

Technology Metals Report (04.12.2024): Gina Rinehart Steps into the Critical Minerals Ring, while Copper Prepares for a Bull Ride

written by Tracy Weslosky | April 12, 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 surging [success](#) of [Vulcan Energy Resources Ltd.](#) (ASX: VUL), backed by Gina Rinehart, in lithium production, signaling a significant advancement in battery technology. Additionally, we explore the implications of [copper's](#) climb to a 2024 high, heralded by Citi analysts as the start of the metal's second bull market this century, amidst concerns about sustainability and market dynamics. We also delve into the [ramifications](#) of Chinese car manufacturing in Italy on Stellantis and the [challenges](#) faced by Volkswagen amidst a resurgence in petrol car demand in Europe, among other crucial developments shaping the industry landscape.

This week's TMR Report also highlights the strategic moves of influential figures like Gina Rinehart, whose [investments](#) in the U.S. rare earths sector and Brazil hint at potential industry mergers and reshaping of the global rare earths supply chain. Furthermore, we discuss the imperative for the United States to

strengthen its commercial ties with African nations to secure key minerals, aiming to reduce dependency on China. Amidst fluctuating rare earths prices in China and U.S. efforts to bolster domestic mining projects, we explore the intersection of environmental concerns with mining practices, exemplified by Australian billionaire Andrew Forrest's call for [greener nickel](#) production. Lastly, we examine Canada's risk of losing its position as a major mining capital due to government opacity surrounding Chinese investments in the critical minerals sector, highlighting the broader implications of uncertain investment policies on the industry's strategic positioning.

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Gina Rinehart-Backed Lithium Hopeful Surges After Demo Batch: (April 11, 2024, [Source](#)) – [Vulcan Energy Resources Ltd.](#) (ASX: VUL), an Australia-listed lithium developer, experienced a surge of nearly 40% in its stock value after announcing the successful production of a demo batch of lithium chloride using direct-extraction technology (DLE) at its demonstration plant in Landau, Germany. This marks a significant advancement in lithium production for batteries, showcasing the potential of DLE to streamline the production process. Vulcan, backed by Australia's wealthiest individual Gina Rinehart, has established supply agreements with major European car manufacturers like Stellantis, Renault SA, and Volkswagen AG. The company's achievement was hailed as a validation of Vulcan's efforts and the viability of DLE in the lithium supply chain. Vulcan aims to commence commercial production in 2026, targeting an annual output sufficient to support half a million electric vehicles, while still seeking necessary funding. The project promises reduced carbon emissions by utilizing geothermal energy.

Copper prices climb to 2024 high as Citi calls the start of the

metal's second bull market this century: (April 10, 2024, [Source](#)) – Copper prices have surged to their highest levels since June 2022, with May delivery trading at \$4.323 per pound in New York and three-month prices on the London Metal Exchange rising to \$9,477 per metric ton. This increase reflects growing demand for copper, seen as an indicator of economic health and a vital component of the energy transition, including electric vehicles, power grids, and wind turbines. Citi analysts herald the start of copper's second secular bull market of the century, predicting prices could average \$10,000 per metric ton by year's end and potentially rise to \$15,000 in a bullish scenario. However, concerns exist about the sustainability of these price levels, with some analysts warning that high prices could dampen demand through substitution or demand destruction, emphasizing the self-regulating nature of commodity markets.

Chinese car manufacturing in Italy could force tough decisions, says Stellantis CEO: (April 10, 2024, [Source](#)) – Stellantis N.V. (NYSE: STLA) CEO Carlos Tavares warned of tough decisions, including potential plant closures, as Chinese car manufacturing in Italy could introduce new competition, notably from automakers like Chery Auto. The Italian government's negotiations with Tesla Inc. (NASDAQ: TSLA) and Chinese companies aim to boost Italy's automotive production. Tavares emphasized the pressure on Stellantis, Italy's only major automaker, could lead to efforts to increase productivity to stay competitive, potentially affecting market share and necessitating a reduction in the number of plants. Despite rumors, Tavares confirmed Stellantis's commitment to Italy, highlighting investments such as the extension of Fiat Panda's production until 2030 and the inauguration of a facility for electrified transmissions at Mirafiori. He dismissed speculation about divesting from Italy as "fake news."

