Technology Metals Report (05.23.2025): Tungsten, Canada, and Perpetua's Antimony Mine Drive Critical Minerals Headlines

written by Tracy Hughes | May 23, 2025

The recent CMI Summit IV in Toronto underscored Canada's emerging strategic significance in critical minerals, with Christopher Ecclestone, Mining Strategist at Hallgarten + Company, stating unequivocally that Canada is "where it's at" for critical minerals. Ecclestone declared tungsten "the new lithium," critical for military and industrial uses, and emphasized the urgency for strengthened U.S.-Canada mineral partnerships to mitigate geopolitical risks. Discussions at the summit broadened beyond tungsten, spotlighting gallium, antimony, and rare earth elements, reflecting the sector's increasing complexity. Ecclestone notably highlighted the evolving business model of Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR), recognizing its innovative pivot from uranium processing toward heavy mineral sands extraction, targeting minerals like titanium, hafnium, zircon, and rare earths. He described this transition as strategically astute, explaining Energy Fuels is effectively "de-radioactivating critical minerals," allowing these materials to be safely transported and widely distributed, thus expanding their market potential and strategic accessibility.

The U.S. further escalated its confrontation with China's dominance in critical battery materials. The Commerce Department

preliminarily determined that Chinese imports of active anode materials, including graphite and silicon essential for EV batteries, benefited from unfair state subsidies. This move, potentially leading to substantial anti-subsidy duties, aims to level the competitive landscape but could inadvertently elevate electric vehicle prices in a sensitive political climate.

Geopolitical friction over environmental regulations was evident domestically, with the U.S. Senate voting to revoke California's stricter emissions standards waivers. This contentious decision, drawing bipartisan support, sets the stage for legal battles and could significantly affect national automotive standards and critical mineral demand linked to electric vehicle mandates.

Internationally, Vietnam's crackdown on illegal rare earth exports highlighted regulatory risks within critical minerals sourcing, sentencing 23 officials and business figures in a high-profile trial. Simultaneously, Rosneft consolidated control over Russia's largest rare earth deposit, Tomtor, reflecting Moscow's strategic push to reduce dependency on China and claim a larger share of the global rare earth market by 2030.

In corporate developments, Rio Tinto's significant lithium investment in Chile, using direct lithium extraction technology, represents a major bet on innovative but unproven extraction methods amid volatile market prices. The company simultaneously secured Argentine approval for its Rincon lithium project, strengthening its footprint in South America's strategic lithium triangle despite industry concerns over regulatory delays affecting other investors.

Supply chain concerns intensified with the International Energy Agency's stark warning about impending copper shortages. The IEA forecasts a 30% gap between supply and demand by 2035, pressing governments to expedite project development, diversify sources,

and bolster recycling initiatives. Concurrently, a notable shift toward lithium iron phosphate (LFP) batteries in the rapidly expanding energy storage sector signals declining prospects for nickel and cobalt, potentially reshaping commodity market dynamics.

Finally, the launch of the first U.S. antimony mine by Perpetua Resources Corp. (Nasdaq: PPTA | TSX: PPTA) marked a pivotal step in reducing reliance on Chinese imports crucial for military and technological applications, while Clarios announced a significant domestic investment of up to $1 billion in a critical minerals processing facility. These developments, amid intensified global competition, underscore the West's challenging yet crucial efforts to reclaim control of critical mineral supply chains long dominated by China.

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Christopher Ecclestone Says Canada is 'Where It's At' for Critical Minerals as Tungsten Takes Center Stage at CMI Summit IV (May 23, 2025, Source) – Tungsten decisively took center stage at Toronto's recent CMI Summit IV, with Christopher Ecclestone of Hallgarten + Company declaring it "the new lithium," vital for both military and industrial sectors. Ecclestone also spotlighted the shifting U.S.-Canada relationship, noting that despite past trade tensions, American policymakers increasingly recognize Canada's strategic importance for critical minerals. He emphasized the urgency of diversifying supply chains away from geopolitical risks associated with gallium, antimony, and rare earth elements, highlighting Energy Fuels Inc.'s (NYSE American: UUUU | TSX:

EFR) strategic pivot toward safely processing heavy mineral sands. Additionally, Ecclestone advocated for stronger U.S.-South Africa ties, underscoring South Africa's substantial mineral resources crucial for securing stable supplies of chromium, manganese, and platinum-group metals.

US targets Chinese battery material imports (May 22, 2025, Source) – The U.S. Commerce Department has issued a preliminary determination that Chinese imports of active anode materials—used in electric vehicle (EV) batteries, including graphite and silicon—have been unfairly subsidized. This finding could lead to anti-subsidy duties aimed at countering the impact of China's state-backed pricing, which U.S. producers argue undermines domestic competition. The move marks an early step in broader trade investigations that also include a probe into alleged unfair pricing. Final decisions are expected later this year, separate from broader tariff measures under former President Donald Trump. Tariff hikes may impact EV costs amid proposed Republican tax changes.

