



CONFERENCE & EXPO

27 MAY 2025  
PALO ALTO, CA

xEV/HEV

# BATTERY RECYCLING SUMMIT USA

DRIVING SUSTAINABILITY  
PIONEERING THE FUTURE OF EV BATTERY RECYCLING

A TECHNICALLY-LED AGENDA CURATED IN COLLABORATION WITH THE USA'S LEADING OEMS: TACKLING THE PRESSING CHALLENGES AND EXPANSIVE OPPORTUNITIES IN EV BATTERY RECYCLING

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- Exploring strategies to improve **financial viability**, such as subsidies, incentives, and market stabilization for recycled materials
- Examine the complexities of varying **battery chemistries, designs, and compositions**
- Evaluate current and emerging technologies for efficient material recovery and automated **battery disassembly**
- Explore potential solutions to improve **battery recycling infrastructure** and nationwide collection systems
- Understand the **regulatory challenges** and the absence of a unified national framework for ev battery recycling.
- Examine the role of **Extended Producer Responsibility (EPR)** and its potential benefits in the U.S. context
- Analyze the **environmental impacts** of improper battery disposal, including contamination risks
- Understand **safety challenges**, including thermal runaway risks during storage, transport, and processing
- Learn about emerging methods like **direct recycling** and **hydrometallurgy** for efficient material recovery
- Understand how recycled materials can be reintegrated into new battery manufacturing to **close the loop**
- Highlight the importance of collaboration between **government, industry, and academia** to overcome recycling challenges

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# THE USA'S PREMIER GATHERING OF **ELECTRIC VEHICLE BATTERY RECYCLING** LEADERS, INNOVATORS AND EXPERTS

Take part in this pioneering, industry leading event dedicated to electric vehicle batteries, where material, battery, OEM and recycling leaders explore future recycling trends, innovations and disruptive technologies shaping the future of e-mobility

## **xEV Battery Recycling USA 2025**

Electric Vehicle Battery Recycling Summit equips industry leaders with the knowledge and partnerships essential for sustainable success. Explore state-of-the-art technologies and pioneering methods that optimize recycling processes, enhance efficiency, and promote environmental responsibility. Stay ahead of the curve and ensure your operations excel in the rapidly advancing field of EV battery recycling.

Explore cutting-edge solutions and innovations designed to enhance the sustainability of electric vehicles, extract greater value from battery waste, and foster the transition toward a more circular battery economy

## **Maximize Your Recycling Potential**

The electric vehicle industry is experiencing a significant shift, and effective battery recycling requires innovation and insight. The Electric Vehicle Battery Recycling Summit offers an interactive technology showcase, insightful presentations, and strategic networking sessions. This summit equips recycling leaders with the tools and knowledge needed to navigate this evolving landscape and drive sustainable, long-term growth.

Discover emerging technical advancements, state-of-the-art interventions, and cutting-edge research. Engage with industry leaders specializing in sustainability, technology, engineering, and research to exchange insights and ideas.

## **Expert-Led Technical Conference Agenda**

Don't miss the opportunity to connect with leading experts in EV battery recycling. Our carefully curated lineup features some of the most renowned names in the industry, delivering inspiring keynote presentations. These sessions will explore the latest challenges, real-world business cases, and opportunities for further integrating advanced recycling technologies into your operations.

Listen to renowned industry experts from the battery, OEM and recycling sectors as they delve into the most recent regulatory, strategic, economic, and technological advancements, offering insights into future trends and innovations

## **Innovation Showcase: xEV Battery Recycling**

Explore the future of EV battery recycling at our Innovation Showcase. The Electric Vehicle Battery Recycling Summit offers an opportunity to engage with leading companies, experts, and cutting-edge technologies on our exhibition floor. Discuss your challenges, network with industry leaders, and discover practical solutions to advance your recycling operations.

Connect with a diverse global audience through invaluable face-to-face networking opportunities and exhibit showcases. Experience the unparalleled benefits of in-person interactions, where you not only meet the right individuals but also ensure that the right individuals have the chance to connect with you.

# **DRIVING SUSTAINABILITY: INNOVATIONS IN EV BATTERY RECYCLING**

Recycling EV batteries is crucial for minimizing environmental impact and conserving valuable resources. However, EV battery recycling faces significant challenges, resulting in a high number of discarded batteries. **Despite the potential to retrieve up to 95% of lithium-ion, only 5% of EV batteries are currently being recycled.**

One of the primary obstacles in recycling end-of-life batteries is the high cost involved. The complex nature of battery components and the need for specialized equipment make the process expensive. Additionally, the lack of standardized procedures for assessing the remaining capacity of EV batteries poses another challenge. Furthermore, the absence of a truly circular economy represents a significant barrier to efficient recycling, slowing down the potential for multiple re-use cycles.

