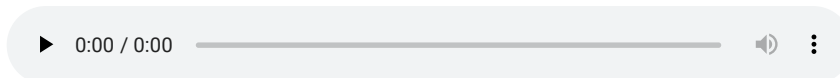




## Clean And Green De-Manufacturing of Lithium-Ion Batteries – American Battery Technology Company CEO Ryan Melsert

By Lynn Walford - October 19, 2021

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 Reading Time: 3 minutes

American Battery Technology Company (ABTC) is revving up funding, processes, testing and getting ready for the onslaught of electrification through de-manufacturing, clean mining and new technology. Ryan Melsert became CEO of ABTC at the end of August 2021, when he was promoted from Chief Technology Officer (CTO).

Melsert explains how the company plans to enable clean America-based recycling and battery-grade material more for batteries to power the future of electrification.

As CTO, Melsert won the Greentown Labs/BASF Circularity Challenge award and assembled a team of experts in chemical engineering, battery materials manufacturing, chemical plant design, and operations.

An important part of Melsert's career is that he started off making battery technology for Tesla. He and his team developed every step in the research and development of making batteries at the Tesla gigafactory.

Knowing the manufacturing process helped him and his team devise a clean way to de-manufacture batteries.



## Cleaner and Greener Recycling

“We de-manufacture the batteries in a reverse process that is faster, costs less and is greener. It is also agnostic to the type of battery,” says Melsert. He notes that ABTC can recycle automotive, energy storage and consumer electronics batteries.

The proprietary secret process that extracts lithium keeps chemicals in a ‘closed system’ that is cleaned, filtered and reused. Any water discharged is treated to be cleaner than the potable standard.

Battery materials such as lithium, graphite or other material/components, are processed ready for safe and secure shipping within hours. Any water discharged is treated to a cleaner than potable standard.

The ABTC way is cleaner and greener than other methods of Lithium-ion battery recycling.

“When batteries are exported to Asia for recycling for U.S.-based companies, there is no way of knowing what happened to it,” says Melsert.

There are a handful of demonstrations making different types of processes for recycling batteries. However, the recycling processes could be shredding and burning the batteries, warns Melsert.

Outdated burning methods generate air pollution creating fluorine, phosphorous, sulfur-based, and carbon dioxide emissions.

“The current battery metals industry in the United States is not able to meet the growing demand at home,” he says. “We are testing and are moving forward with our first pre-commercial facility of battery material product manufacturing.”

ABTC can also sustainably mine metals and produce battery-grade materials. ABTC can extract the minerals from the property it owns in Central Nevada or from batteries to make feedstock to make batteries, adds Melsert.



**“Our goal is that we will be co-located with manufacturing so that the manufacturing and the de-manufacturing will be near each other.”**

Most major automobile manufacturers plan to transition to fully electric vehicles. Global lithium supply is constrained, says Melsert. Unfortunately, only 5% of global lithium-ion batteries are recycled.

He says it is best to have the material in the same region as the manufacturing because importing the material is more expensive and has an impact on the environment.

ABTC made many announcements this year. In January, ABTC announced a \$4.5 million grant by the U.S. Department of Energy’s Advanced Manufacturing Office. In May, the company announced a partnership with Cicle ChargeParks.



Cicle ChargeParks will house multiple ABTC collection points and operations across North America. ABTC will collect used and damaged EV batteries and other lithium-ion products for recycling and core metals processing.

The company was formerly named American Battery Metals Corporation and is in the process of changing its name to American Battery Technology Company (ABTC). The company purchased the property and applied for permits in Fernley, Nevada for a production building, an office building with laboratories, and a warehouse.

The company plans to power a portion of the plant with renewable energy and be LEED Gold.

## The Future of ABTC

“Soon we will be revealing funding from major automakers to run a domestic demonstration process,” says Melsert.

The company is in talks to work with General Motors to see what can be done when the defective batteries come back from all the recalled Chevrolet Bolts, says Melsert.

“The battery material for the Bolts is valuable. It is less expensive to have the recycling done near where the manufacturing is. The Bolt batteries have to be efficiently recycled,” he advises.

“Our goal is that we will be co-located with manufacturing so that the manufacturing and the de-manufacturing will be near each other. We plan to support the change to reuse for operations to create a truly closed-loop economy,” concludes Melsert.

Lynn Walford

NEXT STORY

## Hyundai CRADLE to Host Sixth Mobility Innovators Forum Focused on the Intersection of Creativity and Innovation

By Kia Corporation - October 19, 2021



🕒 Reading Time: 2 minutes

- Hyundai CRADLE will host sixth Mobility Innovators Forum virtually on Oct. 27-28
- Event to focus on the importance of bringing creative mindsets to human-centered mobility as well as the need for close collaboration with technologists
- Anyone interested in joining MIF 2021 can sign up via [the website](#)

Hyundai Motor Group (the Group) announced today that Hyundai CRADLE Silicon Valley will host the sixth annual Mobility Innovators Forum (MIF) virtually on Oct. 27-28. Anyone interested in joining the conversation can sign up via [the website](#).

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