



Lithium: Market trends & insights

The booming lithium market

Executive Summary

The global lithium market is booming, driven by the rapid growth of EVs and renewable energy storage. Lithium demand is expected to grow 3.5x by 2030, but supply shortages and sustainability challenges are straining the industry. Traditional mining methods are unsustainable and can't keep pace, and countries are racing to secure domestic lithium for energy security.

At Lithium Harvest, we extract lithium from geothermal brine, transforming it into a valuable resource. Our process is faster, more cost-effective, and environmentally friendly. This presents a unique opportunity for the energy industry to diversify and gain a first-mover advantage in a rapidly growing market.

Global Lithium Market Dynamics

The rapid adoption of electric vehicles (EVs) and the expansion of energy storage solutions are driving a substantial increase in lithium demand. Projections show that lithium demand will surge by 250% between 2023 and 2030, with an even greater emphasis on securing sustainably sourced lithium. However, supply struggles to keep pace, presenting opportunities and significant challenges for the lithium supply chain.

Current Market Size:

- 2023 global lithium production was estimated at approximately 850,000 mt of lithium carbonate equivalent (LCE).

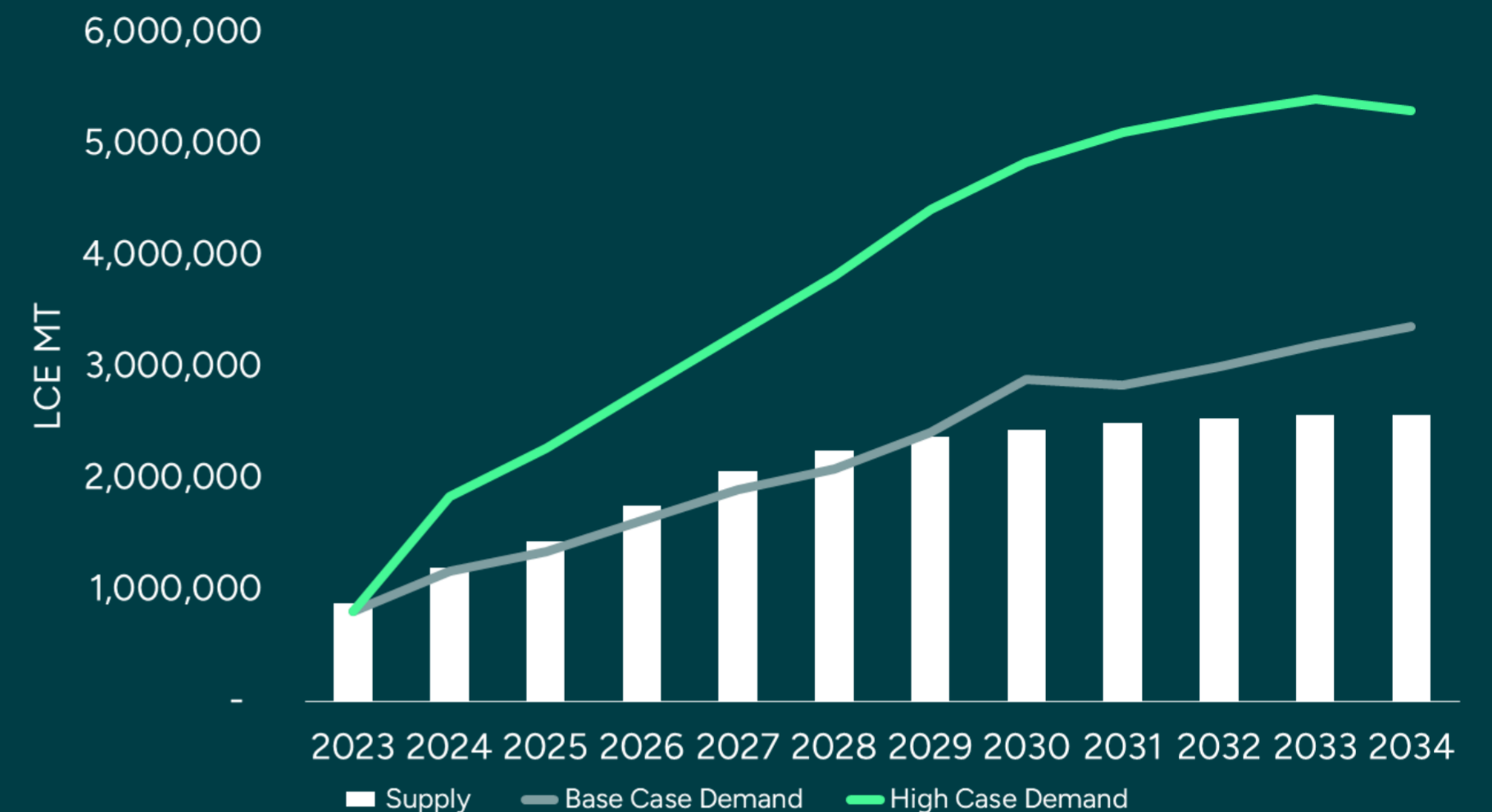
Future Demand Projections:

