

This Next-Generation Battery will Power Wireless Communications from the Stratosphere

Demonstrations marked the first lithium metal battery to pass all tests in the extreme conditions of the stratosphere.

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ANN ARBOR, Mich., April 4, 2023 /PRNewswire/ -- Enpower Greentech, Inc. (EGI), a leading manufacturer of next-generation batteries, has announced the successful development of a high-performance battery in collaboration with SoftBank Corp. The battery was designed to perform in extreme stratospheric conditions where High Altitude Platform Stations (HAPS) provide wireless communications. The innovative battery pack design provided 300 Wh/kg energy that was made possible from the EGI cells rated at 439 Wh/kg.

Next-generation battery performs in extreme conditions.



Enpower Greentech Battery with SoftBank HAPS Mobile

Enpower Greentech lithium-metal battery cells, with specific energy of 439 Wh/kg, were coupled with constraints, heaters, and insulation materials to ensure proper temperature and pressure control in extreme conditions at an altitude of 20 kilometers. To validate battery pack performance SoftBank and its subsidiary HAPS Mobile conducted charge-discharge cycle tests of the battery pack in the stratosphere from January 30 to February 2, 2023, in the United States.



*EGL 3.5Ah Lithium Metal Battery
(3500mAh) for SoftBank*

This test marked the first successful operation of Enpower Greentech's lithium-metal battery in extremely low temperatures (around -60°C) and near-vacuum pressures (of 0.05atm) in the stratosphere. Before testing in the stratosphere, the battery pack was submitted to all ground tests, including those for crash, thermal abuse, vibration, and external short circuit. Both ground and aerial results provide a clear indication of technological maturity and create a roadmap for future advances in both aerial and terrestrial battery powered vehicles.

With these technical breakthroughs Enpower Greentech will continue to develop and commercialize this next-generation battery. Regional advantages have allowed EGL to achieve breakthrough innovations from their subsidiaries in the United States, China and Japan drawing from the relative strength of each base. Stratospheric demonstrations with SoftBank Corp. also provide a checkpoint for Enpower Greentech to move into the next phase of expansion and production.

Committed to provide innovative and sustainable battery solutions such as greener HAPS (powered by solar), in addition to drones, e-Aviation, and electric vehicles (EVs) Enpower Greentech will contribute to a greener future for all.

SoftBank Press: https://www.softbank.jp/en/corp/news/press/sbkk/2023/20230316_01/

Contact Enpower Greentech at: enpower-greentech.com to learn more.

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