

# Technology Metals Report (11.22.2024): Northvolt's CEO Resigns, China's \$1B Resource Push, and Trump's Critical Minerals Policies

written by Tracy Hughes | November 22, 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 Northvolt AB's bankruptcy filing, marking a pivotal moment for Europe's battery ambitions, and China's \$1 billion geoscience survey aimed at securing its dominance in critical resources. These developments highlight the challenges and opportunities in the global race for technology metals.

This week's stories also explore how geopolitical shifts are shaping the future of the sector. From Trump's anticipated policies on critical minerals to Canada's momentum for restructuring its trade agreements, the interplay of industrial strategies and resource dependency is becoming increasingly complex. Additionally, significant corporate moves, such as Sayona Mining's acquisition of Piedmont Lithium and Exxon Mobil's lithium supply deal with LG Chem, underscore the industry's rapid evolution as it adapts to new demands and market pressures.

As always, the TMR delivers insights that matter, combining

expertise from the CMI Board with the latest global updates to keep you informed and prepared for the shifts shaping the future of critical minerals and technology metals. To become a CMI member and receive the TMR emailed to you directly, [click here](#) to subscribe

**Northvolt CEO resigns as Europe's big hope for a battery champion files for bankruptcy** (November 22, 2024, [Source](#)) – Peter Carlsson, CEO of [Northvolt AB](#), has resigned following the Swedish battery manufacturer's filing for Chapter 11 bankruptcy in the U.S. Carlsson, who co-founded and led Northvolt since 2016, will transition to a senior advisor role but remain on the board. The company's bankruptcy filing aims to restructure debt, downsize operations, and maintain business continuity. This development is a significant blow to Europe's ambitions for electrification and establishing a homegrown battery industry. Despite the challenges, Northvolt plans to continue its operations normally and expects to complete the restructuring by early next year. The process will also enable the company to secure about \$245 million in new financing, ensuring the ongoing operation of its flagship Skellefteå gigafactory in Sweden.

**China plans 'mind-boggling' geoscience survey to hunt for natural resources** (November 22, 2024, [Source](#)) – In 2025, China will launch SinoProbe II, a six-year, \$1 billion geoscience survey aimed at bolstering resource self-reliance by mapping the country's subterranean resources. Thousands of researchers will collaborate to drill unprecedented depths, targeting areas beyond 500 meters where shallower resources are nearly depleted. The survey focuses on enhancing fossil fuel and ore self-sufficiency, with specific attention to iron, aluminum, and strategic minerals vital for technology and energy security. Additionally, it will explore geothermal energy and address scientific inquiries, such as the geological impact of India's collision with Eurasia. SinoProbe II builds on its predecessor's

successes, which discovered critical mineral reserves, and promises significant technological advancements in deep-Earth exploration and mineral extraction.

**Trump 2.0 won't reverse Biden's critical minerals push** (November 21, 2024, [Source](#)) – Donald Trump has criticized the Inflation Reduction Act (IRA) as a “green scam,” threatening to repeal it if re-elected. Despite this, sectors like electric vehicles and wind power could still benefit from the \$369 billion funding from the Biden administration. A significant portion of this funding has enhanced the U.S. industrial base, including a \$75 million upgrade to Constellium's aluminum rolling mill in West Virginia. There's a strong bipartisan agreement on reducing dependency on critical minerals from China, a stance Trump supported in 2020 by declaring such reliance a national emergency. Both the Department of Energy and Defense have invested heavily in boosting U.S. metals capacity, targeting a variety of critical minerals necessary for national security and industry. Despite setbacks in new mining projects and some federal funding being challenged, the focus on building domestic mineral capacity continues to be a priority, suggesting Trump's administration may uphold and possibly enhance these initiatives.

