



**Company Profile**

Founded: 2019  
 Location: Rockville, MD  
 Employees: 1  
 Industry: Renewable energy supply chain and recycling

**Team**

Christina Calvin, Founder & CEO  
 Experienced in Corporate Innovation and Experimental Thermodynamics

Education PhD, Brown University;  
 MBA, University of Oregon

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# Terran Material Resources

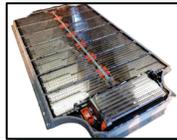
Safe, cost-effective lithium-ion battery deactivation and transportation services

**Problem**

Lithium-ion batteries are prone to thermal runaway, causing them to catch fire and explode. To mitigate these hazards, safe end-of-life disposal costs for large, industrial batteries can exceed the original cost of the battery.

**Solution**

We deactivate and safely transport large lithium-ion batteries to refineries.



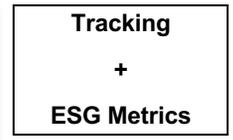
**Step 1: Disassemble**



**Step 2: Deactivate Hazardous Chemicals**



**Step 3: Ship to Refinery**



**Step 4: Provide Regulatory Reports**

**Market**

Global lithium-ion battery sales are expected to grow to \$92B by 2026. Based on average life expectancy of batteries, the lithium-ion battery recycling industry will be approximately \$22.8B by 2030. The battery recycling market is segmented by battery type (e.g., electronic, EV, and industrial) and region.

The target customer is industrial and energy storage consumers, which make up ~46% of the global lithium-ion battery sales in 2020. Unlike the EV segment, industrial and energy storage customers face significant logistical challenges moving batteries to recycling facilities at end-of-life because the large batteries and cells are subject to stricter regional and international transportation regulations. Energy storage systems (ESS) are expected to grow (CAGR of 32.8% through 2025), with lithium-ion batteries dominating deployment of ESS.

**Competitors**

Company	Transport	Decommissioning	Battery Tracking	Carbon Acct	All Batteries	Chemical Recycling
	✓	✓	✓	✓	✓	
Renewance			X			
Redivivus	X	X				X
Li-Cycle					X	X

## Business Model

Revenue is generated from services provided to companies and governments that have industrial-sized lithium-ion batteries. In most cases, these will be contracts with repetitive needs, such as airlines, military vessels, or public transportation. A smaller portion of revenue will be generated from contracts with refineries that need lithium-ion batteries and organizations that require sustainability reporting for their lithium-ion supply chain.

## Customer Traction

The business model has been validated with several industrial customers and renewable energy installers, including one that has offered to be part of a pilot study for the transportation. The company has also identified several customers to test the tracking system later this year.

## Milestones and Future Funding Goals

Terran Material Resources has focused on patenting the transportation prototype and developing the tracking system. In addition, the company has worked with legislators on extended producer responsibility (EPR) for lithium-ion batteries, which will enhance the business model. Future goals are focused on capital equipment purchases, hiring and training new employees, and initial expansion.