To recycle EV batteries, they must first be dismantled—a challenging task due to the lack of standardization. Battery packs from various manufacturers differ in size and configuration, containing differently-shaped cells joined by welds and other connections that must be broken down.

WeAutomotive Group produces and organizes some of the leading conferences, summits, and exhibitions in the automotive industry. Our events are distinguished by dedicated support and participation from OEMs, attracting attendees from major companies and innovative start-ups worldwide. Our meticulously researched and curated programs, developed in collaboration with OEMs, address the most pressing challenges and key investment areas, ensuring the presence of top-tier attendees.

The xEV Battery Recycling Summit USA offers an unparalleled technical-conference agenda and networking opportunities in a welcoming, personable environment. Join us at the EV Battery Recycling Summit USA 2025, where leaders from battery production, recycling firms, raw material suppliers, electric vehicle manufacturers, and the broader automotive battery supply chain will tackle the key challenges to enhanced recycling and recyclability. Discover groundbreaking innovations and solutions driving the establishment of a circular economy in the automotive industry and the development of sustainable supply chains for the future.

# CONFERENCE TOPICS

## Understand the Economic Factors Impacting Battery Recycling

Identify the cost barriers and economic disincentives for recycling EV batteries. Explore strategies to improve financial viability, such as subsidies, incentives, and market stabilization for recycled materials.

## Analyze Technical Challenges in Recycling Processes

Examine the complexities of varying battery chemistries, designs, and compositions. Evaluate current and emerging technologies for efficient material recovery and automated battery disassembly.

## Interpret Regulatory and Policy Gaps

Understand the regulatory challenges and the absence of a unified national framework for EV battery recycling. Examine the role of Extended Producer Responsibility (EPR) and its potential benefits in the U.S. context.

## Evaluate Infrastructure and Supply Chain Limitations

Assess the current state of recycling facilities and logistics for battery collection and transport. Explore potential solutions to improve battery recycling infrastructure and nationwide collection systems.

## Address Environmental and Safety Risks

Analyze the environmental impacts of improper battery disposal, including contamination risks. Understand safety challenges, including thermal runaway risks during storage, transport, and processing.

## Promote Consumer Awareness and Accessibility

Explore strategies to increase public awareness about battery recycling programs and their importance. Evaluate methods to enhance consumer access to convenient recycling options.

## Explore Advances in Recycling Technologies

Learn about emerging methods like direct recycling and hydrometallurgy for efficient material recovery. Understand how recycled materials can be reintegrated into new battery manufacturing to close the loop.

## Develop Collaborative Approaches for Industry-Wide Solutions

Highlight the importance of collaboration between government, industry, and academia to overcome recycling challenges. Investigate case studies of successful recycling initiatives and their applicability in the U.S. market.

# EXHIBITOR CATEGORIES

## Battery Recycling Technologies & Processes

Companies showcasing innovative technologies and processes for recycling electric vehicle batteries.

## Battery Manufacturers

Manufacturers of electric vehicle batteries, including both primary and secondary (remanufactured) batteries.

## Battery Remanufacturers

Companies specializing in the remanufacturing or refurbishing of electric vehicle batteries for reuse.

## Battery Degradation Monitoring Systems

Exhibitors offering monitoring systems and solutions for assessing the health and degradation of electric vehicle batteries over time.

## Battery Chemistry Optimization

Companies specializing in developing advanced battery chemistries optimized for recyclability and sustainability.

## Battery Second Life Applications

Companies showcasing innovative applications and solutions for repurposing used electric vehicle batteries in energy storage systems, grid stabilization, or other secondary uses.

## Raw Material Suppliers

Suppliers of critical raw materials used in battery manufacturing and recycling processes.

## Research And Development

Organizations involved in research, development, and innovation in the field of battery recycling and circular economy initiatives.

## Sustainability Solutions Providers

Companies offering sustainable solutions for battery recycling, waste management, and environmental impact reduction.

## Battery Lifecycle Management Platforms

Providers of software platforms and tools for tracking and managing the entire lifecycle of electric vehicle batteries, from manufacturing to end-of-life recycling.

## Government And Regulatory Bodies

Representatives from government agencies and regulatory bodies involved in setting standards and regulations for battery recycling.

## Battery Management And Safety

Addressing challenges and advancements in battery management, transportation, safety standards, and risk mitigation.

## Consulting And Advisory Services

Firms offering consulting, advisory, and certification services related to battery recycling and sustainability.

## Material Recovery And Refinement Technologies

Exhibitors focusing on technologies for the recovery and refinement of valuable materials from spent electric vehicle batteries, such as lithium, cobalt, nickel, and manganese.

## Education And Training Providers

Institutions or organizations offering education, training, and certification programs in battery recycling and related fields.

## Recycling Equipment Providers

Exhibitors offering machinery, equipment, and tools for battery dismantling, sorting, and recycling.

## Battery Pack Design And Optimization

Companies offering design and optimization services for electric vehicle battery packs, with a focus on recyclability, durability, and performance.

