ON COMMODITIES

Lithium prices have been crashing - here's what's happening

BRIAN DONOVAN

SPECIAL TO THE GLOBE AND MAIL

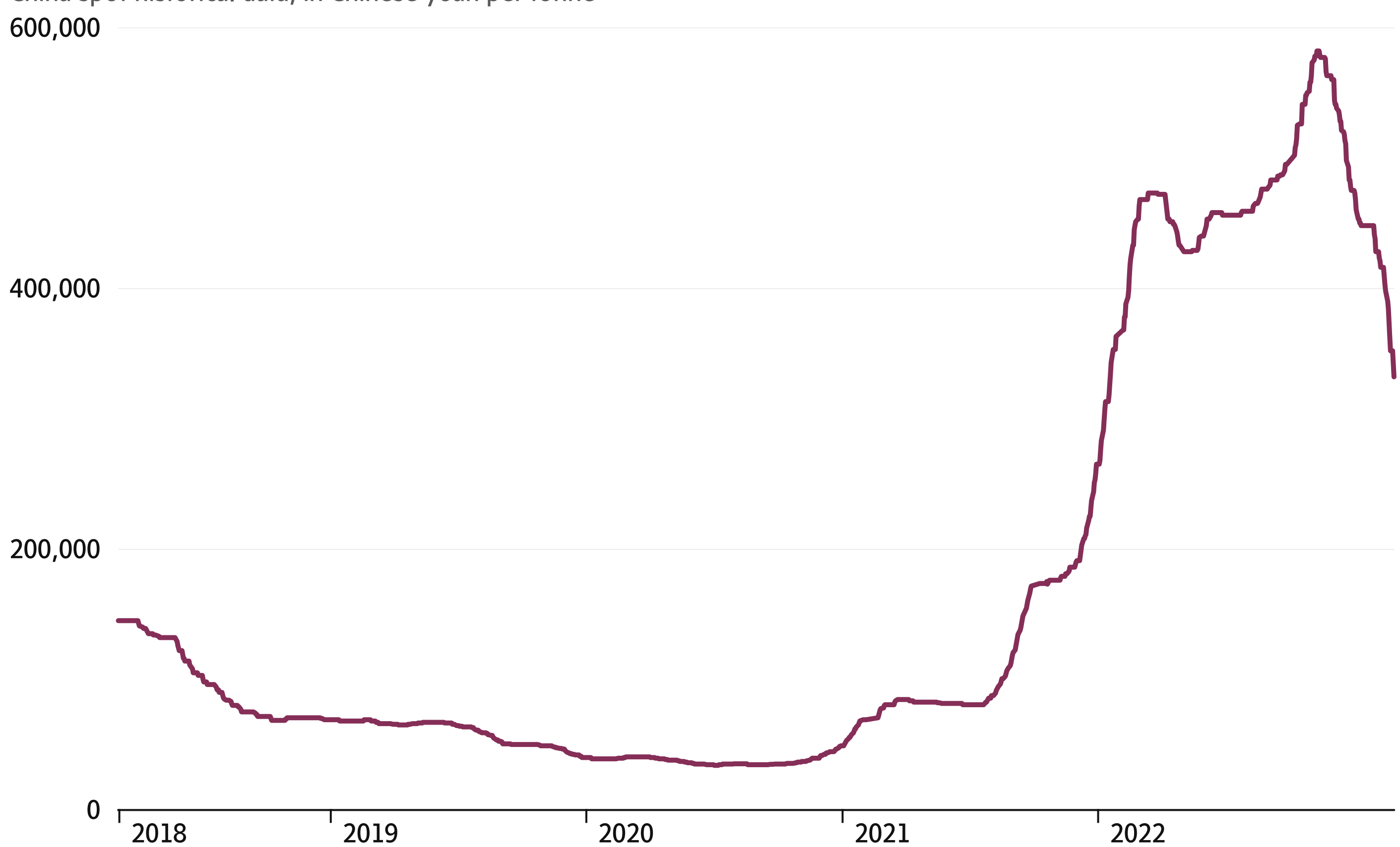
PUBLISHED MARCH 7, 2023

The price of lithium carbonate rose fifteen fold from November, 2020, to November, 2022, but prices have since fallen by more than 40 per cent. Let's dig deeper to see what is happening with this commodity.

Pricing:

Lithium carbonate

China spot historical data, in Chinese yuan per tonne



THE GLOBE AND MAIL, SOURCE: INVESTING.COM

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Supply:

The top five lithium-producing countries (2021 data) are Australia (52 per cent), Chile (25 per cent), China (13 per cent) Argentina (6 per cent) and Brazil (1 per cent). Lithium in Chile and Argentina is extracted from brine, whereas in Australia and Canada, it is mined from the mineral spodumene, which contains up to 8-per-cent Li2O (Lithium oxide). China is heavily involved in the lithium supply chain, having both domestic and international mines as well as 60 per cent of the world's lithium refining capacity for batteries.

Global supply has been ramping up and is expected to nearly double by 2025 from 2022 levels. Longer term, given it takes many more years to permit and commission a mine than start an electric-vehicle factory, a supply deficit is projected to grow.

For a local perspective, the James Bay Lithium Mine Project was approved in January by the federal government. The feasibility study shows production is estimated at 321 metric tonnes of spodumene concentrate per year with a 5.6-per-cent Li2O concentration. Canada has an estimated 2.5 per cent of the world's know lithium deposits.

Demand:

In 2022, 10.5 million battery and hybrid electric vehicles were sold globally, a 55-per-cent increase over 2021 (growth in Europe was 15 per cent, North America 48 per cent, China 82 per cent). According to statista.com, global growth of EV's is projected to continue at an average annual rate of 17 per cent out to 2027, but the World Economic Forum sees demand for lithium up 2.5 times by 2025 and doubling again by 2030. Chinese demand is critical to which of these plays out.

A number of mostly Chinese related actions have resulted in the price of lithium dropping in the last four months. In January, the Chinese government halted subsidies for buyers of electric vehicles. Knowing the subsidies were coming to an end, battery production in the fall of 2022 was high leading to a current oversupply.

CATL (Contemporary Amperex Technology Co. Limited), the world's largest battery manufacturer, started offering discounts to automakers to lock them in as customers. The discounts are predicated on the expectation of dropping lithium carbonate prices and require those customers (including Li Auto, Huawei, Geely and NIO) to lock in the majority of their supply from CATL. Tesla is also a CATL customer, but it does not appear that CATL has offered Tesla the discounts.

Automakers Integrating Supply Chains:

One of the factors further impacting the price of lithium is that automakers are looking to secure their own lithium sources or refining capacity. As reported in The Globe and Mail in January, General Motors, pending approval, is investing in Lithium Americas's Thacker Pass mine in Nevada. Also, Tesla announced Wednesday its plans to develop 50 gigawatt hours of domestic lithium refining capacity at its Corpus Christi refinery, and NIO announced their decision to build a 40 GWh battery factory in China.

Summary:

With the supply of lithium carbonate projected to double over the next three years (26 per cent annual growth) and demand for EV's to grow at a projected 17-per-cent annual rate, we would expect lithium prices to remain at or below current levels out to 2025. Beyond 2025, global growth in demand for EVs coupled with the time required to bring new mine supply online will lead to significant deficits of lithium.

Brian Donovan, CBV, is the president of StockCalc, a Canadian fintech based in Miramichi, N.B.