

WHO

SYSCOM: MCSC

Sponsoring Program: PM GBAD / PEO Land Systems

Transition Target: Joint Light Tactical Vehicles (JLTV) – JPO JLTV

TPOC: sbir.admin@usmc.mil

Other Transition Opportunities: Other DoD platforms which could use a PTO based high export power kit as well as tow trucks and electrified service vehicles.

Notes: Image courtesy of Lynntech, Inc.

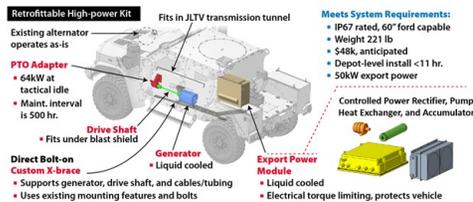


Image courtesy of Lynntech, Inc.

WHAT

Operational Need and Improvement: Joint Light Tactical Vehicles (JLTVs) are vital to the Marine Corps as an expeditionary force must quickly respond to a variety of crises and conflicts across the world. There is an increasing threat of Unmanned Aerial Systems (UAS) which has led to the expeditionary counter UAS systems like Direct Energy Weapons (DEWs) mounted to JLTV to protect ground-based units.

Specifications Required: Once the DEWs are mounted on the JLTVs, there is not enough power available to export from the vehicles to engage them. Therefore, there is a need to develop a high-power vehicle integrated power generation system for the JLTV to provide additional electrical power (50-75kW) for DEWs that are planned to be used in current and future counter UAS missions.

Technology Developed: Lynntech's Retrofittable High-power Kit (RHK) can meet the power generation needs required by the Marine Corps. The RHK uses a ruggedized liquid-cooled power generation unit driven off the Power Take-off (PTO) on the JLTV's Allison transmission to provide mechanical to electrical power conversion.

Warfighter Value: The RHK can easily be mounted to the underside of a JLTV and generate electrical power from excess mechanical power off the transmission during normal operation without any alterations to the existing alternator and electrical system. This provides the warfighter a mobile and effective solution to use DEWs in defending ground-based units.

WHEN

Contract Number: M67854-24-C-6554

Ending on: Sep 29, 2026

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Demonstrate control of RKH and feasibility of integrating into a JLTV	Low	Demonstrate full control and operation of all system components including JLTV idling RPM, torque converter lockout, electronic torque limiting and thermal management system.	3	4th QTR FY25
Demonstrate a full-scale, representative breadboard system in a simulated operation environment	Low	Demonstrate full-scale technology demonstrator on a Duramax and Allison Test Skid	4	4th QTR FY25
Install and integrate the system on a JLTV	Medium	RHK is fully assembled, programmed and tested with all components and integrated onto a MARCOR supplied JLTV.	4	4th QTR FY26
Demonstrate integration of a full-scale prototype on a RHK-retrofit JLTV	Medium	Successful environmental of RHK prototype on a JLTV by the Nevada Automotive Test Center. Show it meets standards set by MIL-STD-810H testing protocol under range of environment conditions.	5	4th QTR FY26

HOW

Projected Business Model: Lynntech has a proven track record of moving technology to market, primarily through our ability to match technologies with the correspondingly appropriate business models (i.e., strategic alliances, licensing agreements, etc.) towards successful commercialization. In recognition of this, Lynntech received the 2016 Tibbetts Award, a prestigious award that recognizes organizations that exemplify the very best in SBIR achievements. We are a for-profit organization and transition/commercial success is the objective of every development effort. Being a small company, we are highly versatile and are therefore open to adopting different, unique, and creative methods to achieve transition and commercialization success. Successful commercialization is part of our company's growth strategy.

Company Objectives: The primary option for commercialization of the RHK is through Lynntech's sister company On-Demand Systems USA (ODS – www.on-demandusa.com). ODS was created in June 2019 as a spin-off company to manufacture the Flight Breathing Awareness Trainer (FBATTM). While the underlying technology for this product was developed at Lynntech through funding from the SBIR program (Federal Funding), the commercialization success was achieved through (Non-Federal) Private Equity funding from Lynntech's parent company, Astin Partners. Given an expected initial product volume of 66 units for the RHK for the JLTV variant planned for procurement by PM GBAD, and that the overall product design architecture for the RHK is anticipated to be like the FBAT, this makes ODS a perfect company to build upon its existing infrastructure to manufacture the RHKs.

Potential Commercial Applications: In addition to the Marine Corps, Lynntech is engaged with the ARMY JPO JLTV team as a potential future customer.

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