Senate votes to revoke California's EV emissions waivers (May 22, 2025, Source) – On May 22, 2025, the U.S. Senate voted 51-44 to revoke three EPA-granted waivers allowing California to enforce stricter vehicle emissions standards than federal regulations. These waivers include mandates for tailpipe emissions, smog control from heavy-duty vehicles, and California's rule requiring all new vehicle sales be zero-emission by 2035. Democratic Senator Elissa Slotkin joined Republicans in support. The move, criticized by Democrats and environmental groups as illegal under the Clean Air Act, prompted California officials to vow legal action. Sixteen other states and D.C. follow California's standards, making the vote nationally significant.

Vietnam jails 23 people over rare earths exploitation (May 21,

2025, Source) – A Vietnamese court has sentenced 23 officials and businesspeople to prison over the illegal exploitation and export of rare earth elements. The nine-day trial in Hanoi involved 27 defendants, including former Deputy Minister Nguyen Linh Ngoc, who received three years in jail. Sentences ranged up to 16 years, with four suspended. The court found that Thai Duong Company unlawfully mined rare earths and iron ore at Yen Phu mine from 2019 to 2023, generating around $30 million, largely from exports to China. The case follows a sharp USGS downgrade of Vietnam's rare earth reserves from 22 million to 3.5 million tons.

Rosneft takes control of Russia's largest rare earth deposit, registry shows (May 21, 2025, Source) – Rosneft, Russia's largest oil producer, has taken full control of Vostok Engineering, the operator of the Tomtor rare earth deposit, according to a state companies registry. Located in Yakutia, Tomtor is Russia's largest rare earth metal deposit and key to its goal of reducing dependence on Chinese imports. President Putin previously criticized delays in the project's development and urged faster progress. Russia aims to capture up to 12% of the global rare earth market by 2030. The deposit changed hands several times post-Ukraine conflict before Rosneft's acquisition on May 20.

Rio Tinto's Chile deal is a bet on unproven tech and lithium price bounce (May 21, 2025, Source) – Rio Tinto (NYSE: RIO | ASX: RIO | LSE: RIO) has partnered with Chilean state-run firms Codelco and ENAMI to lead two major lithium projects—Maricunga and Altoandinos—marking Chile's most significant lithium ventures in years. Rio will own nearly 50% of Maricunga and 51% of Altoandinos, deploying direct lithium extraction (DLE), a yet-unproven technology in Chile. The initiative follows the surprise exit of Rio CEO Jakob Stausholm and comes amid a 90% drop in lithium prices since 2022. Rio plans to invest up to

$900 million in Maricunga and $425 million in Altoandinos, leveraging experience from its Argentina DLE pilot project and recent Arcadium acquisition.

Diversification is the cornerstone of energy security, yet critical minerals are moving in the opposite direction (May 21, 2025, Source) – The IEA's 2025 Global Critical Minerals Outlook warns of increasing vulnerabilities in critical mineral supply chains despite current market surpluses and falling prices. The report highlights rising supply concentration, with the top three producers—especially China and Indonesia—controlling 86% of the market in 2024, up from 82% in 2020. Investment growth and exploration in 2024 slowed, while demand, particularly for lithium and copper, surged. Export restrictions now affect 55% of strategic minerals. The IEA also notes high dependence on China for refining and new battery technologies, underscoring significant geopolitical and supply chain risks.

Province Investing $3.1 Billion to Support Indigenous Partnership in Critical Mineral Development (May 21, 2025, Source) – The Ontario government is investing nearly $3.1 billion to support Indigenous partnerships in critical mineral development as part of its 2025 budget. This includes expanding the Indigenous Opportunities Financing Program to $3 billion, a $70 million boost to the Indigenous Participation Fund over four years, and $10 million in scholarships for First Nations students pursuing careers in resource development. These measures aim to enhance Indigenous equity, regulatory capacity, and workforce training in mineral-rich regions like the Ring of Fire, supporting Ontario's goal of creating a made-in-Ontario critical minerals supply chain and strengthening economic reconciliation.

Demand for copper to dramatically outstrip supply within decade (May 21, 2025, Source) – The International Energy Agency (IEA)

warns that global copper demand will exceed supply by 30% by 2035 without significant action. Copper is essential to renewable energy systems, and the IEA highlights the urgent need for government intervention to increase supply, refine critical minerals domestically, and form global partnerships. China currently dominates mineral refining, processing over 70% of the top 20 energy-related minerals. IEA Executive Director Fatih Birol emphasized that diversifying supply, accelerating project development, and investing in recycling could ease shortages. Supply shocks could increase battery prices by 40–50%, threatening the global green energy transition.

Energy storage boom drives battery shift, leaving nickel, cobalt behind (May 21, 2025, Source) – The rapid growth of energy storage is reshaping the battery industry, driven by the adoption of lithium iron phosphate (LFP) batteries, which are cheaper and free of nickel and cobalt. Fidra Energy's $800 million Thorpe Marsh project in the UK exemplifies this trend, as LFP battery costs have halved in 18 months. Energy storage demand is rising faster than electric vehicle (EV) sales, now accounting for 20% of battery market forecasts by 2030. The shift is depressing nickel and cobalt prices, while lithium demand may benefit. China remains dominant in LFP supply, despite U.S. and European efforts to localize production.