## Circular Economy Integration Solution

Providers of holistic solutions and services for integrating electric vehicle battery recycling into the broader circular economy framework, including waste management, resource recovery, and sustainable supply chain management.

## Advanced Sorting And Separation Technologies

Providers of advanced sorting and separation technologies for efficiently recovering valuable materials from complex battery chemistries and configurations.

## Blockchain And Traceability Solutions

Exhibitors offering blockchain-based solutions for tracking and tracing the origin, ownership, and lifecycle of electric vehicle batteries, enhancing transparency and accountability in the recycling process.

## Robotic Automation And AI In Recycling

Companies showcasing robotic automation and artificial intelligence technologies for automating and optimizing the electric vehicle battery recycling process, improving efficiency and reducing costs.

# AGENDA 2025

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## 07:20 | Morning Registration

## 08:00 | Chair's Opening Remarks

## 08:20

### Reverse Second Life: Unlocking Grid-First, Vehicle-Second Pathways for Sustainable Battery Deployment

**Nathan Saliga**, VP Engineering, **ONE | Our Next Energy**

In this groundbreaking session, Our Next Energy (ONE) explores the technical and economic viability of deploying high-performance battery systems first in stationary grid applications—where duty cycles are moderate and controlled—before transitioning them into automotive use. By optimizing battery conditioning, usage patterns, and health monitoring from the start, this "Grid-First, Vehicle-Second" model could unlock new standards of durability, lifecycle value, and sustainability.

#### Rethinking First Life:

- Why deploying batteries in stationary energy storage may provide ideal "conditioning" for later high-demand EV use.
- Analysis of cycling profiles, thermal management, and degradation in grid applications versus automotive environments.

#### Technical Challenges and Solutions:

- Ensuring battery health, consistency, and safety across transitions between grid and automotive sectors.
- Data-driven battery health monitoring and predictive modeling to assess readiness for second life in vehicles.
- Chemistry considerations: LFP, NMC, and solid-state technologies in a grid-first context.

#### Economic and Sustainability Impact:

- Comparative lifecycle analysis of traditional vs. reverse second-life battery pathways.
- Implications for resource utilization, carbon footprint reduction, and total cost of ownership.

#### Infrastructure and Industry Collaboration:

- What partnerships are required between utilities, OEMs, and recyclers to enable grid-to-vehicle battery flows?
- Certification, regulatory, and logistical hurdles to mainstream adoption.

## 08:40

### Building A Circular Battery Economy: Lucid Motors' Approach To Recycling And Sustainability

**Michael Parton**, Group Manager - Battery Raw Materials, **Lucid Motors (TBC)**

As EV adoption accelerates, sustainable battery management is critical to reducing environmental impact and ensuring material security. Lucid Motors is developing a closed-loop system, retrieving batteries through trade-ins, service centers, and potential incentives for dismantlers. This session will explore Lucid's approach to recycling, from mechanical and chemical material separation to partnerships ensuring a stable, diversified battery supply. Attendees will gain

insight into how automakers can integrate end-of-life batteries into energy storage systems, reducing waste and enhancing sustainability.

- Understand how Lucid Motors is designing a sustainable battery supply and recycling strategy.
- Explore the role of financial incentives, second-life energy storage, and key supplier partnerships.
- Learn about the challenges and potential solutions for creating a domestic, circular battery economy

## 09:00

### Advanced Cathode Innovations: Paving The Way For Battery Materials Circularity

**Daniel Shapiro**, Technology Deployment Manager, Office of Manufacturing & Energy Supply Chains / Batteries and Critical Materials, **U.S Department of Energy (DOE)**

The transition to a circular economy for battery materials hinges on breakthroughs in cathode technology. This presentation will explore how advanced cathode innovations are driving battery sustainability by improving recyclability and reducing reliance on scarce materials. Attendees will learn about key challenges facing the industry, including material recovery efficiency, lifecycle management, and design for circularity. Through case studies and real-world examples, this session will highlight cutting-edge solutions that are helping the industry close the loop and achieve true circularity in battery production and recycling.

- Understand the role of advanced cathode technologies in enabling sustainable, closed-loop battery systems
- Explore case studies demonstrating how cathode innovations improve material recovery and reduce the environmental footprint of batteries
- Learn about future trends and strategic implications of circularity in battery design and recycling

## 09:20

### Innovations In Lithium-Ion Battery Recycling: Tech, Business Models, And Chemistries

**Cameron Lippert**, Co Founder and Chief Innovation Officer, **ElectraMet**

As the electric vehicle market accelerates, innovations in lithium-ion battery recycling are critical to managing the growing volume of end-of-life batteries. This presentation will explore the latest technological advancements, evolving business models, and emerging battery chemistries that are reshaping the recycling landscape. Attendees will learn about the major challenges in scaling recycling operations, such as cost-efficiency and material recovery, and how innovative solutions are addressing these pain points. Through case studies, this session will highlight successful approaches and the strategic implications for future growth in the industry.

