NexTech Batteries' Lithium-Sulfur Cells Successfully Operating in Orbit Aboard NearSpace Launch's SPEAR-1 Mission

First on-orbit demonstration of NexTech's Li-S cylindrical cells advances U.S. energy-storage capability for national security space applications



NexTech Batteries

CARSON CITY, NV, UNITED STATES, September 17, 2026 /EINPresswire.com/ -- NexTech Batteries, Inc. ("NexTech"), a U.S. developer of next-generation lithium-sulfur (Li-S) battery technology, and NearSpace Launch, Inc. ("NSL"), a leader in small-satellite manufacturing and rapid on-orbit technology maturation, today announced the successful on-orbit operation of NexTech's Li-S cylindrical cells aboard the SPEAR-1 mission. The cells are cycling nominally and performing as expected in low Earth orbit.

SPEAR-1 (Space Power and Energy Advanced Recon) is a three-spacecraft constellation developed by NearSpace Launch and launched on July 7, 2026 aboard SpaceX's Transporter-17 rideshare mission. Built on NSL's flight-proven ThinSat® platform, the mission serves as an in-space development and test (ISDT) capability designed to accelerate the transition of promising space technologies from research to operational readiness. The program is funded and managed by the Operational Energy Prototyping Fund (OEPF) under the U.S. Department of Defense, executed by the U.S. Naval Research Laboratory (NRL), with technical oversight from the U.S. Space Force's Space Systems Command (SSC).

NexTech's cylindrical Li-S cells were developed under the company's Small Business Innovation Research (SBIR) Phase I contract with the U.S. Space Force targeting improved lithium-sulfur cell performance for space and defense applications. Lithium-sulfur chemistry offers the potential for materially higher gravimetric energy density than incumbent lithium-ion batteries, with a supply chain built on abundant, non-strategic materials — an increasingly important consideration for U.S. defense and commercial customers seeking to reduce dependence on foreign-sourced critical minerals. On-orbit operation validates cell performance in the space environment and represents a substantive milestone in maturing Li-S technology for mission use.

Bill Burger, Chief Executive Officer of NexTech Batteries, said:

"Seeing our lithium-sulfur cells cycle successfully in low Earth orbit is a defining moment for NexTech. It validates years of focused engineering on a chemistry that can deliver higher energy density than today's lithium-ion, without the strategic-mineral dependence, and it establishes a credible path for U.S.-manufactured Li-S batteries in space, defense, and commercial power systems. We are grateful to the team at NearSpace Launch, and to the Naval Research Laboratory, the Operational Energy Prototyping Fund, and Space Systems Command for the opportunity to fly on SPEAR-1."

Matthew Voss, President of NearSpace Launch, said:

"SPEAR-1 was built to move promising space technologies from research to operational readiness faster than the traditional procurement cycle allows. NexTech's lithium-sulfur cells are exactly the kind of payload the program is designed to advance, and it is rewarding to see them performing on orbit alongside the rest of the constellation. We look forward to continuing our work with NexTech and our government partners as the mission progresses."

The successful flight follows the completion of NexTech's SBIR Phase I effort and coincides with the recent award of a follow-on SBIR Phase II contract from the U.S. Space Force, under which NexTech is advancing its 18650-format Li-S cells toward higher energy density and extended cycle life targets for national security space missions.

About NexTech Batteries Inc.

Founded in 2016, NexTech Batteries is the developer of the world's first commercially viable lithium sulfur battery technology. The Company's proprietary technology, including cathode and electrolyte, solves traditional Li-S challenges, engineered to achieve 400 Wh/kg or greater energy density, depending on application design requirements, with superior safety characteristics, lower cost, ease of recyclability, and a U.S. supply chain. NexTech's technology offers higher energy density than lithium ion while reducing weight by up to 50% depending on cell formulation and applications requirements, making it ideal for aerospace, defense and electric mobility applications. The company holds multiple patents and has achieved UN 38.3 safety certification. NexTech is headquartered in Carson City, Nevada. For more information, please visit www.nextechbatteries.com.

About NearSpace Launch, Inc.

NearSpace Launch, Inc. (NSL) is an Upland, Indiana-based small-satellite manufacturer with more than 1,000 systems and subsystems operating on orbit. NSL's ThinSat® platform and Black Box and EyeStar product lines provide flight-proven satellite architectures, communications, and telemetry for commercial and government customers, enabling rapid, cost-effective maturation of new space technologies. More information is available at nearspacelaunch.com.

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