- Global lithium demand is expected to grow 3.5x by 2030 and 6.5x by 2034 from 2023 levels.

Supply Constraints:

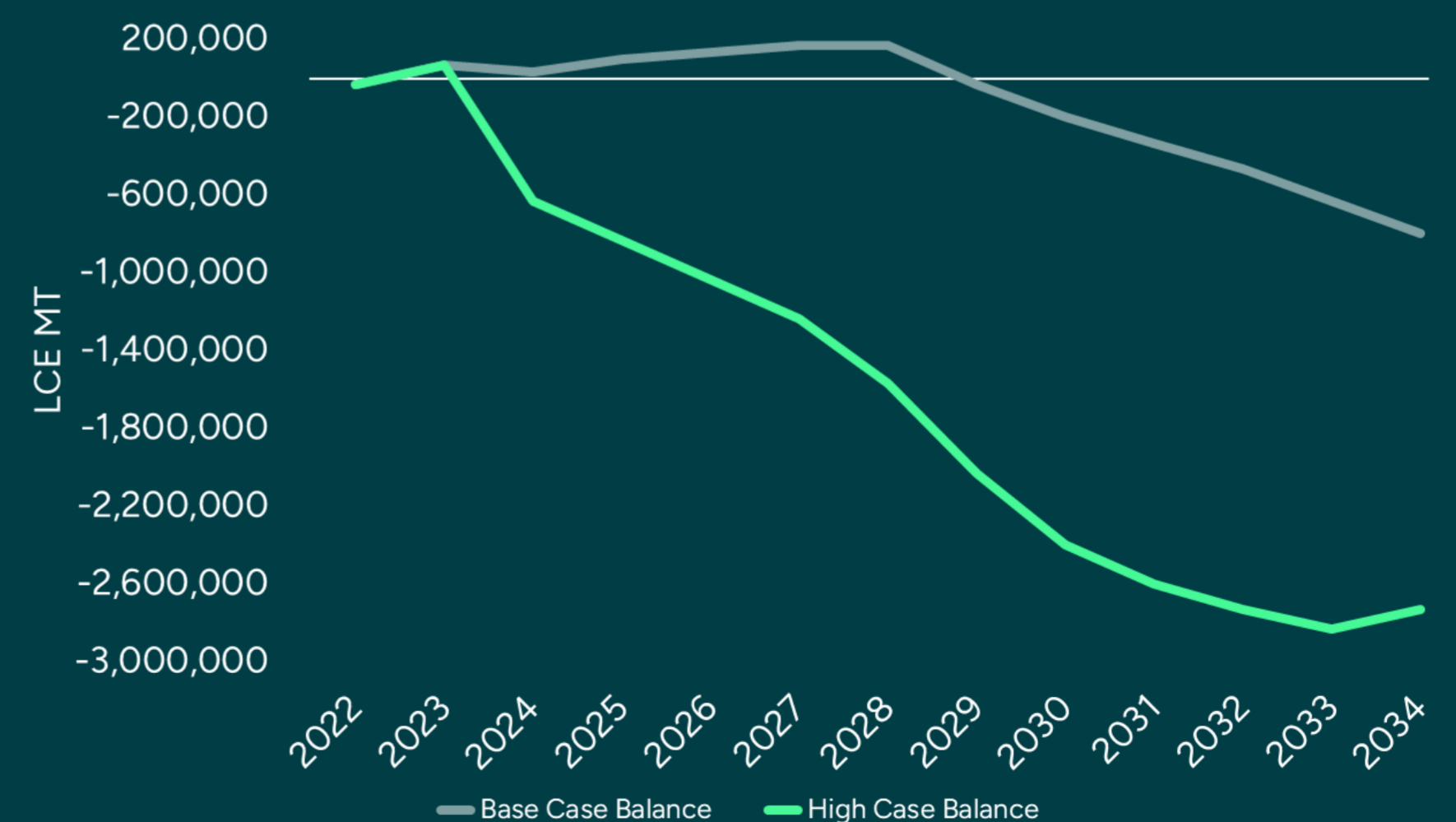
- By 2029, demand is expected to outstrip supply – or even sooner.
- The race to secure lithium intensifies as countries focus on energy security and reducing reliance on foreign supply chains.
- Cuts/delays in lithium projects and geopolitical risks further threaten supply stability.