**Momentum Builds in Canada to Kick Mexico Out of North America Trade Deal** (November 21, 2024, [Source](#)) – Ontario Premier Doug Ford is advocating for Canada to establish separate bilateral trade agreements with the U.S. and Mexico, diverging from the current trilateral USMCA deal. Citing the misuse of Mexico as a conduit for cheap Chinese products to evade U.S. and Canadian tariffs, Ford argues for direct negotiations with the U.S. to protect North American workers. His proposal has the unanimous support of Canada's provincial and territorial leaders. Meanwhile, Canadian Prime Minister Justin Trudeau, though critical of China's trade practices and supportive of U.S.

concerns, prefers improving the existing trilateral agreement. Mexican President Claudia Sheinbaum insists that the USMCA should only be revised, not renegotiated, dismissing suggestions of excluding Mexico as politically motivated.

**Exxon Mobil signs non-binding lithium supply deal with LG Chem** (November 20, 2024, [Source](#)) – [Exxon Mobil Corporation](#) (NYSE: XOM) has entered a non-binding lithium supply agreement with LG Chem for up to 100,000 metric tons from its Arkansas project, leveraging direct lithium extraction from brine. This follows Exxon's exploration of similar processes used in petroleum extraction. The deal, dependent on Arkansas setting a state lithium royalty rate, will allow LG Chem to use the lithium in its Tennessee cathode facility. Amidst debates over royalty rates and potential market challenges, including U.S. President-elect Donald Trump's stance against EV mandates, Exxon remains optimistic about rising lithium demand and is considering multiple technology providers for its project. The final financial terms, including price per ton, will be determined in the definitive contract.

**EU to demand technology transfers from Chinese companies** (November 19, 2024, [Source](#)) – The EU is set to impose a new trade policy that requires Chinese companies to share intellectual property with European firms in exchange for EU subsidies, particularly in the clean technology sector. Starting with a €1 billion grant for battery development this December, the policy demands that Chinese companies operate factories in Europe and transfer technological expertise. This move mirrors China's own policies, which compel foreign companies to share their IP for market access. The EU's tougher stance, which includes heavy tariffs on Chinese electric vehicles and stricter subsidy requirements, aims to protect European industries from low-cost, high-pollution imports. This policy is part of broader measures to strengthen the EU's economy and support its climate

goals without depending on inexpensive imports. However, experts warn that these restrictions could hinder the EU's efforts to decarbonize and maintain competitive pricing.

**Europe Has Lost the Critical Minerals Game: Lessons for the U.S.** (November 19, 2024, [Source](#)) – Jack Lifton from the [Critical Minerals Institute \(CMI\)](#) claims Europe's era of influencing the global critical minerals market has ended, a consequence of its lost control over global commerce and depleted capital following the Great Power Wars. Historically, Europe lacked sufficient domestic critical mineral supplies, essential for industrialization. In the 21st century, Europe faces further isolation due to its failing domestic energy sector and the scaling back of energy-intensive industries to combat climate change. Meanwhile, the U.S., having replaced European powers post-World War II as a major consumer of these minerals, now risks losing its position to China, which has a robust industrial policy aimed at dominating the technology-critical minerals market. The U.S. must revitalize its industrial strategy, focusing on energy access, STEM education, and securing critical minerals to maintain its industrial strength.

**Sayona Mining, Piedmont agree to create \$623 million lithium miner** (November 19, 2024, [Source](#)) – [Sayona Mining Limited](#) (ASX: SYA | OTCQB: SYAXF) of Australia is set to acquire U.S.-based [Piedmont Lithium Inc.](#) (NASDAQ: PLL | ASX: PLL) in an all-stock transaction valued at \$623 million, aiming to expand its operations in North America and strengthen its position in the electric vehicle sector. The merger will see Sayona become the parent company, paying a 6% premium over Piedmont's last closing share prices. This move is part of a broader trend among lithium companies adapting to a market that has seen rapid supply growth outpace demand, partly due to slower-than-expected electric vehicle adoption. The combined entity will have a pro-forma market capitalization of \$623 million, shared roughly equally

between the shareholders of both companies. Sayona plans to raise funds through capital raising and share placement, enhancing its strategic position and production capabilities, including a joint venture in Quebec targeting significant spodumene concentrate production.

