

The Critical Minerals Institute Report for September 2023

written by Matt Bohlsen | September 19, 2023

Welcome to the mid-September 2023 [Critical Minerals Institute](#) (“CMI”) report, designed to keep you up to date on all the latest major news across the critical minerals markets. Here is the IEA [list of Critical Minerals](#).

Global critical minerals and electric vehicle (“EV”) update

Early September 2023 saw several major global events that impacted critical minerals.

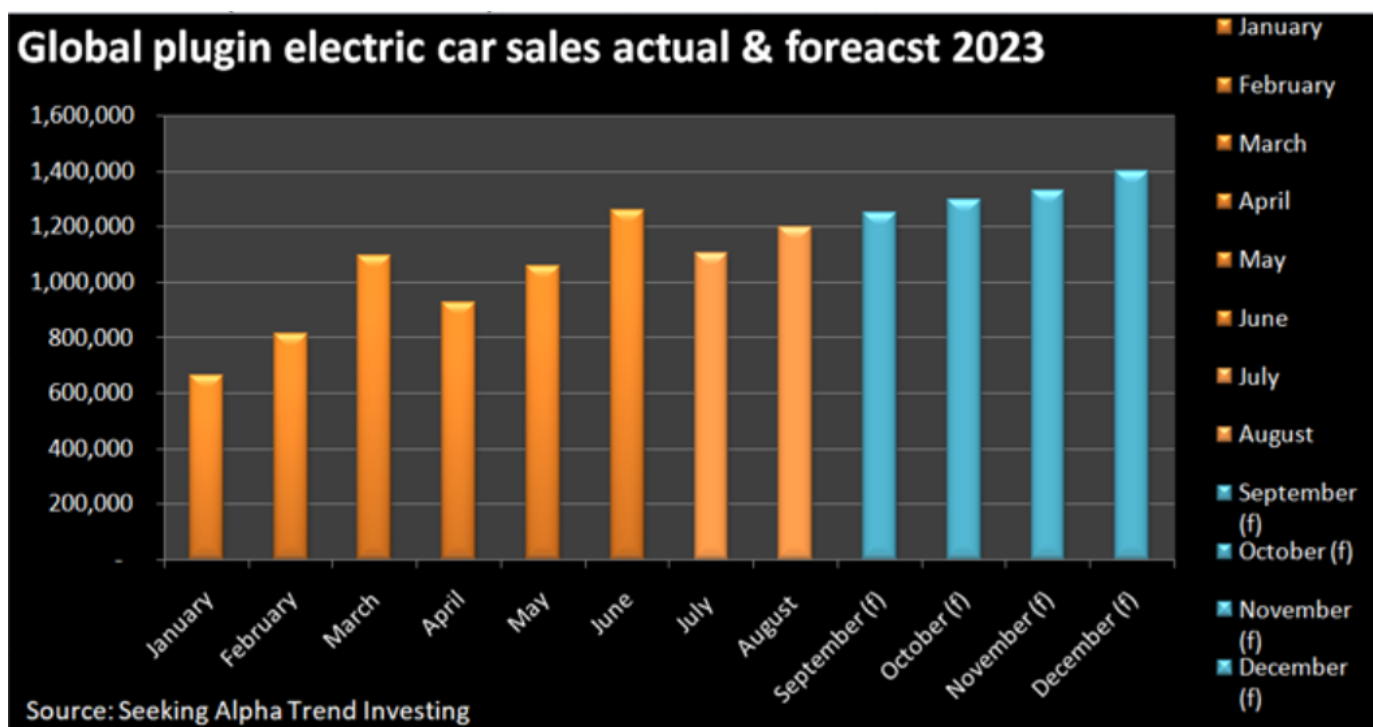
The EU raised interest rates by 0.25% to a new [22 year high of 4.5%](#), signaling this may be the peak in rates. The US Fed is set to meet on September 20 with most analysts expecting a pause (at the [current 5.5% rate](#), also a 22 year high), despite this week’s [3.7% CPI number](#), up from 3.2% the previous month. Rising interest rates in the West is slowing the economy which slows demand for most critical minerals. This has been a trend in 2023 with most critical minerals prices falling.