Volkswagen electric car sales plunge as Europe returns to

petrol: (April 10, 2024, [Source](#)) – Volkswagen's electric vehicle (EV) sales in Europe plummeted by nearly a quarter in the first quarter of the year, amid a resurgence in petrol car demand, driven by high inflation and rising energy costs. This decline contrasts with a modest 3% global dip in all-electric sales and a 4% rise in combustion engine vehicle sales. The shift comes as governments reevaluate EV subsidies and emissions targets, with the UK delaying its ban on new petrol and diesel sales from 2030 to 2035, and the EU considering allowances for synthetic fuels. This backdrop of diminishing government support and increased competition from more affordably priced Chinese EVs, such as those from BYD, has pressured Volkswagen's sales. Despite these challenges, Volkswagen experienced a significant 91% surge in EV sales in China, underscoring the regional disparities in EV adoption trends. Other manufacturers like BMW and Tesla also report varying EV sales performance, highlighting the evolving and competitive landscape of the global electric vehicle market.

China's Tianqi Lithium's \$4bn bet on Chile at risk of backfiring: (April 9, 2024, [Source](#)) – In 2018, Tianqi Lithium, a major Chinese lithium producer, invested \$4 billion to acquire a significant stake in Chile's SQM, a move aimed at securing a strong position in the global lithium market, essential for electric vehicles. This investment in the heart of the "lithium triangle" (Argentina, Bolivia, and Chile) now faces challenges due to Chile's government seeking greater control over lithium resources, particularly in the Atacama Desert where SQM operates. SQM's agreement with Codelco, a state-owned enterprise, to form a joint venture aligns with Chilean policies for public-private partnerships in strategic sectors, potentially diminishing Tianqi's influence and future prospects in SQM's lithium venture. This development is part of a broader trend where countries are reclaiming control over critical

minerals for the green transition, affecting companies like Tianqi, whose profitability and market position are under pressure from changing regulations, market dynamics, and operational challenges, both in Chile and globally.

Rinehart's MP Buy Could Trigger Rare Earths Mining Mega Merger: (April 9, 2024, [Source](#)) – Gina Rinehart, Australia's wealthiest person and iron ore magnate, has made a significant move into the U.S. rare earths sector by acquiring a 5.3% stake in MP Materials Corp. (NYSE: MP), which owns the Mountain Pass mine in California. This purchase has led to a 20% increase in MP's share price within five days. Rinehart's investment extends beyond MP to a 10% stake in [Arafura Rare Earths Limited](#) (ASX: ARU), an Australian rare earth producer, and 5.8% in a Brazilian company. Amidst growing competition with China and threats to "weaponize" its dominance in rare earths essential for modern technologies, Rinehart's actions hint at potential for a major merger, particularly between MP and Australia's Lynas Rare Earths Ltd. (ASX: LYC), aiming to create a significant non-Chinese rare earth supply. This development could signal strategic shifts in global rare earths production, with potential large-scale industry consolidation on the horizon.

China's EV export boom fuels surge in demand for new car-carrying ships: (April 9, 2024, [Source](#)) – Amidst a burgeoning demand for electric vehicles (EVs), Chinese automakers and shippers are investing heavily in a fleet expansion, ordering a record number of car-carrying ships. This surge places China on a trajectory to possess the world's fourth-largest car-carrying fleet by 2028, ascending from its current eighth position. Major corporations like SAIC Motor, Chery Automobile, and EV titan BYD, along with shippers such as COSCO and China Merchants, are spearheading this initiative, accounting for a quarter of global orders. This influx primarily benefits Chinese shipyards, capturing 82% of the global orders. The expansion into foreign

markets, buoyed by a cost-efficient supply chain, has been crucial for Chinese automakers facing domestic challenges like price competition and a slow economy. Notably, China has surpassed Japan as the premier auto exporter, with significant contributions from companies like BYD. However, this export growth has raised concerns in the U.S. and EU about market oversaturation with low-priced goods, though China rebuts, highlighting innovation and downplaying state support's role.

