PowerLight Technologies Achieves Industry First: Wireless Power Beaming to a Fielded Military UAS in Flight

CENTCOM-Sponsored Flights Achieve Autonomous Kilowatt-Class Power Beaming to Kraus Hamdani Aerospace K1000ULE — Closing Persistence Gap for Airborne ISR

PowerLight's transmitter at Poinsett Electronic Combat Range during demonstration - April, 2026

SHAW AIR FORCE BASE, SC, UNITED STATES, April 20, 2026 /EINPresswire.com/ -- PowerLight Technologies today announced the successful completion of the first high-power, long-range wireless power beaming flights for military UAS platforms, conducted at Poinsett Electronic Combat Range, Shaw Air Force Base, in partnership with Kraus Hamdani Aerospace (KHA), hosted by the AFCENT Battle Lab, and sponsored by U.S. Central Command (CENTCOM) and Operational Energy—Innovation Directorate (OE-I). PowerLight's laser power beaming system demonstrated end-to-end operation of a kilowatt-class wireless power beaming capability — from target acquisition and precision tracking through beam delivery and safety management — with a KHA K1000ULE in flight at Poinsett Range. The K1000ULE is a DoW Blue UAS Cleared and Select List platform operating under a recently awarded $270 million AFCENT deployment contract. PowerLight's system acquired and tracked the aircraft at altitudes up to 5,000 feet, delivering wireless power while steering and focusing the beam in real time throughout the flight.

Prior to these flights, wireless power beaming demonstrations have been limited to short ranges, small rotary-wing platforms, and power levels insufficient to support a mission payload. PowerLight's demonstration at Shaw crosses a different threshold: sustained, autonomous power delivery at operationally relevant ranges and power levels, to a fixed-wing Group 2 UAS platform currently conducting real military missions. PowerLight's autonomous end-to-end system — including a mobile transmitter, a modular receiver that integrates into the UAS, and

integrated control and safety software — acquires and tracks the UAS maneuvering at operational altitude, adapts beam steering and focus in real time across a changing flight path and atmospheric conditions, and manages airspace deconfliction and safety automatically throughout, maintaining a precise, controlled energy link between transmitter and receiver.

Every UAS in service today faces the same constraint — when power or fuel runs out, the mission is over. Operational energy is the Achilles Heel for all UAS, limiting endurance and payload capacity in contested environments, putting mission and personnel at risk. PowerLight's power beaming system addresses this directly: transmitters can be geographically distributed across fixed bases, expeditionary FOBs, mobile ground sites, and ships. Autonomous operation eliminates the need to land aircraft, swap batteries, and relaunch from vulnerable positions. Dynamic power, wirelessly delivered across nearly one mile, closes the persistence gap while decreasing costs and operational risk.

Kraus Hamdani Aerospace UAS in flight with attached PowerLight Technologies wireless power beaming receiver at Poinsett Electronic Combat Range

The autonomous capabilities at the core of PowerLight's integrated control system — precision target acquisition and tracking, real-time beam aiming, and dynamic control across a changing environment — extend naturally beyond power delivery. As the Department of War accelerates investment in directed energy counter-UAS solutions, PowerLight's architecture represents a direct pathway to those applications, with the same system intelligence applicable to directed energy effects against non-cooperative targets.

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> *RuthAnne Darling, Director, OE-I Directorate, DoW*

"OECIF recognized the warfighter value of laser power technology before everyone else and stood by it as the first and primary investor, beginning nearly a decade ago. Developing technologies such as this not only benefits the warfighter, but it enables new industries inside the Defense industrial base and creates commercial opportunities. Ten years ago, technologists were just beginning to envision drones. Nobody was thinking about continuously powering or countering them. We expect high-energy

laser power beaming to continue to advance, further enhance operational energy solutions, and serve as a stepping stone to what will eventually become Golden Dome."
—RuthAnne Darling, Director, Operational Energy—Innovation Directorate, Department of War

Pre-launch of Kraus Hamdani Aerospace UAS with PowerLight receiver attached for demonstration at Poinsett Electronic Combat Range

"The K1000ULE is delivering on its core design objective: achieving satellite-like endurance levels once considered unattainable by traditional fixed-wing aircraft. By integrating PowerLight's power beaming capability, Kraus Hamdani Aerospace has extended persistence to a new operational threshold, fundamentally redefining what is possible. The K1000ULE is engineered for continuous airborne operations, eliminating the need to land for recharging and enabling truly uninterrupted mission capability. With PowerLight's system integrated into the K1000ULE's operational framework, it now provides a true never-land capability irrespective of the operational environment."
—Stefan Kraus, CTO & Co-Founder, Kraus Hamdani Aerospace

"The Poinsett Range demos prove what we built and set the stage for the roadmap for this capability that scales from a single transmitter to a distributed network, increasing power output, altitude, and range, sustaining multiple aircraft simultaneously across a theater. The same autonomous targeting, precision beam control, and real-time system intelligence that keeps a friendly platform aloft has direct applicability to directed energy counter-UAS strategies. Working with CENTCOM, the AFCENT Battle Lab, the OE-I Directorate and Kraus Hamdani Aerospace, we are advancing this capability from flight test to field evaluation and toward operational deployment."
—Tim Jenks, CEO, PowerLight Technologies

About PowerLight Technologies
PowerLight Technologies develops autonomous wireless power beaming systems that deliver kilowatt-class power and optical communications to unmanned aircraft in flight. Developed under CENTCOM sponsorship, the system's platform-agnostic integrated control system integrates across UAS classes and payload types, from Group 2 fixed-wing platforms to larger aircraft carrying heavier sensor or effects payloads, and provides a direct architectural

foundation for directed energy counter-UAS applications.

PowerLight Technologies is the world leader in safe, high-power laser energy transmission. With kilowatt-class power and optical communications delivered over kilometers, PowerLight is powering intelligence at the edge. Its technology spans free space laser beaming and power over fiber, deployable across air, space, ground, sea, and undersea domains — delivering power and communications wherever conventional infrastructure is impractical or operationally constrained. Its dual-use systems establish the foundation for autonomy at scale across defense, industrial, telecommunications, and space-based applications.

About Kraus Hamdani Aerospace
Kraus Hamdani Aerospace builds AI-powered unmanned aerial technologies for the world's most critical missions, when communications fail, infrastructure breaks down, and seconds matter. With proven deployments across military and commercial sectors, Kraus Hamdani Aerospace has supported the U.S. Army, U.S. Navy, MARSOC, U.S. Customs & Border Protection, and global energy leaders. Founded in 2016 and headquartered in Emeryville, California, the company operates worldwide. Learn more at www.khaero.com.

About Operational Energy—Innovation Directorate, Department of War
The Operational Energy—Innovation (OE-I) Directorate operates in collaboration with the Services and Combatant Commands, seeding joint innovation efforts. Under the auspices of OUSW, OE-I provides policy and oversight for innovation and program management. OE-I leverages — not replicates — existing infrastructure and organization, developing joint and interoperable technologies.

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