

Lithium producers unable to meet near-term demand

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Market Intelligence



A worker walks beside a warehouse at Arcadia Lithium mine in Zimbabwe. After coming up short about 8,000 tonnes of lithium carbonate equivalent in 2021, the world could face a lithium deficit of 9,000 tonnes of LCE in 2022.

Source: Tafadzwa Ufumeli/Getty Images News via Getty Images

Miners will struggle to meet the soaring demand for lithium, suggesting that high prices and short supplies are here to stay.

Producers of the white metal are enjoying boom times as prices soar amid the global energy transition to net-zero emissions, a shift that will depend on lithium-rich rechargeable batteries. But miners and analysts say delays or denials of key environmental permits, high costs for equipment, and supply chain bottlenecks are slowing or halting mine expansions, limiting producers' ability to keep up with demand.

The price for battery-grade lithium carbonate domestically traded or sold in China reached \$44,500 per tonne on Feb. 28, a 345% increase year over year, according to Benchmark Mineral Intelligence, a price reporting agency specializing in battery metals. Without more supply, automakers and electric grid builders could face battery shortages.

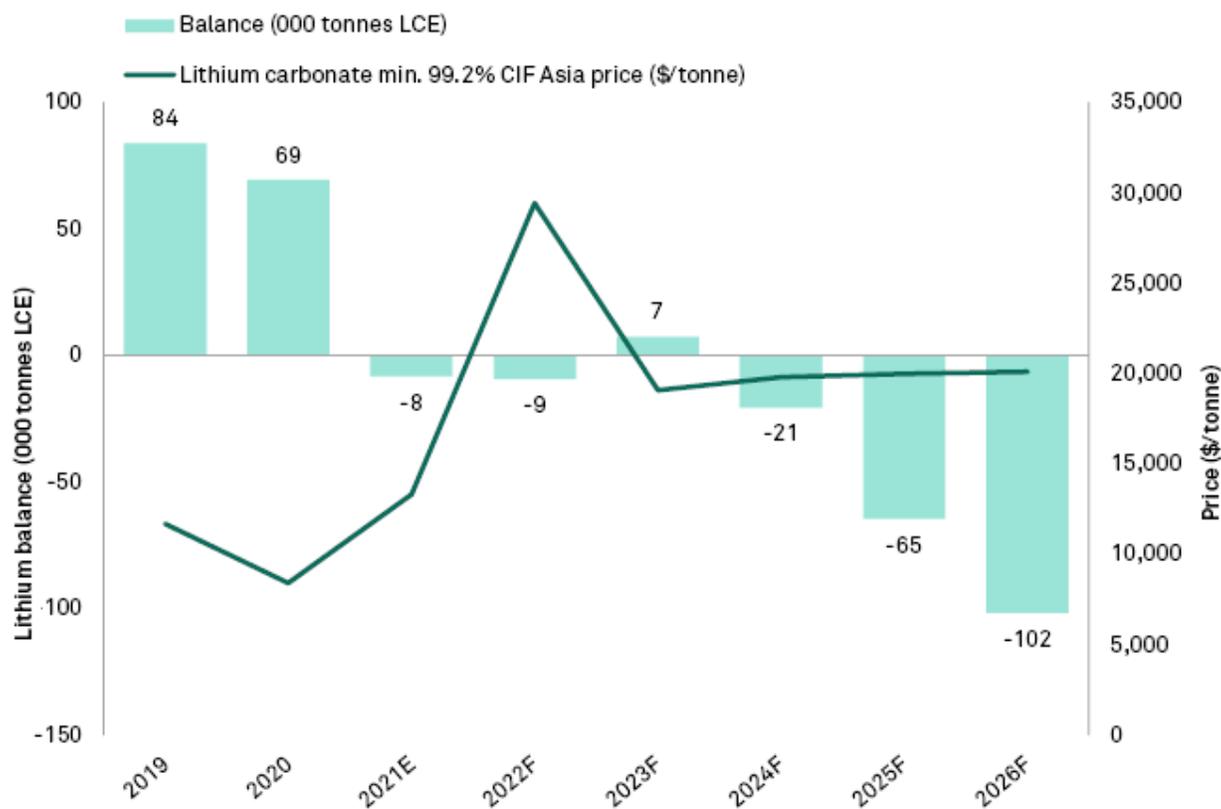
Lithium demand outpaced supply by 8,000 tonnes of lithium carbonate equivalent in 2021, and the gap is expected to

grow to 9,000 tonnes in 2022, according to forecasts by S&P Global Commodity Insights. Customer demand will rise at such a rapid pace that the supply shortfall could balloon to 102,000 tonnes LCE by 2026, even with hundreds of thousands more tonnes of lithium entering the market by middecade.