US must boost Africa ties to secure key minerals, report says: (April 9, 2024, [Source](#)) – To secure vital minerals critical for sectors ranging from electric vehicle production to defense, the United States must strengthen its commercial relationships with African nations, a report from the United States Institute of Peace emphasizes. This is to reduce dependency on China, which currently dominates the supply of these critical minerals. The U.S.'s near-total reliance on foreign sources, especially China, for these materials poses significant economic and national security risks. The report highlights the lag of Western mining companies behind Chinese counterparts in tapping into Africa's rich mineral resources. It suggests enhanced U.S. commercial diplomacy, particularly with leading mineral suppliers like the Democratic Republic of Congo and Zambia. Additionally, it points out the competition from Middle East firms and proposes measures like increasing project financing and reopening the U.S. consulate in Lubumbashi to facilitate U.S. investment. Despite challenges, the report argues for a more vigorous approach to match China's influence in Africa's mining sector.

Rare earths prices in China hit 7-week high on post-holiday restocking: (April 9, 2024, [Source](#)) – Rare earths prices in China, the world's leading producer, reached a seven-week peak on April 8 due to increased post-holiday restocking, before slightly declining the following day. With China dominating 70% of mining and 90% of the refined rare earths market, notable

increases were observed in praseodymium oxide and terbium oxide prices, highlighting the country's significant influence on the market. The demand surge, particularly after the QingMing Festival, led to a depletion of in-plant stocks among magnetic materials producers, who then turned to the spot market for replenishment. Additionally, the use of ore cargoes as collateral by some to alleviate financial pressures contributed to the price hike. The start of the rainy season in Myanmar, a major supplier, is expected to reduce ore availability, potentially increasing market volatility as companies rely more on spot market purchases, impacting long-term contract stability. Consequently, shares in China Northern Rare Earth (Group) High-Tech saw a 4.3% increase.

Perpetua Resources gets nod to seek \$1.8 bln US loan for antimony mine: (April 8, 2024, [Source](#)) – [Perpetua Resources Corp.](#) (NASDAQ: PPTA | TSX: PPTA) has received preliminary approval from the U.S. Export-Import Bank (EXIM) for a \$1.8 billion loan to develop an antimony and gold mine in northern Idaho, aligning with efforts to reduce China's dominance in critical minerals. This potential loan marks one of the largest U.S. investments in the mining sector, reflecting the Biden administration's strategy of using federal funds to support projects that compete with Chinese firms. In addition to this loan, Perpetua will seek extra equity funding. The Stibnite mine aims to become the only U.S. source of antimony, vital for military hardware and electric vehicle batteries, while also harboring substantial gold reserves. This venture is part of a broader U.S. initiative to secure domestic supplies of essential minerals and counter China's market influence.

Mining billionaire Forrest urges China to demand greener nickel: (April 7, 2024, [Source](#)) – Australian mining billionaire Andrew Forrest has publicly called for China to implement and enforce higher environmental standards within its global supply chains,

especially focusing on nickel processing in Indonesia, citing severe environmental damage. In a Financial Times interview, Forrest, who is the chair and largest shareholder of Fortescue Ltd. (ASX: FMG), criticized the extraction of Indonesian nickel for its extensive environmental degradation and urged electric vehicle manufacturers to be cautious when sourcing nickel from Indonesia. Forrest highlighted that China's increasing control over Indonesia's nickel production, vital for electric car batteries and steelmaking, comes with significant environmental concerns, including deforestation, mining waste pollution, and high carbon emissions from coal power. Despite shutting down his nickel mines in Western Australia due to price drops influenced by Indonesian nickel, Forrest remains vocal about the need for a "green premium" for sustainably produced nickel and criticizes the lack of differentiation in the market. The call comes amid rising environmental scrutiny and the potential for market-driven adjustments to reflect the environmental cost of production.