- Gain insights into the newest technologies driving more efficient and scalable lithium-ion

battery recycling

- Explore innovative business models that improve profitability and sustainability in battery recycling
- Understand how evolving battery chemistries influence recycling processes and future industry strategies.

## 09:40

### Building Localized Circular Recycling Networks

**Jonathan Scharf**, Founder and CEO, **Scharf Energy Consulting LLC**

Creating localized recycling networks is a critical step toward achieving circularity in the electric vehicle battery supply chain. This presentation will examine the challenges of decentralizing recycling operations, including logistical hurdles, regulatory complexities, and economic viability. Attendees will gain insights into how localized circular networks can reduce transportation costs, enhance material recovery, and support regional sustainability goals. The session will feature case studies that demonstrate successful localized recycling models and will explore future opportunities for scaling these networks across various regions.

- Understand the benefits and challenges of establishing localized circular recycling networks for EV batteries
- Learn from case studies that illustrate successful models of decentralized recycling systems
- Explore strategies for scaling localized networks to support broader sustainability and circularity goals

## 10:00

### Validation of Anode And Cathode Active Materials From Direct Recycling: Electrochemical Performance In New Li-ion Cells

**Chao Yan**, Co-Founder and Chief Executive Officer, **Princeton NuEnergy**

As the demand for sustainable practices in the lithium-ion battery industry increases, validating the performance of anode and cathode materials sourced from direct recycling becomes crucial. This presentation will examine the electrochemical performance of recycled active materials when integrated into new lithium-ion cells. Attendees will learn about the challenges associated with sourcing and validating these materials, including concerns over efficiency, degradation, and scalability. Through case studies and experimental results, this session will provide insights into innovative methods for assessing performance and the implications for the future of battery recycling and sustainability in the EV market.

- Understand the process of validating recycled anode and cathode materials for use in new lithium-ion cells
- Explore the electrochemical performance characteristics of recycled materials and their impact on battery efficiency
- Learn about the challenges and best practices in integrating recycled materials into the battery manufacturing process

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10:20

## From Waste To Resource: Rethinking Battery Recycling For A Circular Economy

*Ryan Melsert, CEO, American Battery  
Technology Company (TBC)*

End-of-life batteries are often treated as waste, yet the critical metals within them—such as lithium, cobalt, and nickel—can be recovered and reused indefinitely without degradation. Traditional recycling methods, including smelting and mechanical shredding, result in material losses, high energy consumption, and environmental pollution. This presentation will introduce a novel, closed-loop battery recycling approach that eliminates high-temperature processing, maximizes metal recovery, and ensures high-purity outputs suitable for direct reintegration into the supply chain. By leveraging strategic de-manufacturing and targeted hydrometallurgical separation, this process not only conserves natural resources but also reduces costs and emissions while creating a truly circular battery economy.

- Understand the limitations of traditional recycling methods and their impact on material recovery, environmental sustainability, and cost efficiency.
- Learn how a de-manufacturing and hydrometallurgical approach enables high-purity metal recovery while avoiding the inefficiencies of smelting and shredding.
- Explore the role of closed-loop recycling in securing a stable, sustainable battery materials supply chain for EV manufacturers and recyclers.

10:40

## Addressing Waste Management Challenges In Electric Vehicle Battery Recycling

*Patrick Curran, Co-founder and Senior  
Partner, Archimedes Industrial Advisory &  
Investment*

A focus on the critical issue of waste management in the recycling of (EV) batteries. As the adoption of EVs continues to rise, managing the waste generated from battery recycling processes becomes increasingly vital. The session will delve into the key concerns and challenges faced by recyclers, exploring strategies to mitigate these issues effectively.

### Key Concerns in Waste Management

- Overview of the growing importance of effective waste management in EV battery recycling
- The environmental and economic implications of poor waste management practices
- Identification and categorization of waste types generated during the recycling of EV batteries (e.g., hazardous waste, electronic waste, residual materials)
- Environmental impacts of improper waste disposal
- Health and safety concerns associated with handling and processing battery waste

### Challenges in EV Battery Waste Management

- Technical challenges in segregating and processing different waste streams
- Economic barriers to implementing comprehensive waste management systems
- Regulatory challenges and compliance requirements

### Best Practices for Waste Management

- Strategies for effective waste segregation and material recovery

- Implementation of advanced recycling technologies to minimize waste
- Developing and following standardized protocols for waste handling and disposal
- Training and safety measures for personnel involved in waste management

### Innovative Solutions and Technologies

- Introduction to emerging technologies in waste processing and recycling
- Role of artificial intelligence and automation in improving waste management
- Innovative approaches to repurposing and reusing battery waste materials

