# Dossier: LAUNCHPOINT ELECTRIC PROPULSION SOLUTIONS, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $139,947.00

**Award Date:** 2024-07-24

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

LaunchPoint Electric Propulsion Solutions, Inc. (LaunchPoint EPS) is a US-based engineering and technology company specializing in advanced electric propulsion systems and power electronics, primarily targeting the aerospace and defense industries. Their core mission is to revolutionize air mobility and energy efficiency by developing high-performance, lightweight, and highly efficient electric motors, generators, and control systems. LaunchPoint aims to solve the limitations of traditional propulsion systems by offering solutions that enable longer flight durations, increased payload capacity, and reduced operational costs for electric vertical takeoff and landing (eVTOL) aircraft, unmanned aerial vehicles (UAVs), and other advanced air mobility platforms. Their unique value proposition lies in their patented electric machine topologies, advanced power electronics, and system-level integration capabilities, allowing them to deliver custom, optimized solutions tailored to specific mission requirements.

**Technology Focus:**

* High-power density electric machines: LaunchPoint EPS specializes in designing and manufacturing custom electric motors and generators optimized for specific applications. Their focus is on achieving high power-to-weight ratios, exceeding 10 kW/kg for some designs, utilizing advanced materials and proprietary winding techniques.
* Advanced Power Electronics: Development of high-efficiency power inverters, motor controllers, and battery management systems (BMS) tailored for electric propulsion applications. These systems are designed for demanding aerospace environments, including high-altitude, temperature extremes, and stringent EMI/EMC requirements. They claim inverter efficiencies greater than 98%.

**Recent Developments & Traction:**

* USAF AFWERX STTR Phase II Contract (2021):\*\* Awarded a Phase II Small Business Technology Transfer (STTR) contract from the Air Force Research Laboratory (AFRL) under the AFWERX program. This project focused on developing advanced electric propulsion systems for distributed electric propulsion (DEP) applications.
* Advanced Rotor Designs for Electric Aircraft (Ongoing):\*\* Continued development and refinement of optimized rotor designs in conjunction with their electric motors to improve overall propulsion efficiency for advanced air mobility platforms.
* Collaboration with Vertical Aerospace:\*\* Partnership for developing electric powertrain components for Vertical Aerospace's VX4 eVTOL aircraft, demonstrating traction in the commercial eVTOL sector.

**Leadership & Team:**

* Rob Reali (CEO):\*\* Possesses extensive experience in engineering and management within the aerospace and defense industries.
* The company's leadership team also includes individuals with deep expertise in electric machine design, power electronics, and aerospace engineering. While specific names and biographies are not always publicly available, the company highlights the team's strong technical backgrounds.

**Competitive Landscape:**

* MagniX:\*\* Specializes in electric propulsion systems for aviation, competing in the commercial aircraft electrification market. LaunchPoint EPS differentiates itself through its focus on highly customized solutions and advanced electric machine topologies, potentially targeting higher-performance or more specialized applications.
* Honeywell Aerospace:\*\* Developing electric and hybrid-electric propulsion systems for aviation. LaunchPoint EPS is a smaller company with a niche focus on advanced technologies, allowing for agility and rapid innovation, potentially differentiating through specialized solutions and intellectual property.

**Sources:**

1. [https://launchpointeps.com/](https://launchpointeps.com/)

2. [https://www.vertical-aerospace.com/en/news/vertical-announces-electric-powertrain-partnership-with-launchpoint-technologies/](https://www.vertical-aerospace.com/en/news/vertical-announces-electric-powertrain-partnership-with-launchpoint-technologies/)

3. [https://www.afresearchlab.com/](https://www.afresearchlab.com/) (Search AFWERX and LaunchPoint)

4. [https://www.crunchbase.com/organization/launchpoint-electric-propulsion-solutions](https://www.crunchbase.com/organization/launchpoint-electric-propulsion-solutions)