

LITHIUM-ION BATTERY RECYCLING PRIZE



U.S. DEPARTMENT OF ENERGY

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Submission Title:	Lithium-Ion Battery Collection in the Automotive Industry
Submission Track:	Collection

A Public Document



Concept

- Auto Recyclers play a central role in the end-of-life vehicle circular economy by collecting and cataloging parts, and recycling materials from end-of-life vehicles.
- **Batteries are collected by Auto Recyclers with end-of-life vehicles but cataloging rates are very low. Meaningful collection must be measurable.**
- In order to measure collection rates and improve market demand for EV/PEV batteries
 - Improve Auto Recycler cataloging rates.
 - Gather information needed to enhance existing processes and technology to deal with EV/PEV battery requirements
 - Build tools to track and measure collection rates, and enhance existing circular economies with EV/PEV batteries.

Approach

- Gather information needed to enhance existing processes and technology to deal with electric vehicle battery requirements
 - Partner with DOE, CIECA, Auto/Battery Manufacturers and other invested parties to create standardized electronic messaging to facilitate data sharing.
- Improve Auto Recycler cataloging rates for electric vehicle batteries
 - Partner with ARA to build Auto Recycler Battery Certifications and protocols to build understanding and public trust in reused batteries.
- Build tools to track and measure collection rates, and integrate new data into new and existing Auto Recycler Information Technology.

Potential Impact

- This solution is specific to the transportation industry and electric vehicle batteries.
- **Within the transportation industry this is a national solution that could scale to reach 90% of Auto Recyclers.**
- Car-Part.com's existing historical parts database could be leveraged to measure Auto Recycler collection/cataloging rates
- **Given access to data, Car-Part.com's existing software will be leveraged to connect market demand information with battery serial numbers.**
- Increased market demand will increase incentive for collection.