China announced a rate decrease last month and a decrease in the reserve rate ratio this week, all of which is starting to boost their sluggish economy. This is important as China is a key driver of critical mineral prices.

Global plugin electric car sales have generally been improving each month of 2023 after a slow start in Q1. Global EV sales

reached [1.2 million](#) units in August 2023, up 39% YoY, bringing YTD sales to 8.2 million. Sales in China have grown by 35% YTD, in EU and EFTA and UK by 30%, and in the US and Canada by 59%. 2023 sales look set to finish at ~13.5 million and 17% market share, which would be a 28% increase on 2022 (10.522 million and 13% market share). BYD Co. Ltd. (OTC: BYDDF) and [Tesla Inc.](#) (NASDAQ: TSLA) are dominating EV sales as you can [read here](#) in an article by CMI Director Matt Bohlsen.

Global plugin electric car 'monthly' sales in 2023 ([source](#))



In mid-September we heard [news](#) that the Saudis and the US are in talks to secure critical metals in Africa needed to help the US with their energy transition. CMI Co-Chair Jack Lifton and CMI Director Melissa Sanderson shared their views on this controversial topic [here](#). The Chinese have a long track record of mining in Africa, so it will be interesting to see what happens now they have sovereign wealth funds, such as that from Saudi Arabia, as competition. Glencore PLC (LSE: GLEN | OTC: GLCNF | HK: 805) has also increased its DRC activity with the recently [announced](#) backing of [Tantalex Lithium Resources](#)

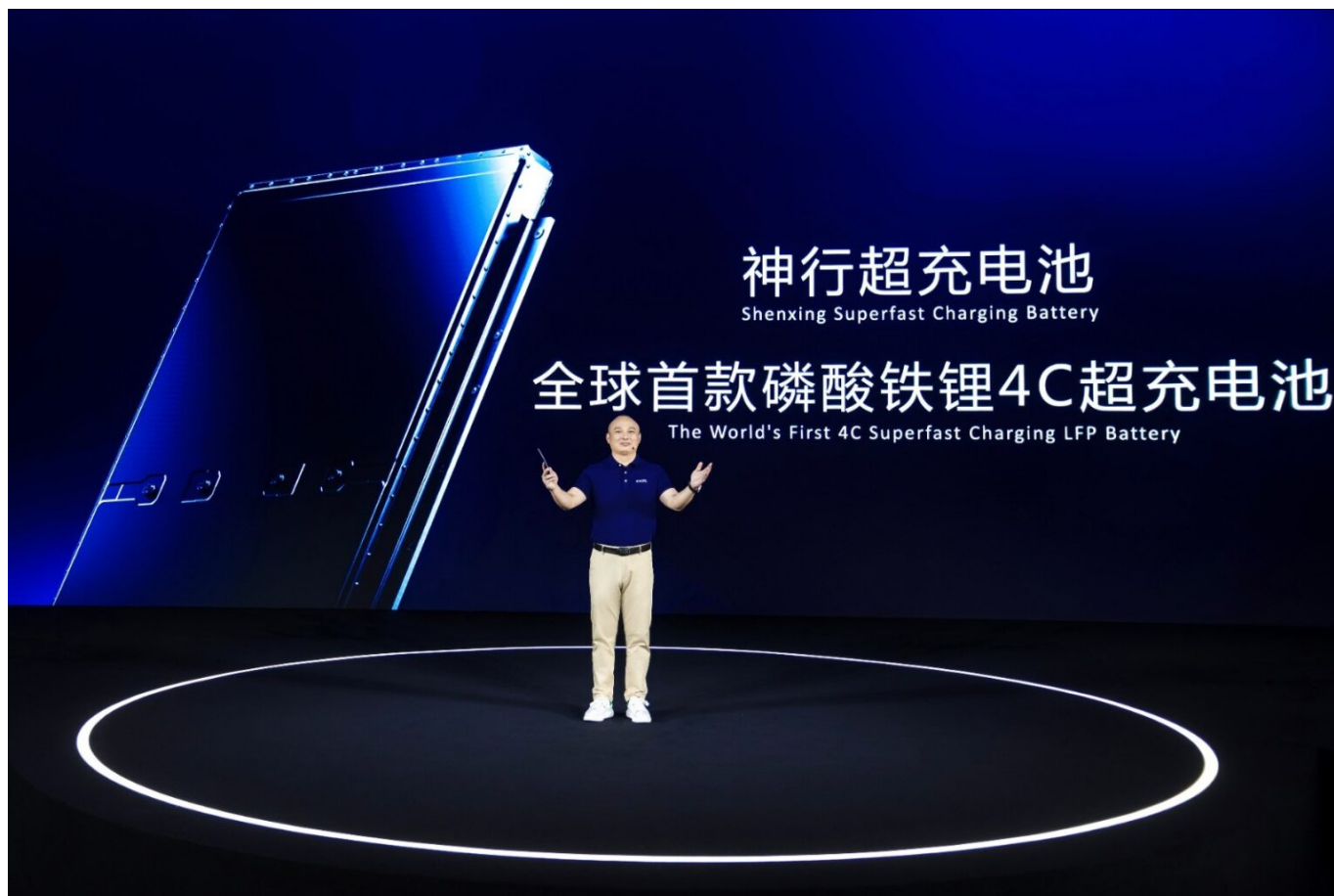
[Corp.](#)'s (CSE: TTX | OTCQB: TTLXF) DRC lithium project.

