

CharacterTowns.org continues to be interested in the sources and uses of materials necessary for the transition to clean energy. Three articles follow that discuss the vagaries of Lithium.

First From...The South China Morning Post.

The China lithium question: a clash of the West's corporate and strategic interests

Sun, February 13, 2022, 4:30 AM·7 min read

The deal went through swiftly - and almost immediately prompted calls for a national security review.

Just three months after Chinese-state-owned Zijin Mining Group announced its US\$960 million plans to buy Canadian miner Neo Lithium, the proposal was signed, screened and delivered.

At a corporate level, the deal made sense. Neo Lithium's biggest mine operation is in Argentina, where Zijin already has interests and plans to build a lithium carbonate plant. Canadian officials also said carmakers in North America were unlikely to use lithium produced so far away.

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But [lithium is an essential mineral](#) and the speed of the deal raised calls from lawmakers and security experts in Canada that such agreements with Chinese companies should be subjected to more thorough review.

The backlash highlights growing concerns in the West over China's control of supply chains for strategic minerals as well as a divide between national interests and corporate priorities.

That divide is particularly apparent in Africa, where the mining sector was previously dominated by European and American firms but has slowly given way to Chinese companies, including Huayou Cobalt, Chengtun Mining, and China Molybdenum.

One example is in the Democratic Republic of the Congo, home to 60 per cent of the world's reserves of cobalt, an essential component of batteries for [electric vehicles](#), smartphones, tablets and laptops.

American company Freeport-McMoRan used to have extensive interests in the DRC but has since sold its stakes to China Molybdenum. It started in 2016 when China Molybdenum bought [Tenke-Fungurume Mining](#), owner of the world's second-largest cobalt mine, from Freeport-McMoRan. Then in 2020, the Chinese company bought Freeport-McMoRan's indirect [95 per cent interest in the Kisanfu copper-cobalt deposit](#) for US\$550 million.

LINK: <https://finance.yahoo.com/news/china-lithium-clash-wests-corporate-093000246.html>

Second From... The Wall Street Journal.

[BUSINESS](#)

Where is there more lithium to power cars and Phones? Beneath a California Lake.

By

Alistair MacDonald

and

Jim Carlton

/ Photographs by John Francis Peters for The Wall Street Journal

Updated Feb. 8, 2022 10:41 am ET

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CALIPATRIA, Calif.—In the U.S. hunt for lithium, an essential component of the batteries that power electric vehicles and cellphones, one big untapped source might be bubbling under a giant lake in Southern California.

The U.S. currently imports almost all of its lithium, but research shows large reserves in underground geothermal brines—a scalding hot soup of minerals, metals and saltwater. The catch: Extracting lithium from such a source at commercial scale is untested.

https://www.wsj.com/articles/where-is-there-more-lithium-to-power-cars-and-phones-beneath-a-california-lake-11644037217?mod=hp_lead_pos7

Third From...

The Economist

[Science & technology](#)

[Feb 26th 2022 edition](#)

Lithium production.

Two new ways of extracting lithium from brine.

How to increase the supply of an increasingly valuable metal



Around 60% of the world's lithium, a metal in high demand for making batteries, comes from evaporation ponds, like that pictured overleaf, located in deserts in Argentina, Bolivia and Chile. These ponds, which can have individual areas of 60km² or more, are filled with lithium-rich brine pumped from underground. That brine, as the ponds' name suggests, is then concentrated in them by evaporation, after which it is treated to purge it of other metals, such as sodium and magnesium, and the lithium is precipitated as lithium carbonate.

This all takes time—often as much as two years. And the process of purification is complex and inefficient. As a consequence, only about 30% of the lithium in the original brine reaches the marketplace.

LINK: <https://www.economist.com/science-and-technology/two-new-ways-of-extracting-lithium-from-brine/21807823>