Canada risks losing mining capital because of government opacity around Chinese investment in critical minerals sector: (April 5, 2024, [Source](#)) – The opacity of the Canadian government regarding Chinese investment in the critical minerals sector is leading to investor uncertainty and risking Canada's position as a major capital source for mining. Despite Ottawa's late 2022 announcement allowing Chinese investments only under "exceptional circumstances" without defining them, transactions continue, confusing the market. For instance, Shenghe Resources acquired a 10% stake in Vital Metals Ltd. (ASX: VML), owner of Canada's only operating rare earths mine, even purchasing a significant stockpile of rare earths mined in Canada. Critics, including those from the Macdonald-Laurier Institute, find it problematic, especially given China's dominance in the rare earths market. The unclear stance and handling of investments,

such as the blocked financing deal for SRG Mining Inc. (TSXV: SRG)., reflect a broader uncertainty and potential discouragement of future critical minerals companies from basing in Canada, fearing the government's unpredictable investment policies. This situation may drive new companies to other countries, impacting Canada's mining capital and strategic positioning in critical minerals.

Investor.News Critical Minerals Videos:

- April 12, 2024 – Defense Metals Dr. Moreno on the Wicheeda Project Poised to Become North America's Next Rare Earth Mine <https://bit.ly/3TXs7kh>

Critical Minerals IN8.Pro Member News Releases:

- April 10, 2024 – American Rare Earths' Assay Results Expand Rare Earth Enrichment Within the Cowboy State Mine Area at Halleck Creek, Wyoming <https://bit.ly/3JecW0T>
- April 10, 2024 – Critical Metals PLC: Issue of Convertible Loan Notes and Corporate Update <https://bit.ly/4aLZ75P>
- April 10, 2024 – Mount Squires Project Option Agreement to unlock potential further rare earth supply <https://bit.ly/440rco4>
- April 09, 2024 – Pekuakamiulnuatsh First Nation and First Phosphate Announce Collaboration Agreement <https://bit.ly/4d2nH4C>

Technology Metals Report (04.05.2024): Uranium Price Doubles as the Green Economy Charges Forward

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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 Ford Motor's strategic [decision](#) to delay its all-electric SUV and truck productions in favor of expanding its hybrid offerings, signaling a broader trend in the automotive sector towards hybrid technologies. The [resurgence](#) of the uranium market, with prices doubling due to the growing demand for clean energy, underlines the critical role of uranium in achieving 2050 climate targets. Moreover, the DRC's [decision to suspend](#) nine subcontractors at ERG mines due to non-compliance issues highlights the persistent challenges and evolving regulatory landscape in the cobalt industry. This action reflects a commendable direction by the Congo government towards enhancing industry standards and governance. The entry of Aclara Resources Inc. into the U.S. [rare earth processing](#) market was both newsworthy and offered Jack Lifton an opportunity to update readers on the advancements of REE processes in North America today.

This week's TMR Report also highlights significant developments across the global critical minerals landscape, including the European Union and the United States' [efforts](#) to broaden their reach in securing critical minerals amidst a stalled bilateral agreement, and Ionic Rare Earths Limited's [joint venture](#) with Viridis Mining to establish a rare earth refining and recycling presence in Brazil. The U.S. Department of Energy's \$75 million [investment](#) in a Critical Minerals Supply Chain Research Facility aims to reduce reliance on foreign sources and bolster national security. Furthermore, the [collaboration](#) between NOVONIX Limited and Lithium Energy Limited to form Axon Graphite Limited through a public listing emphasizes the strategic moves within the natural graphite sector. MP Materials' [awarded](#) tax credit to advance U.S. rare earth magnet manufacturing marks a significant step towards reducing dependency on imported critical materials. Lastly, the [extension](#) of Canada's Mineral Exploration Tax Credit (METC) and the Biden-Harris Administration's [announcement](#) of a \$4 billion initiative in tax credits for clean energy supply chain projects underline the ongoing efforts and investments to strengthen the critical minerals sector, underscoring the importance of these developments for our energy security, economic prosperity, and environmental sustainability.

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Ford to delay all-electric SUV, truck to focus on offering hybrid vehicles across its lineup by 2030: (April 04, 2024, [Source](#)) – Ford Motor has announced a strategic shift in its electric vehicle (EV) plans, postponing the production of a new all-electric SUV and pickup truck to focus on expanding its hybrid vehicle offerings across its entire North American lineup by 2030. Despite this delay, Ford remains committed to the EV market, planning to continue its investments in electric technology. The production of a three-row SUV in Canada has been

rescheduled from 2025 to 2027, and the launch of a next-generation pickup, codenamed "T3," has been moved from late 2025 to 2026. This decision reflects broader industry trends, with many automakers reassessing their EV strategies amid slower-than-expected adoption rates and high production costs. Additionally, Ford aims to leverage new battery technology to enhance the durability and value of its future EVs, focusing its efforts on newly established plants like the "BlueOval City" in Tennessee, rather than converting existing facilities.

