

EcoLithium Solutions Inc.

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
Amlan Sengupta	First	MBA
Maleeha Joohi	First	MBA
Can Li	First	MBA
Supriya Sharma	Second	MBA

Advisor(s): Jennifer Merton and Brian Shea

Topic Title: Lithium-Ion Battery Disposal: Environmental and Industry Challenges

Audience: Industry stakeholders, policymakers, sustainability consultants, and electric vehicle manufacturers at the 17th Lithium Supply and Battery Raw Materials Conference 2025 being held on Jun 23-26, 2025, in Las Vegas, Nevada.

Sustainable Development Goal (2 max)

SDG #12 : Ensure sustainable consumption and production patterns

SDG #13 : Take urgent action to combat climate change and its impacts

Executive Summary

With the rapid adoption of electric vehicles (EVs), lithium-ion battery disposal has become a critical environmental concern. With global lithium-ion battery waste projected to reach 11 million tonnes by 2030, and current recycling infrastructure capturing less than 5% of end-of-life batteries, the industry faces a critical inflection point requiring innovative solutions.

By 2030, approximately 2 million tonnes of lithium, cobalt, nickel, and graphite—equivalent to 30% of current primary production—could be lost annually without proper recycling. This not only worsens resource scarcity but also creates significant environmental risks. Improper disposal has already caused a 26% rise in waste facility fires since 2020, while toxic materials leaching into groundwater disproportionately impact economically disadvantaged communities. Evolving regulations, including EU recycled content quotas (2027), California’s battery durability rules, and upcoming EPA standards (2026), are driving urgent compliance demands for battery producers and EV manufacturers.

For this, EcoLithium Solutions has developed a comprehensive, integrated solution, combining investment in advanced battery recycling technologies, adoption of circular economy principles, and alignment with global regulatory frameworks. This strategy not only addresses environmental and ethical issues but also offers economic benefits through material recovery and reduction of compliance costs.

For conference attendees representing raw material suppliers, battery manufacturers, and EV producers, our solution offers supply chain resilience against geopolitical disruptions and price volatility. For policymakers and sustainability consultants, it provides a framework to achieve critical mineral security while advancing decarbonization goals. We invite potential partners, investors, and customers to join us in transforming the lithium-ion battery lifecycle from a linear path to a true circular economy.