**Australia, India to boost cooperation on renewables, defense, says Albanese** (November 19, 2024, [Source](#)) – Australia will collaborate with India to enhance investments in renewable energy, including initiatives in solar manufacturing, battery, and mineral processing, as stated by Prime Minister Anthony Albanese during a G20 sideline meeting with Indian Prime Minister Narendra Modi. The partnership also aims to bolster defense and maritime security between the two nations. As members of the Quad alliance, along with the United States and Japan, this move seeks to counterbalance China's growing influence in the Indo-Pacific region. Albanese highlighted Australia's leadership in rooftop solar production and its plans to support India's push for household renewable energy use through workforce training projects. Additionally, the Australian Strategic Policy Institute suggests that Quad plus countries, like South Korea, should expand cooperation in critical minerals processing to mitigate China's dominance in the market.

**The global race to break China's grip on graphite** (November 19, 2024, [Source](#)) – A new graphite production facility has opened in Malaysia, operated by Nasdaq-listed [Graphjet Technology](#) (NASDAQ: GTI). This "green graphite" facility uniquely uses palm kernel shells to create synthetic graphite, aiming to reduce dependence on China, which currently dominates the global supply of both natural and synthetic graphite. China's dominant position is bolstered by extensive government investment and recent export controls requiring special permits for graphite, prompting global efforts to diversify supply chains. The Malaysian

facility will produce 3,000 tonnes annually, a small amount compared to China's 1.5 million tonnes. Graphjet also plans a facility in Reno, Nevada, targeting an annual production of 50,000 to 100,000 tonnes within five years. Amid shifting U.S. energy policies and trade tensions, the industry faces uncertainties, but the need for diversification in graphite supply remains critical for battery production.

**IEA report shows how recycling can bolster critical minerals** (November 18, 2024, [Source](#)) – The International Energy Agency's (IEA) latest report emphasizes the potential of recycling critical minerals to support the energy transition and reduce the need for new mining. According to the report, titled "Recycling of Critical Minerals: strategies to scale up recycling and urban mining," recycling could decrease new copper mining by 40% and lithium and cobalt mining by 25% by 2050. It suggests that recycling could save around 30% of the \$600 billion mining investment required by 2040, highlighting that recycled minerals produce approximately 80% less greenhouse gas emissions than primary sources. The report also underscores recycling's role in enhancing supply chain security and reducing landfill waste. Additionally, it notes the rapid expansion of battery recycling capacity, particularly in China, which dominates the market and has launched a new state enterprise for recycling end-of-life batteries. The IEA cautions about environmental risks associated with recycling, advocating for stronger standards to manage them effectively.

**China Deepens Ties with Brazil Through Financing and the Promise of a Green Economy** (November 17, 2024, [Source](#)) – China is significantly strengthening its industrial and economic relationship with Brazil, focusing on developing a green economy and ensuring access to critical resources like niobium and rare earth minerals. Brazil, which produces 88% of the world's niobium and is advancing in rare earth production, is becoming

pivotal in the global supply chain for these essential materials. Chinese companies are actively investing in Brazil's renewable energy sector, exemplified by projects like the Gameleiras wind farm and the Tanque Novo wind project, enhancing Brazil's ability to produce clean energy while creating local employment opportunities. Additionally, the China-Brazil Earth Resources Satellite (CBERS) program is helping monitor environmental issues like deforestation. These developments highlight a missed strategic opportunity for Western countries, particularly the United States, to engage with Brazil and integrate into these critical supply and sustainability initiatives.

**China to tighten export curbs on critical metals ahead of Trump's return** (November 16, 2024, [Source](#)) – China is set to implement stricter export controls on crucial metals and dual-use technologies, effective from December 1, 2024. This announcement follows Donald Trump's recent electoral victory. The regulation targets materials pivotal to both civilian and military industries, including tungsten, graphite, magnesium, and aluminum alloys, which are essential in the electronics and defense sectors. China, dominating over 80% of the global tungsten and about 90% of magnesium production, will require exporters of certain high-spec metals like aluminum alloys with specific elasticity and size to obtain a license. The updated list also restricts the export of select testing and production equipment. Concurrently, Taiwan Semiconductor Manufacturing Co. has paused some production to comply with U.S. sanctions, reflecting heightened scrutiny over exports to blacklisted firms like Huawei. These measures are seen as counteractions to the U.S.'s extensive restrictions on semiconductor and AI technologies.