Uranium price creates new ASX boom: (April 04, 2024, [Source](#)) – In 2023, uranium prices doubled from US\$48 to US\$91 per pound, peaking at US\$106 in 2024, highlighting a significant recovery from previous lows. This resurgence, fueled by the demand for clean energy and carbon emission reductions, has revived interest in uranium projects, now seen as viable at around US\$100 per pound. Global initiatives to expand nuclear energy, with significant investments in new reactors in the US, China, and France, underscore uranium's critical role in meeting 2050 climate targets. Despite temporary price dips, the market outlook remains positive, driven by global nuclear expansion and supply constraints. This bullish sentiment has revitalized the uranium sector, particularly benefiting ASX-listed companies engaged in uranium exploration and mining, reflecting a broader industry optimism and investment in nuclear energy's future.

Congo Suspends ERG Subcontractors at Major Cobalt Mine: (April 04, 2024, [Source](#)) – The Democratic Republic of Congo has suspended nine subcontractors at Eurasian Resources Group (ERG) mines, citing non-compliance with laws requiring Congolese ownership. This move, announced on March 14, intensifies tensions between ERG and the government, which is pushing for greater domestic benefits from the mining sector. Congo, a major global supplier of cobalt and a significant copper producer, is enforcing regulations to ensure local control of mining

operations. The government's actions also reflect ongoing disputes with ERG over asset development and environmental concerns. Despite the suspensions, ERG insists it adheres to local laws, emphasizing its support for Congolese suppliers and its commitment to legal compliance. The sanctions target subcontractors at Metalkol and Frontier, two key ERG projects in Congo, but are not expected to affect output due to a transitional period for bringing in compliant firms. The controversy highlights Congo's efforts to secure more benefits from its mineral resources while navigating challenges with international mining companies.

Disruptive Shift to Rare Earth Processing as Aclara Moves into American Market: (April 03, 2024, [Source](#)) – Jack Lifton of the [Critical Minerals Institute](#) (CMI) offered an analysis on [Aclara Resources Inc.](#)'s (TSX: ARA) strategic entry into the U.S. rare earth processing market. Aclara aims to utilize ionic clay deposits from Chile and Brazil for heavy rare earth elements (HREEs) crucial in magnet manufacturing. They've partnered with the Saskatchewan Research Council and Hatch Ltd. for processing facility development. Lifton, however, questioned the project's ambitious timeline and compared Aclara's efforts to established players like [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR), which is advancing in light rare earth (LREE) separation. The column highlights the competitive nature of the rare earth market, with Aclara facing challenges from Energy Fuels, [MP Materials](#) (NYSE: MP) and [Ucore Rare Metals Inc.](#) (TSXV: UCU | OTCQX: UURAF). Lifton suggests Aclara needs deeper industry integration and strategic partnerships, indicating a complex journey ahead in a competitive and technological landscape.

EU, US seek broader reach on critical minerals as own deal stalls: (April 03, 2024, [Source](#)) – The European Union (EU) and the United States (US) are not expected to finalize a critical minerals agreement at an upcoming meeting. Despite this, they

plan to launch initiatives to partner with resource-rich countries. The EU aims for an accord allowing minerals processed in Europe to be eligible for US clean vehicle incentives, focusing on cobalt, graphite, lithium, manganese, and nickel. A senior European Commission official cited the absence of an imminent deal but confirmed a joint commitment to future agreements. Difficulties include US demands for labor standards verification at mining sites. Moreover, the EU and US are seeking to differentiate their offerings from China's by emphasizing infrastructure funding, sustainability, and value-added business opportunities for developing countries, with plans to engage with ministers from Namibia, Ukraine, Kazakhstan, and Uzbekistan among others.

