

# Growth with geothermal lithium



# Unlocking new markets

# **Executive Summary**

The booming lithium market presents a new opportunity for geothermal operators. At Lithium Harvest, we transform geothermal brines into a valuable revenue stream, seamlessly integrating lithium extraction with existing infrastructure.

Our scalable, cost-effective solution enables diversified income, greater asset value, and market entry with minimal investment. Early adopters will secure a first-mover advantage, supplying sustainable lithium to the fast-growing EV and battery sectors while strengthening profitability and leadership.

## Market Expansion & Growth Potential

Geothermal lithium extraction unlocks high-growth markets, including EVs, battery storage, and renewable energy. With lithium demand expected to grow 3.5x by 2030, the need for sustainable domestic supply is rising. You have a unique opportunity to diversify revenue streams, capitalize on government incentives, and enter the critical minerals market with minimal risk.

# Leverage Existing Infrastructure for Maximum Value

Lithium Harvest's extraction solution seamlessly integrates with geothermal plants, enabling lithium production without disrupting energy generation. By co-locating extraction facilities, we minimize logistical challenges, reduce costs, and eliminate the need for extensive modifications.

- Strategic Co-location: On-site extraction and refining streamline operations, enhance efficiency, and lower environmental impact.
- Scalable & Modular: Our solution adapts to geothermal plants of any size, handling diverse brine chemistries and lithium concentrations.
- Seamless Integration: Minimal modifications are required. Our solution operates alongside existing geothermal infrastructure without disruption.

With a fast-to-market, sustainable solution, we can turn brine into a high-value resource and secure a leadership position in the future lithium supply chain.

# A Booming Lithium Market 6,000,000 5,000,000 4,000,000 3,000,000 2,000,000 1,000,000 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 ■ Supply ■ Base Case Demand ■ High Case Demand

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

A Win-Win Strategy for the Energy Industry

**Advantages for Geothermal Operators** 



#### **Brine to Profit**

into a lucrative asset



### High Recovery & Scalability

and scales seamlessly





# One of the World's Most

Setting new global sustainability standards



**Advantages for the Battery Value Chain** 

#### **Competitive Pricing**

The lowest cost of any lithiu mining technology in the market



#### **Fast Deployment & Returns**

A fast track to tap into the booming lithium market



#### Hassle-Free Operation

We are operating the lithium extraction plant



#### **Fastet to Market**

Rapidly converts oilfield wastewater into lithium compounds



#### **Rapid & Scalable Production**

Rapid market delivery and adaptability to meet increasing demands

# **Technology Benchmark**



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**DLE from Brine** 



Solar Evaporation
Brine Extraction



**Hard Rock Mining** 

			Brine Extraction	
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
CO₂ footprint per 1,000 mt LCE	Neutral	1.5 million kg	5 million kg	15 million kg
Average invested capital per 1,000 mt LCE	\$18 million	\$45 million	\$50 million	\$60 million
Average cost per metric ton	\$4,550	\$5,700	\$5,800	\$6,900

Source: Columbia University, IEA, ICMM.

# Our Innovation Surges Ahead of Competitors

At Lithium Harvest, our lithium extraction solution outpaces traditional methods and competing solutions by delivering one of the most cost-efficient and sustainable lithium extraction processes available today. Here is how we surge ahead:

■ Unmatched Cost-Efficiency: Unlike traditional mining or evaporation ponds, which are capital and resource-intensive, our solution offers a low-cost approach by transforming geothermal brine into valuable lithium compounds using existing infrastructure. With CapEx up to 70% lower and OpEx up to 35% lower than traditional mining methods, we significantly reduce operating expenses and eliminate the need for large-scale infrastructure investments, giving us a clear cost advantage over competitors.

- One of the Most Sustainable Lithium Solutions: Our process significantly reduces the environmental footprint of lithium extraction by minimizing water usage and carbon footprint. Using geothermal brine from energy production, we turn a byproduct into one of the most sustainable lithium sources on the market, aligning with the highest ESG standards.
- Fastest to Market: Our solution accelerates lithium production timelines, enabling us to bring lithium compounds to market faster than traditional mining methods. Energy companies can quickly capitalize on new revenue streams with shorter project development cycles.