Battery news – CATL has a new superfast charging battery that can revolutionize fast charging

In some groundbreaking battery news, *Contemporary Amperex Technology Co.* ("CATL") the world's leading battery manufacturer, recently [announced](#) a new 'superfast charging' lithium iron phosphate ("LFP") battery. It is reported that the new 80kWh battery, named Shenxing, is *"capable of delivering 400 km of driving range with a 10-minute charge as well as a range of over 700 km on a single full charge."*

Now that's impressive, especially given current batteries typically take about 3x longer to charge. It certainly has the potential to revolutionize fast charging speeds.

CATL has a new superfast charging LFP battery, named Shenxing ([source](#))



Lithium

Lithium chemical [spot prices fell](#) so far in September 2023, with China lithium carbonate spot at [CNY 186,500](#) (US\$ 26,022). Prices now look to be close to reaching a bottom due to being close to the current marginal cost of production of ~US\$ 25,000/t. News out of China has reported that some marginal lepidolite producers have recently been halting production.

The good news is that lower material prices have led to battery cell prices falling below the magical [US\\$ 100/kWh](#) for the first time in 2 years. At this price, electric cars potentially reach purchase price parity with internal combustion engines as we are now seeing in China, where almost 2 out of every 5 new cars purchased are EVs (July was [38%](#) and 2023 YTD is 36% market share).

Of interest in September it was [reported](#) that the Australian Government said “tax breaks for lithium are ‘on the table’”. Australia is already the world’s largest supplier of lithium ore but has ambitions to grow its lithium chemicals production and to value add in other areas.

We also had a most interesting report that quotes leading lithium industry expert [stating](#): “Mr Lithium says he’ll ‘be dead’ before the lithium market is oversupplied.”

September also saw an interesting report [stating](#): “The world’s largest deposit of lithium may have been discovered inside a US supervolcano”. The report is referring to a study conducted by Lithium Americas Corp. (TSX: LAC | NYSE: LAC), which hypothesizes that the McDermitt Caldera contains 20 to 40 million metric tons of lithium.

Rare Earths

Neodymium (“Nd”) prices showed some strong recovery so far in September 2023 after a rough 2023 which has seen prices fall [~33% YTD](#). Most of the other rare earths prices have also been struggling in 2023, weighed down by a slowing China.