### Regulatory Considerations and Compliance

- Overview of key regulations governing waste management in EV battery recycling
- Best practices for ensuring compliance with local, national, and international regulations
- Collaborating with regulatory bodies to develop sustainable waste management policies

11:00 | MORNING BREAK

11:40 | PANEL

## Recycling Economics: Balancing Profitability And Sustainability In The EV Battery Lifecycle

*Daniel Shapiro, Technology Deployment  
Manager, Office of Manufacturing & Energy  
Supply Chains / Batteries and Critical  
Materials, U.S Department of Energy (DOE)*

*Alex Hsia, Founder and CTO, EcoX Energy Inc.*

*Cameron Lippert, Co Founder and Chief  
Innovation Officer, ElectraMet*

*Patrick Curran, Co-founder and Senior  
Partner, Archimedes Industrial Advisory &  
Investment*

*Praveen Cherian, Executive Vice President,  
Capgemini*

This roundtable will engage participants in a dynamic discussion about the economic aspects of recycling electric vehicle batteries. As the industry seeks to enhance sustainability, it faces the challenge of balancing profitability with environmental responsibility. Attendees will explore the economic drivers behind battery recycling, including cost structures, material recovery rates, and emerging business models that support both financial viability and sustainable practices. Through collaborative dialogue, participants will share insights and strategies for optimizing the economic landscape of EV battery recycling, ensuring a greener future while maintaining robust profit margins.

- Discuss the key economic factors influencing profitability in the EV battery recycling sector
- Share best practices and innovative business models that successfully balance sustainability and financial success
- Explore collaborative opportunities among stakeholders to enhance the economic feasibility of battery recycling initiatives

12:10

## Enhancing EV Battery Recycling Through Advanced Adhesive Technologies

*Marlen Valverde, PhD., Global Technical  
Manager ePower and Energy Storage, H.B.  
Fuller*

As EV adoption grows, effective battery recycling is essential for sustainability and resource efficiency. However, the increasing complexity of battery designs, poses significant challenges for disassembly and material recovery. This presentation highlights the critical role of adhesive technology in addressing these challenges. The right adhesives not only enable secure bonding during battery operation but also facilitate efficient, safe disassembly at end-of-life, reducing costs and environmental impact. By leveraging innovative adhesive solutions, manufacturers and recyclers can streamline processing, improve safety, and support a circular economy for EV batteries.

### • Understand the Challenges of Battery Recycling

Learn how increasing battery design complexity impacts disassembly and material recovery.

- Explore the Role of Adhesive Technology  
Discover how advanced adhesives enable both secure bonding during use and efficient, safe disassembly at end-of-life.

### • Optimize Recycling Processes for Sustainability

Gain insights into how innovative adhesive solutions can reduce costs, improve safety, and support a circular economy for EV batteries.

12:30

## Accelerating EV Battery Reuse: High-Throughput State-of-Health Diagnostics

*Dave Mauer, Director of Business  
Development, ReJoule*

As the volume of retired EV batteries grows, the challenge of efficiently assessing their viability for second-life applications becomes critical. Traditional cycling-based testing is slow, costly, and labor-intensive, limiting the scalability of battery repurposing efforts. This presentation will showcase the results of a study conducted by ReJoule and Renewance, where ReJoule's BattScan050M device enabled rapid state-of-health (SOH) estimation of 1,670 EV battery modules. By leveraging Electrochemical Impedance Spectroscopy (EIS) and cloud-based data management, the study demonstrated how high-throughput testing can streamline battery reuse, reduce waste, and create a domestic supply of repurposed energy storage solutions.

- Understand the limitations of traditional EV battery testing methods and the need for scalable, rapid diagnostics.
- Explore how Electrochemical Impedance Spectroscopy (EIS) enables fast and accurate SOH estimation for second-life applications.
- Learn how integrating cloud-based platforms with portable testing solutions can optimize logistics, reduce costs, and accelerate battery circularity.

12:50

## Addressing Battery Recycling Technical Challenges Of Variable Formats And Chemistry For Metals Production In The Circular Economy

*Derek Ramsell, Founder & CEO, Battery  
Metals, Inc.*

This presentation will explore the critical technical challenges of recycling EV batteries with diverse chemistries and formats to support a sustainable circular economy. It will delve into the complexities of handling varying battery

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chemistries, including lithium-ion, nickel-metal hydride, and solid-state batteries, each with unique recycling requirements and safety considerations. The discussion will highlight the role of modular designs, automation, and standardized labeling in overcoming format variability. Furthermore, it will examine how advanced recovery technologies can ensure high-purity material production for reuse in battery manufacturing. By addressing these challenges collaboratively, the industry can drive efficient and sustainable recycling practices to meet the growing demand for EV battery materials.

