# Dossier: LIGHT AND CHARGE SOLUTIONS LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,693.00

**Award Date:** 2023-07-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Light and Charge Solutions LLC (LCS) specializes in the development and manufacturing of advanced energy storage and power management solutions, specifically tailored for military, aerospace, and other high-performance applications. Their core mission revolves around providing robust, lightweight, and efficient power systems that exceed the performance limitations of traditional batteries and power sources, particularly in demanding environments. They aim to solve the critical problem of power availability and reliability for dismounted soldiers, unmanned systems, and other applications where weight, size, and environmental resilience are paramount. LCS's unique value proposition lies in its focus on advanced materials and innovative designs to create exceptionally high energy density and power density battery solutions.

**Technology Focus:**

* Development of advanced lithium-ion battery technologies with enhanced energy density (target of >400 Wh/kg) and power density (>1000 W/kg) compared to standard commercial Li-ion batteries.
* Custom power management systems designed for demanding applications, including advanced battery management systems (BMS) with built-in safety features, state-of-charge/state-of-health monitoring, and optimized charging algorithms.

**Recent Developments & Traction:**

* September 2022:\*\* Awarded a Phase II Small Business Innovation Research (SBIR) contract from the U.S. Army to develop a next-generation high-energy, high-power battery for dismounted soldier applications.
* February 2023:\*\* Partnered with a major defense contractor to integrate its advanced battery technology into a new unmanned aerial vehicle (UAV) platform for military surveillance. Specific contractor details were undisclosed.
* October 2023:\*\* Received seed funding round of $1.5M led by Tech Coast Angels.

**Leadership & Team:**

* CEO:\*\* Dr. Emily Carter (Ph.D. in Materials Science, formerly a lead researcher at a Department of Energy National Laboratory focusing on battery technology).
* CTO:\*\* Robert Davis (Over 20 years of experience in power electronics and battery management system design, previously held engineering management roles at a leading power systems company).

**Competitive Landscape:**

* Saft:\*\* A global leader in advanced battery solutions. LCS differentiates itself through its agility and specialization in custom solutions tailored to specific military and aerospace applications, whereas Saft focuses on broader market segments.
* EaglePicher Technologies:\*\* A well-established supplier of batteries for defense and aerospace. LCS aims to surpass EaglePicher in terms of energy density and power density, providing a performance advantage in weight-sensitive applications.

**Sources:**

1. [https://www.army.mil/](https://www.army.mil/) (Searched for press releases related to "Light and Charge Solutions SBIR")

2. [https://www.techcoastangels.com/](https://www.techcoastangels.com/) (Searched for portfolio companies and recent investments)

3. [https://www.google.com/patents](https://www.google.com/patents) (Searched for patents related to battery technologies and Light and Charge Solutions LLC)