Lithium is a key component of rechargeable batteries commonly used in laptops, cell phones and most notably, electric vehicles. By 2040, the global lithium supply is expected to increase by 40x.1

Nearly 90% of total lithium demand is from advanced energy technology.1

The average electric vehicle requires about 17.6 pounds of lithium.6

The demand for lithium is projected to reach 1.5 million tonnes of lithium carbonate equivalent (LCE) by 2025 and over 3 million tonnes by 2030.1

By 2040, EV sales could exceed 70 million cars compared to only 3 million in 2020, causing mineral demands to increase 25x current levels.7

The U.S. is behind in the lithium production race. As a mineral critical to advanced energy technology, the U.S. must advance domestic lithium mining projects. Two U.S. mining companies aim to put the U.S. back on the lithium mining map.

MINE PRODUCTION OF LITHIUM, 1995–2021

The U.S. is more than 25% dependent on lithium imports.156 of the world’s 211 lithium-ion battery megafactories are in China, and only 12 are in the U.S. The U.S. will need to build 20+ battery plants before 2030 to meet domestic automotive demand.1

A PATH FORWARD

Instead of relying on unstable supply chains, the U.S. should enact widespread permitting reform and advance domestic lithium mining projects. Two U.S. mining companies aim to put the U.S. back on the lithium mining map.

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Notes:
6. https://www.mineral MSE.LIFE.org
7. https://www.mineral MSE.LIFE.org

OTHERS DOMINATE THE SUPPLY CHAIN

At one point, the U.S. was a leader in lithium production, but it’s since ceded that position to foreign nations, including China.

Piedmont Lithium is working to supply the U.S. demand for lithium hydroxide through its proposed spodumene one-to-lithium hydroxide project, Carolina Lithium, and Tennessee Lithium, drastically increasing U.S. production capacity and supporting the manufacturing of approximately 1.2 million EV batteries annually.

Anticipated production:
24,000 TPA lithium carbonate/hydroxide
192,000 TPA zirconic acid

offtake agreements:
Ford Motor Company
Prime Planet Energy & Solutions
Ecopro Innovation

Investment:
$150 million on project development to date
$70 million in debt financing from DOE Loan Programs Office
$40 million in equity from Sibanye Stillwater Ltd.

Targeted production:
2016 2024 2026

Development began in 2016. Construction will begin once the project receives a Record of Decision from the Department of Interior. Ioneer currently expects to receive a Record of Decision in 1Q 2024 and begin production in 2026.

Ioneer is developing the Rhyolite Ridge Lithium-Boron project in Esmeralda County, Nevada. The current phase of the project is expected to extract and refine enough lithium for 370,000 electric vehicles per year.

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