- **Understanding Chemistry and Format Challenges:** Analyze the complexities of recycling batteries with diverse chemistries and formats, including the safety, disassembly, and material recovery challenges they present.
- **Exploring Innovative Solutions:** Learn about cutting-edge technologies, such as automated sorting, modular designs, and advanced material recovery processes, that are shaping the future of efficient battery recycling.
- **Building a Collaborative Approach:** Understand how collaboration among manufacturers, recyclers, and policymakers can establish industry standards and scalable infrastructure to support the circular economy.

### 13:10 | LUNCH BREAK

### 14:10

#### Waste Not, Win Big: Closing the Loop on Sodium Sulfate in Battery Production

**Bilen Akuzum, Co-Founder & CTO, Aepnus Technology**

As the EV battery industry expands, so does the challenge of managing sodium sulfate waste—a byproduct with significant environmental and economic implications. Aepnus introduces an innovative electrolysis platform that converts sodium sulfate into valuable chemicals like sulfuric acid and sodium hydroxide. This breakthrough not only reduces CO2 emissions but also supports the circular economy by repurposing waste into high-demand resources. Join us to explore pilot results, real-world applications, and the transformative potential of this technology for the EV battery supply chain.

- **Understand the Challenge:** Gain insights into the scale and impact of sodium sulfate waste in the growing EV battery industry and its environmental implications.
- **Explore Innovative Solutions:** Learn how Aepnus' electrolysis technology converts waste into critical chemicals, addressing sustainability bottlenecks while supporting a circular economy.
- **Discover Real-World Applications:** Review case studies and projections to understand the practical benefits and adoption strategies of this transformative technology within the battery supply chain.

### 14:30 | PANEL

#### The Road Ahead: Collaborative Solutions For EV Battery Recycling Challenges

**David Monk, New Business Development Manager, Ascend Elements**

**Steven Wu, COO, American Battery Technology Company**

**Christina Chilcote, Director of Business Development, Blue Whale Materials LLC**

**TBC, Li-Cycle**

**TBC, EnergyX**

**TBC, Cirba Solutions**

**TBC, Lithion Technologies**

This roundtable will bring together leading voices from major EV battery recycling companies to discuss the critical challenges facing the industry. Panelists will delve into pain points such as scaling recycling capacity, managing hazardous materials, regulatory hurdles, and technological advancements needed for the circular economy. Attendees will gain firsthand insights into how these challenges are being addressed today and explore collaborative pathways to a sustainable and efficient EV battery recycling ecosystem.

- **Understanding Current Challenges:** Identify the major technical, regulatory, and logistical barriers impacting the scalability and efficiency of EV battery recycling.
- **Exploring Collaborative Opportunities:** Learn how collaboration between recyclers, OEMs, and the wider supply chain can accelerate innovation and resolve shared pain points.
- **Gaining Insights into Future Trends:** Discover the evolving landscape of recycling technologies, market drivers, and sustainability goals shaping the next decade in EV battery recycling.

### 15:00

#### Advancing Hydrometallurgical Solutions for Critical Battery Materials

**Alex Hsia, Founder and CTO, EcoX Energy Inc.**

This session will explore the complex challenges associated with the hydrometallurgical recycling process for battery materials, focusing on the extraction and purification of valuable metals from black mass. Attendees will gain insights into the technical, environmental, and economic obstacles and learn about innovative solutions and best practices to enhance the efficiency and sustainability of battery recycling.

##### Challenges in Processing Complex Feedstock:

- Managing the variety of materials in batteries
- Techniques for effective initial separation and dealing with impurities

##### Chemical Handling and Safety Concerns:

- Best practices for handling corrosive chemicals and ensuring worker safety
- Strategies for managing hazardous by-products and preventing environmental contamination

##### Efficiency and Selectivity in Metal Extraction:

- Methods for treating and disposing of solid and liquid waste
- Approaches to optimize energy consumption and reduce the carbon footprint

##### Economic Viability of the Recycling Process:

- Cost analysis of reagents and chemicals used in the process
- Impact of fluctuating market prices for recovered metals on profitability

##### Technological Challenges and Innovations:

- Continuous process optimization to enhance efficiency and yield
- Scaling up from laboratory to industrial-scale operations

##### Regulatory and Compliance Issues:

- Navigating environmental regulations and standards for recycling
- Ensuring recovered materials meet industry quality standards

### 15:20

#### From Stuck to Sorted: Overcoming Debonding Hurdles in EV Battery Disassembly

This session will provide a comprehensive overview of the technical, safety, economic, environmental, regulatory, and scalability challenges, along with innovative solutions and best practices.