Ionic Rare Earths Limited (ASX:IXR) and Viridis Mining to Form REE Refining and Recycling JV in Brazil: (April 03, 2024, [Source](#)) – [Ionic Rare Earths Limited](#) (ASX:IXR) and [Viridis Mining and Minerals Limited](#) (ASX:VMM) have announced a 50:50 joint venture (JV) to establish a dominant position in the global supply chain for Rare Earth Elements (REE) in Brazil. This strategic partnership aims to utilize IonicRE's intellectual property and Viridis' global assets to become a leading supplier of high-quality, reliable rare earths crucial for various industries and energy transition. The JV plans to co-fund a Brazilian production facility, aiming to complete a Scoping Study by the end of 2024 and a preliminary feasibility study within 18 months. IonicRE's recent success in producing rare earth oxides at its Belfast facility and Viridis' promising Colossus Ionic Adsorption Clay REE Project in Brazil highlight the joint venture's potential to accelerate growth and leverage Brazil's rich rare earth resources. This collaboration aligns with Brazil's ambition to become a global leader in rare earth production, offering an exceptional opportunity for both companies to advance their positions in the rare earth supply

chain significantly.

DOE Invests \$75 Million to Strengthen Nation's Critical Minerals Supply Chain: (April 02, 2024, [Source](#)) – The U.S. Department of Energy (DOE), under President Biden's Investing in America agenda, announced a \$75 million investment for a Critical Minerals Supply Chain Research Facility, aimed at bolstering the nation's supply chains for critical minerals and materials essential for energy security, economic prosperity, and national security. This initiative, part of the Bipartisan Infrastructure Law, focuses on reducing reliance on foreign sources by accelerating the production of critical minerals from diverse sources. The facility will collaborate with other government initiatives and aims to enhance supply chain efficiencies and support a circular economy. A supply chain assessment highlighted the risks of over-reliance on foreign and adversarial sources for these materials, underscoring the importance of this project for the U.S.'s clean energy transition, manufacturing sector revitalization, and overall competitive edge. The project will involve nine national laboratories, emphasizing community engagement and benefits in line with the Justice40 Initiative. This is in addition to FECM's commitment of \$58 million since January 2021 to further support critical mineral and material projects across the country.

NOVONIX Limited and Lithium Energy Limited to Combine Natural Graphite Interests with Intention to Take Combined Business Public: (April 02, 2024, [Source](#)) – [NOVONIX Limited](#) (NASDAQ: NVX | ASX: NVX) and [Lithium Energy Limited](#) (ASX: LEL) are combining their natural graphite exploration interests into a newly formed company, Axon Graphite Limited, aiming for a public listing through an initial public offering (IPO) on the Australian Securities Exchange (ASX). Both companies will each retain up to 28.57% ownership post-IPO, intending to create a significant

natural flake graphite project. This move is designed to unlock value for shareholders of both NOVONIX and LEL, with eligible shareholders given priority in the IPO. The combination of NOVONIX's Mt. Dromedary project and LEL's Burke and Corella projects under Axon signifies the development of a major resource aimed at supporting the electric vehicle and energy storage sectors. The IPO seeks to raise between \$15 million to \$25 million, setting the stage for Axon to become a key player in the battery materials sector, benefiting from the anticipated growth in demand for anode materials and high-grade graphite products.

MP Materials Awarded \$58.5 Million to Advance U.S. Rare Earth Magnet Manufacturing: (April 01, 2024, [Source](#)) – [MP Materials](#) (NYSE: MP) has been awarded a \$58.5 million tax credit by the IRS and Treasury, under the Section 48C Advanced Energy Project, to support the construction of the first fully-integrated rare earth magnet manufacturing facility in the United States. This grant was part of a competitive process by the Department of Energy assessing around 250 projects for their viability and environmental impact. The facility will focus on producing neodymium-iron-boron (NdFeB) magnets, essential for various applications including electric vehicles, wind turbines, and defense systems. With global demand for these magnets expected to triple by 2035, MP Materials' initiative aims to commence the commercial production of magnet precursor materials in Fort Worth, Texas, by summer and finished magnets by late 2025, supplying to companies like General Motors. This project addresses the U.S.'s near-total reliance on imports for these critical materials, mainly from China, and aims to establish a sustainable, end-to-end supply chain.

