reduce the carbon footprint of the entire lithium-ion battery supply chain for EVs by 50% compared to 2022 levels. The majority of emissions arise from resource mining, raw material processing, and logistics. Therefore, in addition to reducing the carbon footprint generated during battery manufacturing through the carbon neutralization of all factories, Panasonic Energy actively addresses environmental impact reduction in the upstream supply chain. This agreement will allow Panasonic Energy to leverage NOVONIX's innovative environmental technology and procure 10,000 tons of graphite from NOVONIX's North American operations over a period of four years, a strategically important step in the reduction of the environmental impact of its supply chain.

There are two types of graphite for lithium-ion batteries: natural graphite and synthetic graphite. Synthetic graphite offers enhanced battery durability, allowing for reliable performance during repeated charging and discharging cycles. Synthetic graphite is traditionally produced by means of lengthy high-temperature

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treatment in an Acheson furnace, lasting 30 days per production cycle, with temperatures reaching up to 3,000°C. However, this production method poses challenges due to its high energy consumption and resulting CO2 emissions, and companies are actively developing innovative production methods to overcome these drawbacks.

NOVONIX's proprietary graphitization furnaces are the first of its kind for large-scale production, enabling efficient mass production of synthetic graphite in just around three days per cycle. This innovation is expected to reduce the levels of CO2 emitted during the production of synthetic graphite compared to conventional Acheson furnaces. It represents a significant contribution towards Panasonic Energy's goal of halving its carbon footprint, and demonstrates the company's commitment to environmental sustainability.

In the North American market, encompassing the U.S. as the world's second-largest for new car sales, Panasonic Energy aims to facilitate the widespread adoption of EVs by providing high-quality and high-capacity batteries that offer extended driving range. The company will leverage its expertise and experience to take the lead in the lithium-ion battery industry. Through strategic partnerships, it will accelerate its efforts towards achieving zero emissions and helping build a sustainable society.

About Panasonic Energy Co., Ltd.

Panasonic Energy Co., Ltd., established in April 2022 as part of the Panasonic Group's switch to an operating company system, provides innovative battery technology-based products and solutions globally. Through its automotive lithium-ion batteries, storage battery systems and dry batteries, the company brings safe, reliable, and convenient power to a broad range of business areas, from mobility and social infrastructure to medical and consumer products. Panasonic Energy is committed to contributing to a society that realizes happiness and environmental sustainability, and through its business activities the Company aims to address societal issues while taking the lead on environmental initiatives. For more details, please visit <https://www.panasonic.com/global/energy/>.

About NOVONIX Limited

NOVONIX is a leading battery technology company revolutionizing the global lithium-ion battery industry with innovative, sustainable technologies, high-performance materials, and more efficient production methods. The company manufactures industry-leading battery cell testing equipment, is growing its high-performance synthetic graphite anode material manufacturing operations, and has developed an all-dry, zero-waste cathode synthesis process. Through advanced R&D capabilities, proprietary technology, and strategic partnerships, NOVONIX has gained a prominent position in the electric vehicle and energy storage systems battery industry and is powering a cleaner energy future. To learn more, visit us at www.novonixgroup.com or on [LinkedIn](#) and [X](#).

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