Lithium Supply-Demand Forecast

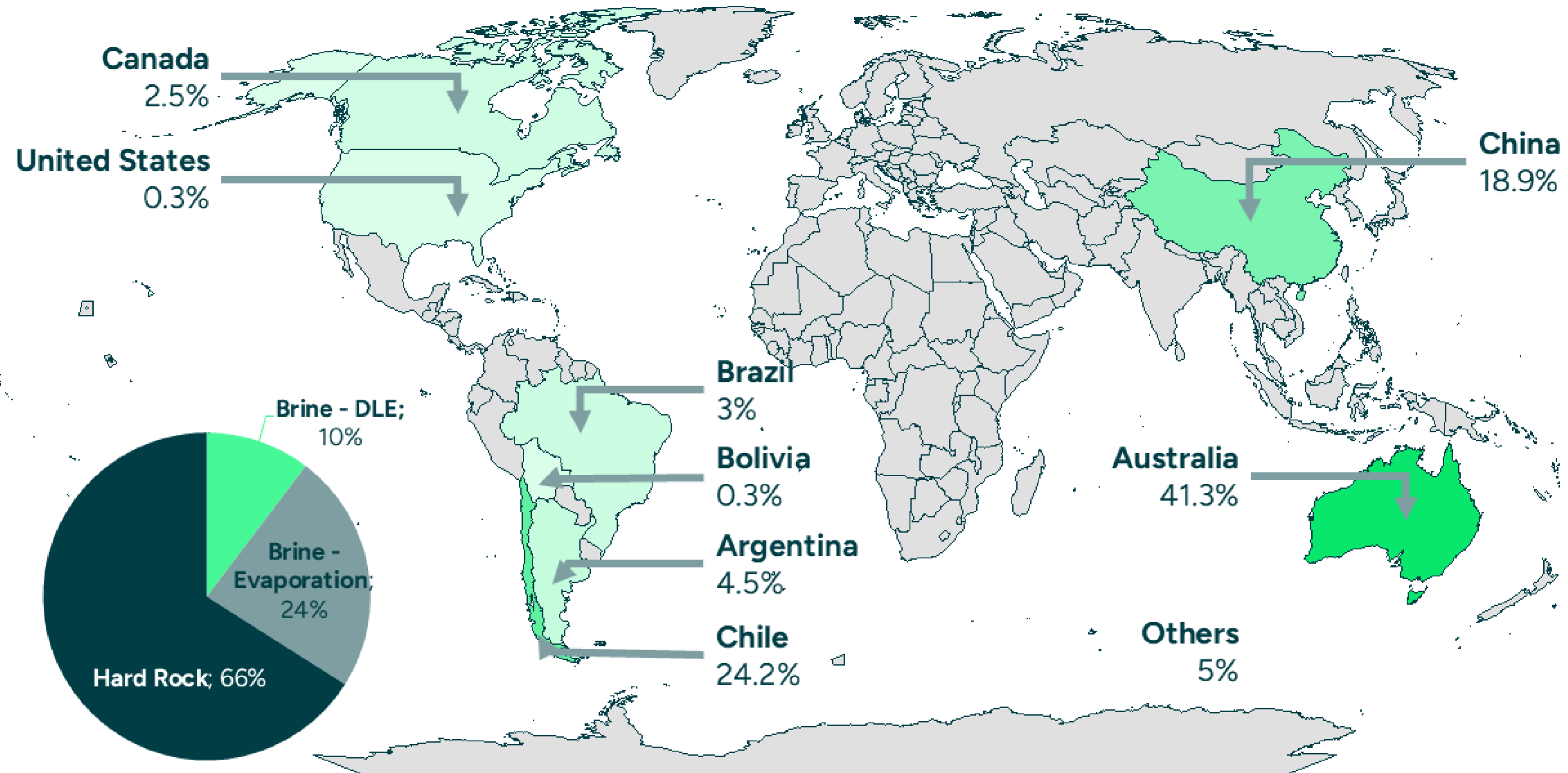


Lithium demand is expected to grow 3.5x by 2030 and 6.5x by 2034.

