

Commercialization

PROJECT NAME: Large-Scale Demonstration of Domestic Manufacturing of Low-Cost and Low-Environmental Impact Battery-Grade Lithium Hydroxide from Unconventional Domestic Sedimentary Resources

APPLICANT: American Battery Technology Company

Federal Cost Share: \$57,744,831

Recipient Cost Share: \$57,744,831

Supply Chain Segment: Materials Separation & Processing (Cathode Minerals)

Project Description:

American Battery Technology Company (ABTC), in collaboration with DuPont Water Solutions, University of Nevada Reno, and Argonne National Laboratory, will design, construct, commission, and operate a commercial scale facility to demonstrate its novel process for the manufacturing of battery cathode grade lithium hydroxide from unconventional Nevada-based lithium-bearing sedimentary resources. By demonstrating at commercial scale this new low-cost and low-environmental impact process for manufacturing lithium products from unconventional sedimentary resources, the domestic-US lithium resource base can be expanded and allow for the US battery manufacturing supply chain to operate in a self-sustaining closed-loop fashion.

ABTC has secured over 10,000 acres of these lithium-bearing sedimentary resources near Tonopah, NV, and this project team has been performing work under an existing grant award from the U.S. Department of Energy Advanced Manufacturing Office (AMO) to demonstrate this process in an integrated multi-ton per day field demonstration system. With the support of this Bipartisan Infrastructure Law grant award, a 5,000 MT (metric tonnes) LiOH/year commercial processing plant will be constructed and operated at this resource site, with the capacity of the facility to subsequently be expanded to 30,000 MT LiOH/year.

Community Benefits:

The design of this project's community impact approach has been driven by an imperative and responsibility to develop domestic sourced lithium resources in a sustainable and ethical fashion. The disruptive step-change reduction in environmental impact compared to conventional processing methods allows for significant positive economic and social impacts for the host region and surrounding areas, without the negative impacts experienced with conventional processing facilities. This will create over 150 new skilled regional jobs, foster local community-driven betterment, and develop the next generation of diverse scientists and engineers that will continue innovating for future generations. ABTC has been an active and participating member in the community for many years and is proud to have received support from the Tonopah Development Corporation as well as the Southwest Central Regional Economic Development Authority (SWCREDA) detailing the impacts that our increased activity in the area will generate with our underrepresented partners.