Relief and Renewal: Canada's METC Extension Breathes New Life into Mineral Exploration: (March 31, 2024, [Source](#)) – The Canadian government announced the extension of the Mineral

Exploration Tax Credit (METC) until March 31, 2025, addressing concerns in the mining sector over the future of flow-through financings. This move has been met with relief, particularly as the deadline approached without prior confirmation, sparking anxiety among stakeholders. The METC plays a vital role in supporting exploration companies by enhancing flow-through share pricing, thereby facilitating fundraising. Critics, including Peter Clausi from the [Critical Minerals Institute](#) (CMI), had voiced concerns over the uncertainty caused by the government's silence, which hampered planning and investments. The extension is seen as crucial for continued investment in the sector, particularly benefiting junior mining companies and associated industries, including First Nations communities. Despite debates over the sufficiency of the projected \$65 million support, the decision signifies the government's recognition of mining's importance to Canada's economy and its commitment to sustainable development and Indigenous economic participation.

Central Asia's rising role in global rare earth metal competition: (March 31, 2024, [Source](#)) – Central Asian countries are becoming increasingly significant in the global competition for rare earth metals, crucial for technological and economic development. Eldaniz Gusseinov and Abakhon Sultonazarov highlight this trend against the backdrop of geopolitical shifts, such as the Ukraine conflict, prompting Western countries to seek alternatives to Russian and Chinese supplies. Central Asia, rich in mineral reserves, is eyed by the West to reduce dependencies, particularly as they move towards renewable energy sources. Kazakhstan emerges as a focal point with substantial reserves of rare earth elements like scandium, yttrium, and lanthanides, pivotal for industries ranging from computing to automobile manufacturing. The U.S. and EU are exploring investments in Kazakhstan to diversify their supply chains. Meanwhile, the U.S. and China vie for influence in the

region, leveraging their strategic advantages. Central Asia's untapped mineral wealth, including significant rare earth deposits, positions it as a critical player in global supply chains, with the potential to alter the dynamics of resource control and economic development amidst great power competition.

Biden-Harris Administration Announces \$4 Billion in Tax Credits to Build Clean Energy Supply Chain, Drive Investments, and Lower Costs in Energy Communities: (March 29, 2024, [Source](#)) – The Biden-Harris Administration has announced a groundbreaking \$4 billion initiative in tax credits to foster over 100 projects across 35 states aimed at bolstering clean energy manufacturing, reducing greenhouse gas emissions, and securing the supply chain for critical minerals. This move, part of President Biden's Investing in America agenda and funded by the Inflation Reduction Act, represents a major leap forward in the domestic production of clean energy and the strategic development of critical minerals essential for energy independence and technological advancement. Managed by the Department of Energy (DOE) in partnership with the Treasury and the IRS, the initiative focuses on a diverse range of projects, including significant investment in communities historically dependent on fossil fuels, aiming to create high-quality jobs and promote a transition to a cleaner economy. The Qualifying Advanced Energy Project Tax Credit (48C) program, rejuvenated with a \$10 billion boost from the Inflation Reduction Act, provides up to a 30% investment tax credit for approved projects that meet specific wage and apprenticeship standards. With a particular emphasis on critical minerals recycling, processing, and refining, this program is a key component of the Administration's strategy to ensure a sustainable, secure, and competitive energy future.

Investor.News Critical Minerals Media Coverage:

- April 03, 2024 – Ecclestone Takes Critical Mineral Hit Lists to Task in the Hallgarten + Co Resource Monthly “Debasing Criticality’s Currency” <https://bit.ly/3IZLkwV>
- April 03, 2024 – Disruptive Shift to Rare Earth Processing as Aclara Moves into American Market <https://bit.ly/43J4C2V>
- March 31, 2024 – Relief and Renewal: Canada’s METC Extension Breathes New Life into Mineral Exploration <https://bit.ly/4cFr1lI>
- March 29, 2024 – Boosting Market Interest Through the Strategic Advantage of a Stellar Advisory Board <https://bit.ly/3vIAWwk>

Investor.News Critical Minerals Videos:

- April 04, 2024 – Danny Huh on Neo Battery Materials’ Process Innovation, 9th Patent and Position in NBM Korea <https://bit.ly/3VL2V2X>

