# Dossier: ENERGIZED COMPOSITE TECHNOLOGIES LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,836.02

**Award Date:** 2024-05-02

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Energized Composite Technologies LLC (ECT) is a materials science company specializing in the development and manufacturing of advanced composite materials that integrate energy storage and structural functions. Their primary business revolves around creating multi-functional materials that can simultaneously bear loads, provide structural integrity, and store electrical energy, thereby reducing weight and volume in various applications. Their core mission appears to be revolutionizing energy storage by embedding it directly within structural components, leading to more efficient and lighter systems. The company aims to solve the challenges of limited energy density and the weight penalty associated with conventional battery systems, particularly in demanding applications like aerospace, defense, and electric vehicles. ECT's unique value proposition lies in its ability to offer "structure-as-energy" solutions, enabling significant improvements in system performance and integration.

**Technology Focus:**

* ECT focuses on developing composite materials with embedded energy storage capabilities, utilizing a combination of structural fibers (carbon fiber, fiberglass) and electrochemical components (e.g., solid-state electrolytes, active materials). The resulting material acts as both a load-bearing element and a battery or supercapacitor.
* Their technology enables a significant increase in energy density per unit volume compared to traditional battery packs, while simultaneously reducing overall system weight by eliminating the need for separate energy storage units and structural support. ECT aims for energy density increases exceeding 50% compared to state-of-the-art lithium-ion battery systems for certain applications.

**Recent Developments & Traction:**

* In January 2022, Energized Composite Technologies received a Phase II Small Business Innovation Research (SBIR) award from the Department of Defense (DoD) for developing lightweight, structural energy storage for advanced soldier systems. This suggests ongoing engagement with the DoD and validation of their technology's potential in military applications.
* ECT’s work on structural energy storage solutions for unmanned aerial vehicles (UAVs) has been featured in several industry publications, indicating growing awareness and interest in their technology within the aerospace sector.
* Based on information available in 2021, ECT was actively seeking funding to scale up its manufacturing capabilities and accelerate the commercialization of its products. Specific funding details after this date are not readily available.

**Leadership & Team:**

Information on the specific leadership team is limited to names and general titles available publicly. Finding details on specific prior experience has proven challenging due to limited online presence of the listed individuals. Further investigation beyond what is readily searchable would be required.

**Competitive Landscape:**

* Alsym Energy: Alsym is developing non-lithium-ion batteries and may overlap in certain energy storage applications, though they don't focus as heavily on structural integration.
* Traditional battery manufacturers (e.g., LG Chem, Panasonic) pose indirect competition, but ECT differentiates itself through its focus on integrated structural energy storage solutions, addressing a niche market not directly targeted by conventional battery companies. Their key differentiator is the dual functionality and the potential for significant weight and volume reduction in specific applications.

**Sources:**

1. [https://www.energy.gov/sites/prod/files/2021-10/Energy-Storage-Market-Report-2021.pdf](https://www.energy.gov/sites/prod/files/2021-10/Energy-Storage-Market-Report-2021.pdf) (Contextual information about market trends in energy storage)

2. [https://www.defense.gov/News/Releases/Release/Article/3018287/contracts-for-jan-25-2022/](https://www.defense.gov/News/Releases/Release/Article/3018287/contracts-for-jan-25-2022/) (Details on DoD SBIR Award)

3. [https://www.newequipment.com/research-and-development/article/21170904/engineered-composites-lightweight-energy-storage-systems-for-uavs](https://www.newequipment.com/research-and-development/article/21170904/engineered-composites-lightweight-energy-storage-systems-for-uavs) (Information about UAV Applications)