Molten Metals Aims to Meet the Rising Demand for Antimony in Energy Storage

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Supply chain disruptions and geopolitical concerns caused Western governments to re-examine the source of critical metals that will drive the economic engine for decades to come.

Media attention seems focused on the battery metals required for electric vehicles (“EVs”), including lithium, cobalt, graphite, and rare earths, but antimony was one of the few metals that is on all of the critical metals lists across Australia, Canada, China, the EU, Japan, and the USA.

The importance of antimony

Currently, Antimony is primarily used as a flame retardant in items such as paints, plastics, and textiles. It is also used in brake pads, ceramics, glass for televisions and monitors, and rubber. When alloyed with lead, it is found in metal products used in ammunition and lead-acid batteries.

As we strive towards transitioning to a carbon-free society, it is essential not only to harness renewable energy but also to store it efficiently. The future increase in demand for antimony lies in its potential to become a crucial component in battery technology.

Antimony’s unique property as a heat retardant is essential in preventing thermal runaway in batteries, making it a crucial element in the development of effective energy storage systems. Its heat retardant properties enable the mass scalability of

batteries, making it the only metal capable of achieving this goal.

Antimony molten salt batteries

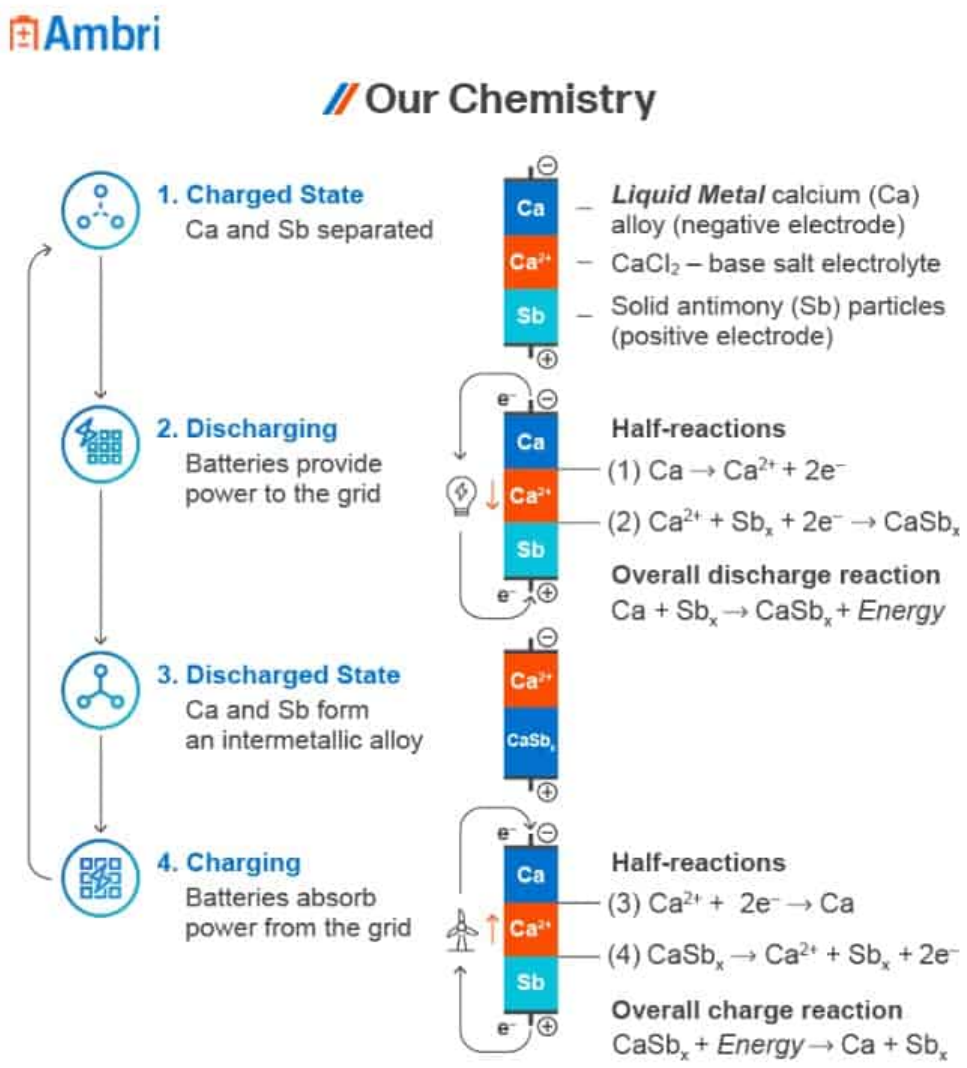
Ambri Incorporated, a US-based energy storage company, has developed a long-duration liquid metal battery technology for the power grid with backing from prominent investors, including Bill Gates, Khosla Ventures, and SoftBank Group, and funding from the US Department of Energy.

Ambri's battery technology uses solid antimony as the positive electrode, liquid metal calcium as the negative electrode, and a salt electrolyte consisting of calcium and chloride. The use of these metals allows for a reliable, low-cost, long-lasting, and safe energy storage solution that can enable the integration of renewable energy sources into the electric grid.

As Ambri continues with its commercialization efforts, it is estimated that its forward contract sales will require over 25% of the global production of antimony outside of China by 2026.