Trump admin hits bullseye with first US mine for key mineral used in military ammo, night-vision, Big Tech (May 20, 2025, Source) – The Trump administration supported the launch of the first U.S. mine for antimony, a critical mineral primarily sourced from China, which currently dominates half of global production. Located in Idaho and operated by Perpetua Resources Corp. (Nasdaq: PPTA | TSX: PPTA), the Stibnite Gold Project will extract and smelt antimony, vital for military ammunition, night-vision technology, semiconductors, and hardened alloys. The mine, which also includes significant gold extraction

potential, received its 404 permit from Interior Secretary Doug Burgum. The project, backed by the National Energy Dominance Council, will create 550 jobs and is projected to reduce U.S. antimony import reliance by one-third.

Argentina approves $2.5 bln Rio Tinto lithium mining project (May 20, 2025, Source) – Argentina has approved Rio Tinto's $2.5 billion Rincon lithium project in Salta province—the first to be sanctioned under the new RIGI investment incentive regime. The announcement was made by Mining and Energy Secretary Daniel Gonzalez, amid industry concerns over delays in approving other applications. The RIGI framework offers tax and customs benefits, arbitration access, and long-term stability. Despite seven projects submitted under RIGI in the past nine months—including proposals by Ganfeng, McEwen Copper, and Posco—only Rio Tinto's has been approved so far. Argentina, part of the "lithium triangle," is the world's fourth-largest lithium supplier.

China's CMOC calls on Congo to lift cobalt export ban, sources say (May 20, 2025, Source) – China's CMOC Group, the world's largest cobalt producer, urged the Democratic Republic of Congo (DRC) to lift its four-month cobalt export ban, set to expire June 22. The ban was imposed in February to address oversupply as prices hit nine-year lows. At a closed-door industry meeting in Singapore, CMOC Vice President Kenny Ives warned the restriction could accelerate a shift to cobalt-free lithium iron phosphate (LFP) batteries. Congolese officials reportedly viewed this as a threat. Meanwhile, Glencore supported continued restrictions or export quotas to stabilize prices. DRC is evaluating options, including extending the ban or moving to quotas.

Clarios Reveals Site Selection Process for an Anticipated Investment of up to $1B to Build and Equip a Critical Mineral

Processing & Recovery Plant in the United States (May 20, 2025, Source) – Clarios, the world's leading manufacturer and recycler of low-voltage batteries, announced plans to invest up to $1 billion in a U.S.-based critical minerals processing and recovery plant. Enabled by federal tax credits and executive orders, the plant aims to enhance national security and supply chain resilience by processing minerals like antimony, vital for defense applications. Indiana, Texas, and Utah are being considered for the site. Part of Clarios' broader $6 billion American energy strategy, the facility will utilize advanced technologies to extract critical minerals from recycled materials and support future battery manufacturing innovations.

The Eel Trap of Globalization: The West's Uphill Battle to Reclaim Critical Mineral Supply Chains (May 18, 2025, Source) – Over the past decades, globalization has shifted the dominance in critical mineral supply chains from Western nations to countries with rich deposits and low processing costs, particularly China. This shift was driven by efficiency, leading to local processing and manufacturing, and eventually value addition moving abroad. As the West now attempts to re-establish its position, it faces challenges from entrenched infrastructure and industrial policies in China. China, meanwhile, is grappling with overcapacity in rare earth permanent magnet motor (REPMM) production. The West's reshoring efforts face limitations due to the loss of upstream value chains and lack of coherent industrial policies.

InvestorNews.com Media Highlights

- May 20, 2025 – Nationalize like Canadians. https://bit.ly/4krPtKD
- May 20, 2025 – Resouro's Tiros Deposit Positions Brazil as a New Source of Titanium and Rare Earths

https://bit.ly/4jhnr3B

- May 18, 2025 – The Eel Trap of Globalization: The West's Uphill Battle to Reclaim Critical Mineral Supply Chains https://bit.ly/431RxTO

InvestorNews.com Video Highlights

- May 23, 2025 – Christopher Ecclestone Says Canada is 'Where It's At' for Critical Minerals as Tungsten Takes Center Stage at CMI Summit IV https://youtu.be/cDxMIj40lLc

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- May 23, 2025 – Resouro Strategic Metals Inc. (ASX:RAU) Files Updated NI43-101 Technical Report for Tiros https://bit.ly/4kSpJYf
- May 23, 2025 – Australian Strategic Materials Limited: Termination of Mount Squires Project Option Agreement https://bit.ly/3FoLRtU
- May 22, 2025 – Coniagas Begins Field Work on Graal's Southern Claims https://bit.ly/3FmOWuu
- May 22, 2025 – Neo Concludes Strategic Review and Accelerates Current Strategic Path https://bit.ly/4dtH33b
- May 21, 2025 – American Rare Earths Limited: Channel Sampling Reinforces Expansion Potential of Bluegrass Area at Halleck Creek https://bit.ly/3Fk41Np
- May 21, 2025 – Appia Announces Appointment of Peter J. Cashin as a Director of the Company https://bit.ly/4dLh9rX