Solidion Technology Inc. Is Ready to Produce a Sustainable Key Component in Lithium-ion Batteries

Sustainable Graphite Anode Materials to be produced in the U.S.

DALLAS, TEXAS, UNITED STATES, February 7, 2024 /EINPresswire.com/ -- Solidion Technology, Inc. (Solidion), an advanced battery technology solutions provider, aims to address the burgeoning battery materials supply shortage, driven by anticipated soaring demand for electric vehicle (EV) and energy storage systems (ESS) battery capacities.

Solidion plans to build a graphite production facility in the Southeast United States with an initial capacity of 10,000 metric tons per annum (MTA) by the end of 2026, which will be expanded to ~180,000 MTA by 2030 to fulfill the growing domestic demand. This US domestic facility will manufacture graphite anode materials primarily from biomass, an abundant and sustainable class of feedstock materials for battery-grade graphite production in North America.

According to Benchmark Mineral Intelligence, the annual worldwide graphite demand in 2035 is forecast to be 12.4 million metric tons (7.2 million tons of natural graphite and 5.2 million tons of synthetic graphite). As of 2022, the production capacity of the graphite industry was only 3.2 million tons per year. By 2035, the world will need additional 97 natural graphite mines, each producing 56,000 tons, and additional 54 synthetic graphite factories, each producing 57,000 tons per year. (Source: Benchmark Mineral Intelligence on X: "More than 300 new mines could need to be built over the next decade to meet the demand for electric vehicle and energy storage batteries, according to a Benchmark forecast. https://t.co/QSJdcx3TD1 https://t.co/vjm7t5ECqG" / X (twitter.com) and More than 300 new mines required to meet battery demand by 2035 | Benchmark Source (benchmarkminerals.com)

According to a recent Department of Energy report, China produced 84% of the global lithium-ion anode materials in 2021, whereas the domestic sources produced only 0.6% per annum. The US supply shortage will likely worsen as China has stated that it intends to put in place graphite export restrictions beginning in December 2022.

Having developed a cost-effective process for mass-manufacturing green graphite anode materials from sustainable biomass sources, Solidion's years of in-depth R&D and anode manufacturing experience put it in a unique position to capitalize on the rapidly changing EV battery materials market.

About Solidion Technology, Inc.
Headquartered in Dallas, Texas with pilot production facilities in Dayton, Ohio, Solidion's core business includes manufacturing of battery materials and components, as well as development and production of next-generation batteries for energy storage systems and electric vehicles for ground, air, and sea transportation. Recognized as a global IP leader in both the high-capacity anode and the high-energy solid-state battery, Solidion is uniquely positioned to offer two lines of battery products: (i) advanced anode materials (ready for production expansion); and (ii) three classes of solid-state batteries, including Silicon-rich all-solid-state lithium-ion cells (Gen 1), anodeless lithium metal cells (Gen 2), and lithium-sulfur cells (Gen 3), all featuring an advanced polymer- or polymer/inorganic composite-based solid electrolyte that is process-friendly. Solidion's solid-state batteries can be manufactured at scale using current lithium-ion cell production facilities; this feature enables fastest time-to-market of safe solid-state batteries. Solidion batteries are designed to deliver significantly extended EV range, improved battery safety, lower cost per KWh, fastest time-to-market, and next-gen cathodes (potential to replace expensive nickel and cobalt with sulfur (S) and other more abundant elements).

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