- **Importance of Addressing Debonding Challenges for Sustainability and Efficiency**
- **Complex Bonding Techniques:** Strategies for reversing advanced bonding methods
- **Material Composition:** Handling diverse materials within batteries
- **Precision and Control:** Techniques for achieving precise control over the debonding process
- **Understand the complexities of material recovery and the advanced techniques required**
- **Explore solutions to handle varied materials and complex bonding techniques**
- **Evaluate the economic aspects of debonding technologies and their cost-effectiveness**
- **Scalability:** Developing scalable debonding processes for large volumes of batteries
- **Integration with Existing Infrastructure:** Adapting new technologies into existing facilities
- **Gain diverse perspectives and insights to address the multifaceted challenges of debonding**

### 15:40 | PANEL

#### Bridging The Gap: OEM-Recycling Partnerships Driving Sustainable End-of-Life Solutions

**Kevin Hobbie, Global Operations Manager, Green Li-ion**

**Michael Parton, Group Manager - Battery Raw Materials, Lucid Motors (TBC)**

**William Q. Walker, Ph.D., Chief Technology Officer, KULR Technology Group, Inc.**

**Mitchell Regenstreif, Battery Recycling, Nickel & Cobalt Category Manager, Ford Motor Company**

**Ian Hoff, Head of Sales - Commercial, TerraCycle**

This roundtable will focus on the critical collaboration between original equipment manufacturers (OEMs) and battery recyclers in managing the end-of-life phase of electric vehicle batteries. As the number of EVs on the road increases, effective end-of-life management becomes essential to ensure sustainability and resource recovery. Participants will discuss strategies for designing batteries with recycling in mind, as well as the role of OEMs in establishing take-back programs and fostering partnerships with recyclers. The session will also address regulatory considerations and best practices for maximizing material recovery while minimizing environmental impact.

- **Explore the importance of collaboration between OEMs and recyclers in developing effective end-of-life management strategies for EV batteries**
- **Discuss design considerations that enhance recyclability and facilitate the recovery of valuable materials**
- **Identify regulatory challenges and opportunities for creating a sustainable framework for battery recycling and end-of-life management**

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16:10

## Circular Strategies Powering A Resilient EV Supply Chain

*Kevin Hobbie, Global Operations Manager, Green Li-ion*

We are at a critical juncture in the Western world, where decades of outsourcing manufacturing to the East have left us with a significant gap in our ability to process and recover the critical materials needed for the EV supply chain. As demand for EVs continues to grow, so does the urgency to establish robust domestic recycling and refining capabilities. But what does it take to build a truly circular battery economy? This session will explore the current state of Western recycling infrastructure, the bottlenecks preventing full-scale material recovery, and the policy and industry collaborations needed to accelerate progress.

Attendees will gain insight into the technological, economic, and regulatory factors shaping the future of EV battery recycling—and walk away with a clearer understanding of how they can contribute to closing the loop.

### Key Learning Objectives:

- **Assessing the Current Landscape:** Understand the gaps and opportunities in Western EV battery recycling, including the limitations of existing infrastructure.
- **Pathways to Self-Sufficiency:** Explore strategies for building a domestic, closed-loop battery supply chain, from policy incentives to technological advancements.
- **Collaboration for a Circular Economy:** Identify ways OEMs, recyclers, and policymakers can work together to ensure sustainable material recovery and supply security.

16:30 | NETWORKING BREAK

17:20

## End-of-Life Batteries: Who's Buyin?

*Tyler Helps, Chief Commercial Officer and Co-Founder, Currents*

This presentation will explore the critical role of low-cost, user-friendly testing equipment in the end-of-life vehicle and battery supply chain. Attendees will gain insights into how adopting efficient testing processes can enhance the value of EV batteries, support circularity, and address pressing challenges in battery reuse and recycling.

- Understand the cost-benefit dynamics of battery testing in the end-of-life supply chain.
- Discover practical strategies for integrating low-cost, easy-to-use testing solutions to maximize battery value.
- Explore how efficient testing aligns with the broader goals of battery circularity and reuse within the EV ecosystem.

17:40

## Efficient Reintegration of Critical EV Battery Minerals

*Haixia Casey Deng, Founder and CEO, XERA ENERGY*

The battery supply chain outside China faces a critical gap; while companies address black mass recycling and cathode production, the midstream NMC refinery process is notably absent.

Conventional methods are overly complex and resource-intensive, while newer approaches often lack industrial experience and fail to address real pain points. Fragmented supply chains further stall progress, as dependencies like chemical inputs and byproduct management fail to align. This creates a “death valley” of stalled innovation.

This strategy emphasizes targeted innovation, streamlined execution, and market alignment to deliver impactful solutions.

- Build on proven technology for practical innovation; XERA ENERGY focuses Ni and Li, avoiding overly ambitious, unscalable approaches.
- Streamline and integrate processes to address supply chain segmentation.
- Align with supply and market demand for optimal product adoption.

18:00

## Closing the Loop with Advanced Cathode Engineering

*David Monk, New Business Development Manager, Ascend Elements*

The terms “circularity” and “closed loop” are often used to describe battery recycling processes like pyrometallurgy and hydrometallurgy, but these traditional recycling processes are just the first steps in any round-trip journey of battery materials.

The typical outputs of battery recycling require extensive processing before they can go into new EV batteries.