"We need to see significant new additions and new mines coming into production to meet this demand," said Siddharth Rajeev, equity analyst at Fundamental Research Corp., an investment analysis firm researching lithium, among other metals.

"Meeting this [lithium] demand will be a challenge," Kent Masters, chairman, president and CEO of U.S. lithium giant Albemarle Corp., said during a Feb. 17 earnings call. "When you look at ... the auto industry's ambitions for a rapid transition to [electric vehicles], it's easy to see why demand expectations are so bullish."

Lithium demand forecast to outpace supply in 2022



Data compiled Feb. 23, 2022.
 e = estimate; f = forecast
 LCE = lithium carbonate equivalent
 Acknowledgement: historical lithium carbonate prices refer to Benchmark Mineral Intelligence's assessments.
 Sources: S&P Global Market Intelligence; Benchmark Mineral Intelligence

Strong commodity prices alongside healthy upstream investment and growing demand can help nudge new lithium projects forward, but bringing new mines online does not happen overnight, company executives said.

"[E]xpansion projects are complex," Livent Corp. President, CEO and director Paul Graves said during a Feb. 17 earnings call. "They are both time and capital intensive, and they almost always have unique local challenges that require a great deal of sensitivity to overcome. Given these practical realities, it is very difficult to forecast a sustained period of oversupply over the next few years."

Seven new lithium projects and the restart of two existing lithium assets are expected to add 355,000 tonnes LCE to the market by the end of 2023, according to a Jan. 18 report by Commodity Insights. Yet even if all expected lithium capacity comes online without a hitch, it could still fall short of the demand expected this decade, industry analysts and company

executives said.

Albemarle boosted its lithium demand outlook up 30% in February and expects demand to reach over 3 million tonnes by 2030. The lithium developer is working to bring 200,000 tonnes to market by the first half of 2025 through expansions and new projects in Chile, Australia and China.

Eric Norris, Albemarle's president of lithium, said the sprint to catch up with lithium demand would still be "a hard run" for producers.

"It's going to take everybody, ourselves and our competition being successful at hitting their milestones in order [to] meet that supply," Norris said. "It's an all-out effort to get there. I don't want to sugarcoat it."

Philadelphia-headquartered Livent has multiple lithium expansion projects underway, including in North Carolina and Argentina. It expects to reach a total annual lithium carbonate capacity of 60,000 tonnes, in addition to 9,000 tonnes of lithium chloride capacity, by 2025 through its operations in Argentina. Livent's expansion efforts remain on schedule, but industrywide the picture is different, Graves said, as several projects face slowdowns and fiscal challenges.

"We continue to see both delays and cost increases," Graves said of the overall lithium industry. "Part of this can be attributed to inflationary pressure and tightening markets, but there are also some factors such as environmental challenges or the local opposition that are creating delays and even some high-profile cancellations."

Local opposition factored into Serbia's decision in January to revoke permits for Rio Tinto Group's lithium project, which effectively eliminated almost one-third of future European lithium production and dealt a heavy blow to the continent's battery-makers and EV manufacturers.

Chilean lithium company Sociedad Química y Minera de Chile SA, or SQM, has expansion plans of its own in Chile and Australia, though company executives said new projects face growing inflationary pressures and market uncertainties.

"We don't know really what's going to happen next year or next two years," SQM CEO Ricardo Ramos Rodríguez said during a March 3 earnings call, "But of course, we are doing our best to increase our capacity."

Vancouver, British Columbia-based Lithium Americas Corp. expects to commission its 44.8%-owned Cauchari-Olaroz lithium joint venture with Ganfeng Lithium Co. Ltd. in Argentina within the year. The project, which took over a decade to develop, would be the largest new brine project to come online in 2022.

But the company's lengthy development timeline of its wholly owned Thacker Pass lithium project in Nevada demonstrated the challenges facing miners. Exploration launched in 2007, and the company finally secured three key state permits Feb. 25.

"With the final key state environmental permits in hand, Lithium Americas can begin to advance Thacker Pass towards construction," Lithium Americas President and CEO Jonathan Evans said in a Feb. 25 statement. "Our commitment to developing Thacker Pass in the most environmentally responsible way is demonstrated from over a decade of conducting the necessary planning, design and engagement."

The federal government issued a record of decision for Thacker Pass in January 2021, but the decision was met with legal challenges. The company expects a final decision on its federal permits by the third quarter.

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