However, the current supply lacks the necessary capacity to fulfill this demand, leading to an imbalance in the supply-demand equation. This highlights the urgent need for investment in new antimony mines and refining ("roaster") facilities.

FIGURE 1: Ambri's Molten Salt Battery Chemistry



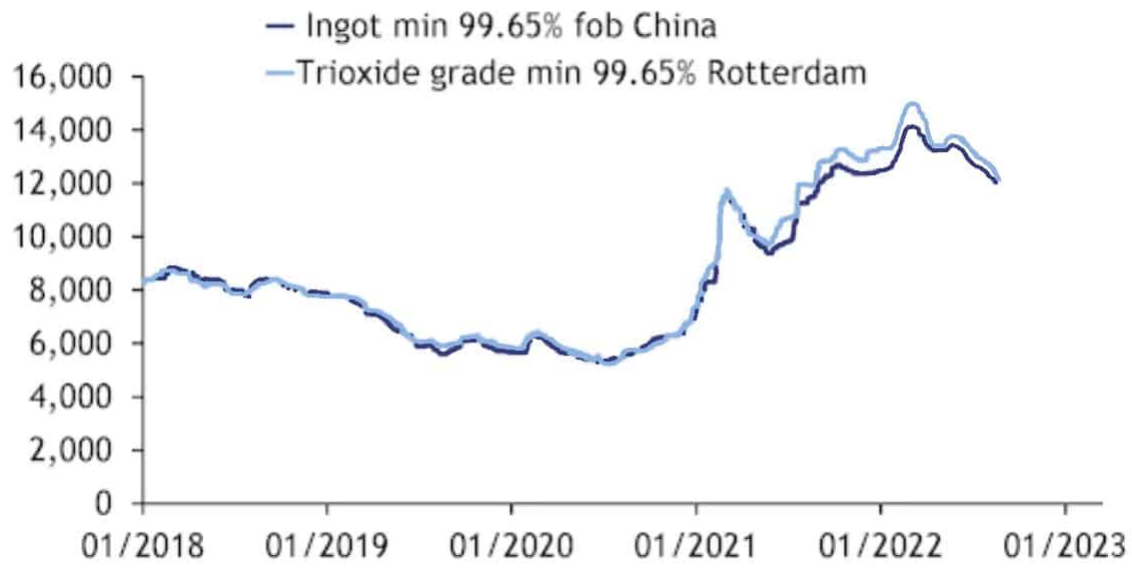
Source: [Ambri's website]

Lack of supply and increasing demand drives the price higher

Currently, the global supply of antimony is heavily reliant on China, Russia, and Tajikistan, which produced over 88% of the world's supply in 2022, according to the [US Geological Survey] ("USGS").

Antimony prices have surged this year to a record high, currently trading at US$13,000 per tonne, more than double the US$5,500 per tonne rate in 2019.

FIGURE 2: Antimony Market Prices (US$/tonne)



Source: Argus Media

Newly Listed Molten Metals Corp.

Listed in August 2022, Molten Metals Corp. (CSE: MOLT| FSE: Y44) is a Canadian mineral exploration company and one of the few companies actively developing antimony assets in North America and Europe, reducing the foreign dependence on this resource.

The Company has four properties, which include a former antimony mine in Nova Scotia, Canada and it has two antimony-gold projects and one tin project in Slovakia. All of the Slovakian projects are brownfield sites, either past-producing mines or previously explored.

In Nova Scotia, Molten Metals' West Gore project is home to one of Canada's foremost historic antimony mines, which has been abandoned since the 1960s. The Company is currently testing the remaining stockpiles and tailings at the site, in an effort to extract valuable antimony and revive the mine.

According to the Company's website, these stockpiles could

contain up to 570 tonnes of antimony and 2,500 ounces of gold, worth approximately US$7.4 million and US$5.0 million at today's price, respectively. These estimates were taken from a report released by George Packard in 1949 using a survey undertaken by Nova Scotia's Department of Mines.

The Company is also focusing on the past-producing Trojarova project in Slovakia with a well-preserved mining infrastructure and a historic resource calculation, which, if correct, would make it one of the world's largest unmined antimony projects globally.

Upcoming exploration plans include confirmation sampling and drill hole twinning to complete a NI 43-101 initial resource to validate the historical resource. Molten Metals could have one of the largest antimony resources globally if it can confirm the historical resources that were calculated in the 1980s and 1990s when Slovakia was part of the Soviet Union.

Offtake agreements and future capital

Molten Metals recently announced that it executed a non-binding Memorandum of Understanding ("MOU") for a long-term antimony supply agreement with Swedish company Scandinavian Steel AB.

The agreement will be subject to a specific financial investment into the development of one or more of Molten Metals' projects and a provision to upgrade the MOU to a binding offtake agreement within a reasonable time frame.

Final thoughts

Molten Metals (CSE: MOLT| FSE: Y44) has a strong focus on antimony, which is increasingly in demand due to its use in batteries. In the short term, the Company plans to process the remaining stockpiles of tailings at its Nova Scotia project and

advanced its mines in Europe. The company has two antimony-gold projects and one tin project in Slovakia that could provide a near-term, large resource and additional upside.

With a market cap of only C$1.9 million and a tight share structure of only 16.9 million shares outstanding, if you have confidence in the antimony theme, it should be a stock to watch.