This presentation puts recycled battery materials under the microscope and explores the steps needed to engineer new, battery-ready cathode active material (CAM).

- **Understanding the Challenges of Recycled Material Utilization:** Analyze the limitations of traditional recycling methods, such as pyrometallurgy and hydrometallurgy, in producing battery-ready cathode active materials (CAM).
- **Exploring Advanced Cathode Engineering:** Discover the essential steps and technologies required to transform recycled materials into high-quality CAM suitable for new EV batteries.
- **Driving Circularity Through Collaboration:** Learn how collaboration among recyclers, material engineers, and EV manufacturers can streamline the integration of recycled materials into the battery production cycle, fostering a closed-loop ecosystem.

18:20

## Next-Gen Tech Meets Battery Recycling: Quantum, AI & Blockchain in Action

*Ravi Gade, VP of Business Strategy, Bridge Green Upcycle*

This presentation explores how cutting-edge technologies—quantum computing, generative AI, and blockchain—are revolutionizing battery recycling and repurposing to meet the demands of a sustainable energy future.

Quantum computing offers unprecedented capabilities for solving complex material recovery and optimization problems, while generative AI enhances diagnostics, process automation, and material yield predictions. Blockchain ensures transparency and traceability across the

battery lifecycle, fostering trust and regulatory compliance.

By integrating these technologies, we unlock pathways for a circular economy in energy storage, minimizing waste, maximizing value, and setting new standards for environmental stewardship.

18:40

## The Strategic Imperative For EV Battery Recycling In A Resource-Constrained World

*Michael Liu, Managing Director, Volta Foundation*

As global EV adoption accelerates, battery recycling is no longer an environmental necessity but a strategic imperative for supply chain resilience and resource security. This presentation will provide a high-level assessment of the evolving recycling landscape, highlighting economic drivers, policy interventions, and technological advancements shaping the industry. We will examine the challenges of scaling closed-loop systems, from the volatility of raw material prices to the impact of regional protectionist policies. This session will set the stage for the discussions ahead, providing a framework to contextualize the key themes and challenges that will be explored throughout the conference.

- Learn how global EV sales growth and shifting supply chain risks impact demand for battery recycling
- Discover how the evolving battery recycling value chain and its business models open up new regional opportunities and challenges
- Understand the role of OEMs, policymakers, and recyclers in shaping the future of battery circularity

19:00 | Chair's Closing Remarks

19:10

All Attendee Drinks Reception

# SUPER EARLY BIRD RATE ENDS 15<sup>TH</sup> APRIL 2025

OEM/Battery Mnf. **\$500**

Vendor/Supplier **\$700**

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## THOUGHT LEADERSHIP

Position your company as a thought leader by sharing your latest innovations, insights and best practices on the electric vehicle battery recycling stage. Demonstrate your expertise through presentations, panel discussions and technical workshops to establish your company as an innovative industry leader.

## MAXIMUM VISIBILITY

Showcase your brand to a highly targeted audience of battery manufacturers, OEMs, Tier 1 suppliers and recycling professionals from across the e-mobility sector. Enhance your visibility with prominent logo placement, booth displays, and speaking opportunities within the electric vehicle battery recycling community.

## NETWORKING OPPORTUNITIES

Build meaningful connections and collaborations with leading experts, decision-makers and potential customers invested in e-mobility, sustainability and circular economy. The conference provides ample networking opportunities, including dedicated networking breaks, receptions and meeting with key stakeholders.

## #SHOWCASE YOUR TECHNOLOGIES AND SOLUTIONS AT EV BATTERY RECYCLING USA 2025

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## ATTENDEE JOB TITLE CROSS SECTION 2024

**CEO / Founder / Co-Founder**, Chief Commercial Officer, **Chief Technology Officer (CTO)**, **Chief Innovation Officer**, **COO**, **Director**, Director of Business Development, **Director of Business Team**, Executive Director, **Head**, **Innovation Consultant**, **Manager**, Managing Director, **Managing Director of Operations**, President, **Principal Scientist**, **Process Engineer & Deputy Director**, Product Manager, **Program Analyst**, Research Associate, **Researcher**, **Senior Process Development Engineer**, Technical Principal, **Technology Analyst**

29 APRIL 2025  
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# BATTERY RECYCLING

ELECTRIC VEHICLE SUMMIT USA

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**OFFER ENDS 18<sup>TH</sup> MARCH 2025**

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- Prices include food & beverages, morning breakfast & coffee
- Networking breaks, coffee and snacks. Hot buffet luncheon
- Afternoon coffee break including soft drinks & snacks
- All attendee evening drinks reception – open bar

### **SUPER EARLY BIRD RATE** **SUPPLIER RATE \$700**

- Prices include food & beverages, morning breakfast & coffee
- Networking breaks, coffee and snacks. Hot buffet luncheon
- Afternoon coffee break including soft drinks & snacks
- All attendee evening drinks reception – open bar

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