Lithium Impending Supply-Demand Balance



Lithium Production Concentration



Main Growth Drivers

Lithium drives key technologies powering the green energy shift:

- **Critical Mineral:** Lithium is essential for batteries, which are driving the shift to low-emission transportation. It is recognized as critical to achieving clean energy goals in the world.
- **Energy Storage Systems:** Lithium-ion batteries are essential for storing renewable energy, ensuring grid stability as renewable energy adoption rises globally.
- **Government Policies & Incentives:** Policies like the U.S. Inflation Reduction Act and the European Critical Raw Material Act are accelerating demand through EVs, battery production, and clean energy infrastructure incentives.
- **National Energy Security:** Countries are racing to secure domestic lithium supplies to reduce reliance on foreign processing, investing in mining and recycling to ensure energy independence.

Strategic Importance for Energy Transition

Lithium is crucial for a sustainable future:

- **Foundation of Decarbonization:** Lithium is essential for decarbonization, powering EV batteries and renewable energy storage. It's classified as a critical mineral by governments for meeting climate goals.
- **Government Policies & Incentives:** Policies like the U.S. Inflation Reduction Act and the European Critical Raw Material Act incentivize sustainable lithium sourcing to accelerate the transition to clean energy and achieve net-zero emissions targets.
- **Sustainability Considerations:** As countries commit to net-zero targets, lithium is crucial for powering EVs, renewable energy, and industrial decarbonization. Sustainable extraction technologies, like Lithium Harvest's, are key to reducing environmental impact while meeting the growing demand.

Technology Benchmark



Lithium Harvest Solution



DLE from Brine



Solar Evaporation Brine Extraction



Hard Rock Mining

Feedstock	Geothermal brine	Continental brine	Continental brine	Rock / spodumene
Project implementation time	12-15 months	5-7 years	13-15 years	8-10 years
Lithium carbonate production time	2 hours	2 hours	2-3 years	3-6 months
Lithium yield	>95%	80-95%	20-40%	6-7%
Average footprint per 1,000 mt LCE	1.4 acres	1.4 acres	65 acres	115 acres
System design	Modular and mobile	Mobile / stationary	Stationary	Stationary
Environmental impact	Minimal	Minimal	Soil- and water contamination	Soil- and water contamination
Water consumption per 1,000 mt LCE	20 million gallons	80 million gallons	550 million gallons	250 million gallons
CO ₂ footprint per 1,000 mt LCE	Neutral	1.5 million kg	5 million kg	15 million kg

Source: Columbia University, IEA, ICMM.

Opportunities for the Geothermal Industry

The lithium market presents a unique opportunity for geothermal operators to diversify and enhance long-term profitability:

- Diversification Strategies:** Expanding into the lithium market allows you to maximize the value of your existing infrastructure. As demand for critical minerals surges, leveraging geothermal brines for lithium extraction opens new revenue streams while reinforcing geothermal energy's role in the green energy transition.
- Competitive Advantage:** Your geothermal infrastructure is already in place. By integrating lithium extraction, you can efficiently produce battery-grade lithium with minimal additional investment. As an early mover in this space, you gain a strategic advantage, securing a leadership position in the evolving sustainable lithium market while strengthening your geothermal operations.

Join Lithium Harvest: Surge Ahead in the Lithium Market

Partnering with Lithium Harvest allows you to lead in the booming lithium market. Our innovative extraction process is one of the fastest, most sustainable, and cost-effective solutions in the market. By leveraging your existing infrastructure, you can quickly integrate lithium extraction, minimizing costs and unlocking new revenue streams.

As our partner, you will gain a competitive edge, positioning your company at the forefront of the green energy revolution. With our solution, you can enter the lithium market faster and secure a profitable foothold in this rapidly expanding sector.

Unleash the power of lithium



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