

FutureBridge

What is?

Geothermal Brine: A Game-Changer for Lithium Supply Chains?

Traditional mineral processing wastes over 60% of ore, incurs high operational costs, and is energy-intensive, driving greenhouse gas emissions.

Geothermal Brine Extraction: A process that uses hot water and mineral-rich brine from geothermal systems to sustainably extract metals with minimal environmental impact.

Geothermal brines contain significant concentrations of lithium, particularly in regions such as the Salton Sea in California (US), which is estimated to hold 600,000 metric tons reserves of lithium

Traditional metal extraction process have

40%

metal recovery rate with significant ore wastage

Mineral extraction and processing contributes

~10%

global greenhouse gas emissions

Metal recovery rate from geothermal mining is as high as

70%

from lithium ores

US Department of Energy (DOE) awarded

US\$10.9

Mn

to support 10 geothermal brine extraction projects

What if?

From Mines to Geothermal: A Sustainable Lithium Extraction Path

With a 70% metal recovery rate, geothermal brine extraction could globally boost lithium production, with US output projected to hit 60,000 tons by 2030. Geothermal Lithium Corporation is working on innovative methods to improve the efficiency and cost-effectiveness of the lithium extraction process through geothermal brine extraction.

Adoption Expands...

The US Department of Energy (DOE) awarded US\$10.9 million to support 10 projects aimed at extracting and processing battery-grade lithium from geothermal brine sources within the United States.

What now?

The BIG questions

If the turnover of copper sourced from the biomining potentially reaches US\$ 20 Bn by 2035, then...

- ❖ How will the metal processing landscape change due to geothermal brine extraction? What would be impact on existing mineral processing players?
- ❖ Which countries and regions will move fast with developing necessary ecosystem for technology and players to drive this transformation?
- ❖ How regulatory compliances will impact the growth prospects of large-scale geothermal brine extraction?

Geothermal brine extraction has the potential to process an additional

6Mn tons

lithium by 2035

By 2035, it has the potential to

meet **4%**

of global lithium demand

About FutureBridge

FutureBridge is a techno-commercial consulting and advisory company. We track and advise on the future of industries from a 1-to-25-year perspective to keep you ahead of the technology curve, propel your growth, identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.