

Technology Metals Report (07.19.2024): Politics & Critical Minerals at Play

written by Tracy Hughes | July 19, 2024

Welcome to the latest issue of the Technology Metals Report (TMR), brought to you by the [Critical Minerals Institute](#) (CMI). In this edition, we compile the most impactful stories shared by our [CMI Directors](#) over the past week, reflecting the dynamic and evolving nature of the critical minerals and technology metals industry. Among the key stories featured in this report are the [tripling](#) of Argentina's lithium carbonate production capacity, the U.S. Department of Energy's new vision for [integrating](#) EVs into the grid, and the Biden-Harris administration's [investment](#) to strengthen the domestic critical minerals supply chain. These highlights are presented in chronological order to provide a clear timeline of the week's developments.

This week's TMR Report also highlights significant initiatives such as Microsoft's strategic [investment](#) in Cyclic Materials to promote climate tech innovation and Canada's infrastructure [upgrades](#) to support critical minerals development. Additionally, we are excited to announce the countdown to the [Critical Minerals Summit III](#) in Toronto, taking place on August 21-22, 2024, at the prestigious National Club. Daily updates for this landmark event, themed "Connecting Leaders, Advancing Critical Minerals," are available at [CriticalMineralSummit.com](#) – we are updating the agenda daily.

FYI – if you want to become a CMI member, click [[here](#)].

Argentina tripled lithium carbonate production capacity in last two years: (July 16, 2024, [Source](#)) – In the past two years,

Argentina has tripled its lithium carbonate equivalent (LCE) production capacity, reaching 136,500 tons, according to the Chamber of Mining Entrepreneurs (CAEM). This growth has been fueled by new projects, including the Centenario Ratones plant in Salta, a joint venture between France's Eramet and China's Tsingshan. Inaugurated this month, the plant aims to produce 24,000 tons of LCE annually by 2025, narrowing the gap with Chile, the leading producer in Latin America. Argentina's LCE production capacity increased from 37,500 tons in 2022 to 136,500 tons, with more projects expected to boost output further later this year. The country is part of the "lithium triangle" with Chile and Bolivia, crucial for electric vehicle battery production.

DOE Releases Vision for Beneficially Integrating EVs into the Grid: (July 16, 2024, [Source](#)) – The U.S. Department of Energy (DOE) has announced "The Future of Vehicle Grid Integration (VGI): Harnessing the Flexibility of EV Charging" as part of the EVGrid Assist initiative. This vision, developed with stakeholder input, outlines a roadmap for integrating electric vehicles (EVs) with the electric grid. The plan aims to ensure EVs are safely and securely connected, benefiting customers and communities. The vision emphasizes a symbiotic relationship between EVs and the grid, supported by five pillars: universal value, appropriate infrastructure, innovation through standards, customer-centered options, and secure coordination. The initiative seeks collaboration between public and private sectors to achieve equitable and reliable solutions. DOE plans to detail a VGI strategy, building on existing activities like smart charge management demonstrations and stakeholder engagement.

Biden-Harris Administration Invests Additional \$10 Million To Build Domestic Supply Chain for Critical Minerals and Materials: (July 16, 2024, [Source](#)) – As part of President Biden's

Investing in America agenda, the U.S. Department of Energy (DOE) announced nearly \$10 million for projects aimed at lowering costs and reducing the environmental impact of producing rare earth elements and other critical minerals from coal and its by-products. Funded by the Bipartisan Infrastructure Law, these initiatives aim to meet the rising demand for critical minerals essential for clean energy technologies, reducing reliance on foreign supply chains. The projects involve advanced testing to improve separation and refining technologies, utilizing secondary coal-based resources. Led by the California Institute of Technology and the University of Utah, these projects will boost domestic production, enhance national security, and create high-quality jobs. Additionally, the DOE has committed \$151 million since 2021 to support critical mineral projects, emphasizing environmental sustainability and community benefits through the Justice40 Initiative.