**Russia restricts enriched uranium exports to the United States** (November 15, 2024, [Source](#)) – Russia has imposed export



restrictions on enriched uranium to the U.S., potentially affecting the U.S. nuclear power plants that sourced a quarter of their enriched uranium from Russia last year. This move follows a U.S. import ban on Russian uranium, despite waivers allowing continued imports under certain conditions through 2027. Russia, which controls 44% of the world's uranium enrichment capacity and is the sixth largest uranium producer, seems to be retaliating against Western sanctions. In 2023, U.S. imports from Russia fell by 30%. Although the U.S. ban started in August, it remains unclear if any imports have occurred post-ban. Meanwhile, the U.S. investigates a rise in uranium imports from China, suspecting it might help Russia circumvent the U.S. restrictions.

**BHP set to detail copper growth plans on Chile roadshow, analysts say** (November 14, 2024, [Source](#)) – Next week, [BHP Group Limited](#) (NYSE: BHP | ASX: BHP | LSE: BHP) is expected to unveil plans to invest at least \$7 billion to enhance copper recovery at Escondida, the world's largest copper mine, according to investors and analysts. This disclosure is set to occur during a roadshow of its Escondida and Spence copper operations in Chile from November 17-20. BHP's growth strategy heavily relies on copper, crucial for the global shift to cleaner energy. However, BHP faces a decline in annual copper production, which is projected to drop by 300,000 metric tons to 1.6 million tons by the end of the decade. The company aims to maintain output levels despite diminishing ore grades, with potential capital expenditures estimated between \$7 billion and \$12 billion over several years. Additional investments include a new concentrator at Escondida costing between \$5 billion and \$6.5 billion.

## **Investor News Media Highlights:**

- November 20, 2024 – NEO Battery Materials Secures Role in

\$20M Recycled Silicon Battery Project

<https://bit.ly/3YQr744>

- November 19, 2024 – Europe Has Lost the Critical Minerals Game: Lessons for the U.S. <https://bit.ly/3AJMmMZ>
- November 17, 2024 – China Deepens Ties with Brazil Through Financing and the Promise of a Green Economy <https://bit.ly/48WKEUV>

## Investor News Video Highlights:

- November 20, 2024 – Christopher Berlet Discusses Stakeholder's Skye Gold and Loki Copper Zone Advances in Yukon's White Gold District <https://youtu.be/0RTtiKm5XNE>

## Investor News Member News:

- November 22, 2024 – First Phosphate Announces Investor Outreach Engagements <https://bit.ly/493QMej>
- November 22, 2024 – NEO Battery Materials Appoints Prominent South Korean Attorney, Mr. Seok Hyung Lee, as New Director and Announces Battery Board Transition Initiative <https://bit.ly/3V5InB8>
- November 21, 2024 – Scandium Canada Ltd. Announces Diamond Drilling Results <https://bit.ly/4107j0P>
- November 21, 2024 – Completion of Sale of Palm Springs Project for up to \$5M <https://bit.ly/30ky2xK>
- November 20, 2024 – Western Uranium & Vanadium Closes Second Tranche in CAD \$5.5 Million Financing <https://bit.ly/40Z71Yc>
- November 20, 2024 – NEO Battery Materials Awarded as Consortium Partner in \$20M Recycled Silicon Battery Project by South Korean Government <https://bit.ly/4eGahKY>

- November 20, 2024 – GKN Hoeganaes to Support First Phosphate in LFP Cathode Active Material Development <https://bit.ly/40VAYrX>
- November 19, 2024 – Managing Director Appointment & CFO Transition <https://bit.ly/4fUgx2R>
- November 18, 2024 – Western Uranium & Vanadium Corp. Closes First Tranche of Financing of CAD \$5 Million <https://bit.ly/3UY3ntQ>
- November 18, 2024 – First Phosphate Announces OTCQB Market Listing and DTC Eligibility in the United States <https://bit.ly/40Mwioh>
  
- November 18, 2024 – American Rare Earths Engages BMO Capital Markets as Financial Adviser <https://bit.ly/30eqWul>
- November 18, 2024 – Critical Metals PLC Investor Presentation <https://bit.ly/3UWdUFU>