In an interesting rare earths September market update titled [“The Chinese Rare Earths Monopoly Saga Continues”](#), leading global expert Jack Lifton stated: “China is doubling the size of its rare earth permanent magnet industry. It is said that this will happen by 2025. This means that China needs more, much more of the magnet precursor rare earths and all of the heavy rare earths, in particular, that it controls.”

The interesting part is that the West, boosted by the U.S Inflation Reduction Act (“IRA”) and the EU Critical Raw Minerals Act (“CRMA”), is also working to rapidly build up their own

supply chains of key critical metals, notably the magnet rare earths.

One such development in this direction is by [Neo Performance Materials Inc.](#) (TSX: NEO") ("Neo"), who recently held their [groundbreaking](#) for a new permanent magnet plant in Estonia, Europe. The new plant targets [Phase 1 production to reach 2,000/t pa in 2025](#), with Phase 2 targeting *production of 5,000 tonnes/year (to support the manufacturing of ~4.5 million electric cars)*. The new plant will be fed by Neo's rare earth oxide feed to come from Neo's existing rare earth separations plant in Estonia. Another company [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR) is also making great strides at developing a US supply chain for critical rare earths as you can [read here](#). There are also several other junior rare earths companies, notably in Canada and Australia looking to supply the sector in future years.

Cobalt, Graphite, Nickel, Manganese and other critical minerals

Cobalt prices (currently at [US\\$ 14.84/lb](#)) continue to be very depressed in 2023, not helped by the slowdown in the global electronics sector. Some reports that China may be starting to pick up as well as some strength in superalloys (used in aerospace & military) demand gives a glimmer of hope.

Flake graphite prices are also very weak with prices near the marginal cost of production. Flake graphite is [forecast by Macquarie](#) and [others](#) to start heading into deficit from about 2024. Leading western graphite producer Syrah Resources Limited (ASX: SYR) has been slowing production. Syrah announced in September that they had received a [US\\$150 million conditional loan commitment for Balama](#) approved by United States

International Development Finance Corporation. The US government is supporting Syrah as they are well advanced towards construction of an active anode materials (spherical graphite) plant in the USA, which happens to have an off-take deal with Tesla (NASDAQ: TSLA).

Nickel [prices](#) have remained quite strong the past 3 years; however, oversupply concerns from Indonesia and a slowing Chinese economy have taken their toll in 2023. A pickup in China stainless steel demand will be key to watch out for.

Manganese [prices](#) continue to be weighed down by weak Chinese demand as the Chinese housing industry continues to rebalance after years of over construction and oversupply. On the positive side manganese is starting to be used in lithium manganese iron phosphate (“LMFP”) batteries, by both [Gotion Hi-Tech](#) and [CATL’s Qilin battery](#).

Special Thanks to the Editor of **The Critical Minerals Institute Monthly Report**, Matt Bohlsen who is a CMI Director.

About the Critical Minerals Institute: The Critical Mineral Institute (CMI) is an international organization for companies and professionals focused on battery materials, technology metals, defense metals, ESG technologies and practices, the general EV market, and the use of critical minerals for energy and alternative energy production. Offering an online site that features job opportunities that range from consulting roles to Advisory Board positions, the CMI offers a wide range of B2B service solutions. Also offering online and in-person events, the CMI is designed for education, collaboration, and to provide professional opportunities to meet the critical minerals supply chain challenges.

The Critical Minerals Institute was created to offer education, collaboration, and an online resource to learn about critical mineral projects, emerging technologies, legislative initiatives, government funding, human capital needs, and capital market investment opportunities. There is no charge or sign up required for access to the Critical Minerals Institute website: www.criticalmineralsinstitute.com. A range of enhanced benefits are available to individual and corporate members of the CMI, including attendance at the CMI Summit, virtual events and additional resources. For details see: www.criticalmineralsinstitute.com/cmi-membership/.

For more information, go to: [Critical Minerals Institute](#)