Microsoft Makes Strategic Investment in Cyclic Materials to Accelerate Climate Tech Innovation: (July 16, 2024, [Source](#)) – Microsoft's Climate Innovation Fund has invested in Cyclic Materials, a company specializing in the recycling of rare earth elements from end-of-life hard drives. This investment underscores Microsoft's dedication to a circular economy and sustainable technology. Cyclic Materials has developed CC360™, a patent-pending technology designed to recover rare earths from hard drives typically destroyed for data security. The technology allows IT asset disposal companies to extract valuable materials while maintaining data security. Cyclic Materials' recycling process is more environmentally friendly than traditional mining, reducing carbon footprint and water usage. Their new plant in Kingston, Ontario, employs the proprietary REEPure™ technology to produce recycled Mixed Rare Earth Oxide. This partnership aims to enhance the supply of rare earth elements essential for the energy transition and

sustainable technology deployment.

Looking North: Pension funds are key to developing Canada's critical minerals: (July 16, 2024, [Source](#)) – Canada's North represents a major investment opportunity and a critical geopolitical concern, necessitating significant long-term and venture capital to develop infrastructure and critical minerals essential for the global net-zero energy transition. Pension funds are vital to this goal. Western allies prioritize countering China's dominance in critical minerals, integrating geopolitics, energy security, and ESG standards to attract institutional investors. Canada should adopt similar strategies, emphasizing high environmental and human-rights standards, and democratic institutions. Despite existing strategies, China continues to invest in Canada's Northern projects, posing security risks. Indigenous leaders require capital to participate in these investments. To secure its North, Canada needs a comprehensive Arctic strategy linked to national security, leveraging pension fund investments to develop critical minerals and infrastructure, fostering innovation, and bolstering defense capabilities.

China's state rare-earth players bleed red ink as prices fall: (July 16, 2024, [Source](#)) – China's major state-owned rare-earth companies are experiencing significant financial losses due to plummeting prices, despite the government's strategic control over the industry. Rising Nonferrous Metals, for instance, reported a net loss of up to 311 million yuan for the first half of the year, a drastic shift from a 102 million yuan profit the previous year. This decline is attributed to a sharp drop in the prices of key rare-earth products like dysprosium, terbium, and didymium. Similarly, China Rare Earth Resources and Technology forecasts a net loss up to 251 million yuan, reversing last year's profits. Xiamen Tungsten also reported a 22% revenue decline in its rare-earth sector. The downturn is largely due to

oversupply, weak demand, and the state-led industry consolidation efforts.

Construction begins on China's largest uranium mining project: (July 15, 2024, [Source](#)) – China has commenced construction on its largest uranium mining project in Ordos, Inner Mongolia, developed by China National Nuclear Corporation. The China Atomic Energy Authority (CAEA) reports that the National Uranium No.1 project will set global benchmarks in safety, environmental, and efficiency standards. Utilizing advanced technology, the project will feature automation, remote control, and big data analysis for efficient and precise uranium extraction. The in-situ leaching method, using CO₂ and O₂, minimizes environmental impact by avoiding waste and emissions. This initiative aligns with China's nuclear energy expansion, aiming to boost domestic uranium production to support its 56 operational reactors and 27 more under construction. The project contributes to China's goal of sourcing uranium domestically, through foreign equity, and from the open market.

Rare earth prices are in the doldrums and China wants to keep them that way: (July 15, 2024, [Source](#)) – Rare-earth prices have hit three-year lows, driven by China's strategic overproduction. The spot price of neodymium-praseodymium has dropped nearly 20% since January, reflecting a broader trend in rare-earth markets. Despite rising demand for high-tech applications like electric vehicles and wind turbines, an oversupply from China has suppressed prices. China's production quotas have significantly increased, exacerbating the supply glut. Additionally, the slowing Chinese economy and weaker global EV sales have dampened demand. China controls a major portion of the rare-earth supply chain, allowing it to influence prices and maintain market dominance. This strategy appears aimed at supporting its green-energy industries and deterring Western competition. In response, Western countries have introduced measures like

subsidies and tariffs to reduce dependence on Chinese rare earths, but significant challenges remain.