By offering a cost-effective, environmentally responsible, and fast-to-market solution, Lithium Harvest ensures thatyou can stay ahead of the curve, meeting the demand for sustainable lithium while maximizing profitability.

#### Who We Are

At Lithium Harvest, we lead the charge in sustainable lithium extraction, supplying high-performance lithium compounds to the rapidly expanding electric vehicle (EV) and battery markets. As a pure-play lithium company, we are committed to delivering fast-to-market, environmentally responsible products that meet the growing global demand.

Using advanced extraction technology and a closed-loop process, we efficiently recover lithium from geothermal brine - unlocking its full resource potential while maintaining sustainable operations. Our process allows us to produce lithium compounds quickly, cost-effectively, and with minimal environmental impact. This innovative approach enables us to produce one of the world's most sustainable lithium, accelerating the green energy transition.

#### Unlock the Full Potential of Your Geothermal Brine

Partnering with Lithium Harvest means leveraging our proven expertise to turn your geothermal brine into a valuable resource, positioning your company as a leader in the green energy transition.

- Proven Expertise in Resource Management: With 20+ years in industrial wastewater treatment, Lithium Harvest delivers tailored solutions for efficient lithium extraction, ensuring maximum recovery while minimizing OpEx and CapEx.
- Sustainable & Profitable: Our approach balances sustainability with profitability, helping you meet ESG goals while unlocking new revenue streams.
- Turnkey, Hassle-Free Solution: Our Design-Build-Own-Operate (DBOO) model handles everything from design to operation, ensuring a seamless, risk-free experience.
- Local Impact & Energy Security: Onsite lithium extraction creates local jobs, supports domestic supply chains, and enhances energy security.
- Future-Proof Partnership: Surging lithium demand makes geothermal extraction a long-term growth opportunity in the clean energy transition. Partnering with Lithium Harvest places you at the forefront of this expansion with sustainable, carbon-neutral extraction.
- Gain a Competitive Edge: Enter the lithium market faster with a cost-effective, sustainable extraction solution designed for scalability and rapid deployment.
- Low-Risk, High-Reward Expansion: Fast-track market entry with minimal operational risk, allowing you to focus on energy production while capitalizing on the lithium boom.

## Planned Projects to Elevate U.S. Lithium Output

	Facility Details – ND 1	Facility Details – ND 2
Location	North Dakota	North Dakota
Initial Capacity	400 mt	600 mt
Maximum Capacity	1,300 mt	1,500 mt
Footprint	41,000 sq ft	62,000 sq ft
Construction Start	H2/2024	H2/2024
Expected Production Start	H2/2025	H2/2025

- Co-Located Facilities: Our lithium extraction facilities are co-located with the oilfield brine collection facilities. On-site lithium extraction and refining optimize operational efficiency and minimize environmental impact.
- Carbon Neutral Commitment: We are dedicated to carbon neutrality and significantly reducing our environmental footprint through innovative practices.
- Pioneering Technology: Our facilities will be the world's first large-scale facilities to produce lithium from oilfield brine utilizing our patented lithium extraction solution.

# **Profit-Boosting Business Scenarios**

Explore tailored setups with Lithium Harvest's turnkey lithium extraction from geothermal brine solution - where we operate, you profit, and lead in environmental stewardship. We invite you to meet with our team to explore business cases customized to your infrastructure, aligning with your corporate growth strategy.

Together, we can introduce new revenue streams and build a strong business case for joint success in this emerging market.

	Joint Ventures for Shared Success	Royalty-Based Revenue Streams
Benefits	Co-develop a lithium extraction facility with Lithium Harvest and share in the profits while establishing your leadership in sustainable innovation.	Earn consistent royalties by licensing your geothermal water for lithium extraction, enhancing your ESG profile, and supporting resource sustainability.

# Drive growth with lithium extraction



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