US approaches Indonesia for multinational critical mineral partnership: (July 15, 2024, [Source](#)) – The U.S. has approached Indonesia to join the Mineral Security Partnership (MSP), a collaboration of 14 countries and the EU, aimed at enhancing sustainable critical minerals supply chains. U.S. Under Secretary of State Jose Fernandez, during his visit to Jakarta, highlighted the MSP's potential to improve Indonesia's environmental standards and governance in its mineral sector. Indonesia, rich in nickel, copper, and bauxite, seeks to become a hub for battery and electric vehicle production. The nation has expanded its nickel processing industry since banning unprocessed ore exports in 2020, leading to environmental concerns. Fernandez emphasized the MSP would attract investment beneficial to communities and compliant with labor and environmental laws. Indonesia is also exploring a critical mineral trade deal with the U.S. similar to the U.S.-Japan agreement.

Investment in critical minerals in web of doubt, industry says: (July 15, 2024, [Source](#)) – Many companies are hesitant to invest in critical minerals and energy transition projects due to doubts about consumer demand for electric vehicles (EVs) and government commitment to zero-carbon goals, as discussed at the World Materials Forum in Paris. Despite the long-term need for materials like lithium, cobalt, and copper, the short-term outlook is uncertain. Former Umicore CEO Mathias Miedreich highlighted the difficulty in investing under current conditions. EV sales in the EU dropped by 12% in May, and companies like TotalEnergies and its partners have paused some battery plant plans. An executive noted a potential two-year delay in the energy transition, shifting projections from 2030 to 2032. Meanwhile, demand for critical materials in China and

Asia remains more robust than in Europe and the U.S.

Canada and B.C. Invest in Infrastructure Upgrades to Support Critical Minerals Development in Northwest B.C. and Create Jobs Across the Province: (July 15, 2024, [Source](#)) – The Canadian and B.C. governments announced a \$195 million investment to upgrade highway infrastructure in northwest B.C., aiming to support critical minerals development, improve community access, and create mining jobs. This project, part of the Canadian Critical Minerals Strategy, focuses on enhancing Highways 37, 37A, and 51, essential for transporting minerals like copper, molybdenum, zinc, nickel, and cobalt from the “Golden Triangle” region. These upgrades, funded by the Critical Minerals Infrastructure Fund, are expected to generate up to 3,000 jobs, \$20 billion in capital investments, and significant annual tax revenues. The improvements will also benefit First Nations and local communities, ensuring safer, more reliable transportation and boosting economic opportunities across the province.

Europe needs way to price critical minerals independently of China, group says: (July 15, 2024, [Source](#)) – Europe must establish an independent pricing system for critical minerals essential for the energy transition to reduce dependence on China, which dominates the sector, according to Bernd Schaefer, CEO of EIT RawMaterials. Currently, oversupply and weak prices of materials like lithium and cobalt challenge Western start-ups, making competition with China difficult. Schaefer suggests Europe should create a critical materials platform reflecting local supply and demand and establish a substantial exploration fund. EIT RawMaterials, leading a 300-member alliance, supports the EU’s plan to secure necessary raw materials for net zero emissions by 2050. Schaefer warns political uncertainty might delay essential steps, stressing the urgency to act despite political transitions in Europe. EIT RawMaterials aims to drive necessary changes as a neutral body.

Platinum And Palladium Poised For A Double-Barreled Boost: (July 15, 2024, [Source](#)) – Platinum and palladium, often overshadowed in the precious metals market, are poised for a resurgence. Historically impacted by oversupply and weak demand, these metals are crucial in reducing emissions from internal combustion engines (ICE). Despite predictions of a shift to electric vehicles (EVs) diminishing ICE demand, consumer hesitation towards EVs has reignited interest in hybrids. Consequently, the prices of platinum and palladium, primarily used in gasoline and diesel engines respectively, have remained sluggish. However, with the U.S. potentially lowering interest rates and supply constraints due to mine closures, investor interest is rekindling. The shift in market dynamics, highlighted by rising demand and stagnant supply, positions platinum and palladium for potential gains, echoing the recent performance of gold and silver.

Oversupply forces BHP to suspend Western Australia nickel operations: (July 11, 2024, [Source](#)) – BHP Group Ltd. (ASX: BHP | NYSE: BHP) will suspend its Western Australia nickel operations from October due to falling metal prices and a global oversupply. The world's largest listed miner plans to review this decision by February 2027. BHP expects an EBITDA loss of around \$300 million for the financial year ending June 30, 2024. The suspension affects 3,000 workers, with 1,600 offered alternative roles. BHP will invest \$300 million annually to support a potential restart. Indonesia's rise as a nickel supplier and the shift away from nickel in some batteries have pressured prices, which, despite recovering, remain significantly lower than a year ago. Australia's efforts to develop a processing industry face challenges like low prices and high costs. BHP is optimistic about future nickel demand, especially for low-emission production.

InvestorNews.com Media Highlights:

- July 18, 2024 – Jack Lifton issues a Red Flag on Critical Mineral Technology Claims <https://bit.ly/4688vzR>
- July 9, 2024 – As BYD Accelerates Plans for Global Dominance, the EV Market Brakes for Consumer Reaction <https://bit.ly/4bDUPxo>
- July 8, 2024 – Plato Gold Expands its Portfolio with Strategic Critical Minerals Acquisition in Northern Ontario <https://bit.ly/3VVK83J>

InvestorNews.com Video Highlights:

- July 18, 2024 – Energy Fuels Mark Chalmers Offers a ‘Made in America’ Approach to Critical Minerals <https://youtu.be/6JVDlMSzhXA>
- July 18, 2024 – Frank Basa on Nord’s high-grade silver and gold in Ontario, and rare earths in Sweden <https://youtu.be/Pm2eIbxqxP0>
- July 17, 2024 – Nick Holthouse on the Meteoric Deal with Latin America’s First Permanent Magnet Maker <https://youtu.be/ZLVNS1Ka0lg>
- July 15, 2024 – Pat Ryan on UCORE’s Plan to Disrupt China’s Control of the Rare Earths Supply Chain <https://youtu.be/FCg9RUh4oN0>

InvestorIntel Member News:

- July 19, 2024 – FuelPositive: Completes On-Farm Commissioning of the First Scalable Green Ammonia Production System and Announces New Manitoba-Based Partnerships <https://bit.ly/3WtJYSr>
- July 17, 2024 – Scandium Canada Announces Upsizing of its Private Placement <https://bit.ly/3y4pFlm>
- July 17, 2024 – Appia Announces Excellent Desorption

Results From Target IV Ionic Adsorption Clay Rare Earth Mineralization in Brazil <https://bit.ly/3W6UPAj>

- July 17, 2024 – Terra Balcanica Announces Increase to Private Placement <https://bit.ly/4cKWP8r>
- July 17, 2024 – Zentek Subsidiary Albany Graphite Corp. Achieves Five Nines Purity for Albany Graphite <https://bit.ly/4d1eqsA>
- July 15, 2024 – American Rare Earths 2024 Drilling commences in Cowboy State Mine Area <https://bit.ly/3zKjiEb>
- July 12, 2024 – Appia Announces Non-Brokered Working Capital Private Placement <https://bit.ly/3S6YgWt>
- July 12, 2024 – Scandium Canada provides Additional Details on the closing of its Right Offering and Announces a Private Placement <https://bit.ly/4cCoM2v>
- July 11, 2024 – Fathom Announces Mal Lake Nickel-Copper-Cobalt Mineralization – Further Evidence of “Blue Sky” Potential at Company’s Gochager Lake Property <https://bit.ly/4fdPMHg>
- July 11, 2024 – Appia Extends Memorandum of Understanding for the Elliot Lake Uranium Project, Ontario <https://bit.ly/3xYIMNG>
- July 10, 2024 – First Phosphate Confirms Longest High Grade Intersect to Date of 8.9% Igneous Phosphate Across 156 Metres from Surface at Its Begin-lamarche Project in Saguenay-Lac-St-Jean, Quebec, Canada <https://bit.ly/3Liu2vZ>
- July 10, 2024 – Dotted Lake: 3D Inversion Modelling of Targets Commissioned <https://bit.ly/3RY2Cze>
- July 10, 2024 – Defense Metals’ Wicheeda Rare Earth Element Project considered as key by the Government of British Columbia <https://bit.ly/3Lh57J5>
- July 9, 2024 – Voyageur Pharmaceuticals Grants Deferred Share Units <https://bit.ly/3Wex220>
- July 8, 2024 – Scandium Canada Ltd. Successfully closes

its Rights Offering <https://bit.ly/4cCYNIg>

- July 8, 2024 – Caldeira Project Scoping Study confirms potential for the world's lowest cost source of rare earths with outstanding financial metrics <https://bit.ly/4cTybm2>