Critical Minerals IN8.Pro Member News Releases:

- April 04, 2024 – Power Nickel Announces C\$2 Million Private Placement <https://bit.ly/49meqkQ>
- April 03, 2024 – Voyageur Pharmaceuticals Ltd Grants

Deferred Share Units Compensation to Independent Directors
<https://bit.ly/3U3sDyH>

- April 03, 2024 – Zentek Announces U.S. Distribution Agreement for ZenGUARDTM-Enhanced Surgical Masks with Medwell Solutions <https://bit.ly/4cKM4U3>
- April 03, 2024 – Defense Metals Appoints Guy de Selliers de Moranville to the Board of Directors <https://bit.ly/3vzlxsj>
- April 03, 2024 – Panther Metals PLC – Fulcrum Metals Announce Potential Disposal of Uranium Projects <https://bit.ly/44012BX>
- April 02, 2024 – First Phosphate Drills a 2 m Vein of Massive Apatite at Its Begin-Lamarche Project in Saguenay-Lac-St-Jean, Quebec, Canada <https://bit.ly/3VIAGCb>
- April 02, 2024 – Fathom Continues to Expand the Historic Gochager Lake Deposit to Depth with Intersections of Semi-Massive to Massive Sulphide Mineralization <https://bit.ly/3TKm07I>
- April 02, 2024 – CBLT Announces Program at Past Producer Falcon Gold and Revisits Historical High Gold Values <https://bit.ly/49jcVnl>
- April 02, 2024 – Panther Metals PLC – Obonga Graphite: Awkward East Exploration Permit Application <https://bit.ly/4atD3gm>

Technology Metals Report

(03.28.2024): China Challenges US EV Plans and the DoE Invests \$6B to Decarbonize Economy

written by Tracy Weslosky | April 12, 2024

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This week's TMR Report also highlights U.S. Critical Materials' efforts to publicize its Bitterroot gallium deposits, significant for semiconductors and defense technologies; the Department of Energy's largest-ever investment to decarbonize industry; Brazilian Rare Earths Limited's new rare earth discovery in the Pele Project; challenges in America's lithium laws slowing down the pace of domestic production; and collaborative efforts between Australia's Pilbara Minerals and China's Ganfeng to study a new lithium chemical plant. Additionally, we explore CATL's discussions with Tesla and other

automakers for U.S. licensing of its battery technology, aiming to navigate the tightening U.S. regulations on the battery sector. Through these stories, the TMR provides a comprehensive overview of the latest developments affecting the critical minerals sector, highlighting the challenges and opportunities ahead. To become a CMI member and stay informed on these and other topics, [click here](#)

Chile needs to finalize more lithium plan details to spur investment, miners say: (March 27, 2024, [Source](#)) – Chile's attempt to draw private investment into its lithium sector is met with apprehension due to unresolved details and potential regulatory hurdles. The government plans to open 26 salt flats for private mining, excluding some reserved for state control, as part of President Gabriel Boric's strategy to double lithium production by decade's end. However, concerns over how contracts will be allocated, opposition from Indigenous communities, and environmental considerations could deter investors. Industry voices also caution against possible legal conflicts over mining rights and the negative impact of heavy state involvement on Chile's investment appeal. With lithium prices and electric vehicle sales currently in a slump, the attractiveness of new projects is further challenged, making neighboring countries more appealing for lithium investment.

Chile opens lithium salt flats for investment, saves two for state control: (March 27, 2024, [Source](#)) – Chile has inaugurated a significant move to open more than two dozen lithium salt flats to private investment, while strategically keeping the prolific Atacama and Maricunga deposits under state majority control. This decision is part of President Gabriel Boric's vision to increase state involvement in the nation's lithium sector, which is the second-largest globally. The initiative could potentially double Chile's lithium output within ten years, crucial for electric vehicle batteries, according to

Finance Minister Mario Marcel. The tender process for 26 salt flats will start in April, aiming for completion in July. State-run enterprises are initiating projects in five other flats, seeking partners. Currently, only Sociedad Química y Minera de Chile S.A. (“SQM”) (NYSE: SQM) and U.S.-based Albemarle Corporation (NYSE: ALB) operate in Chile, specifically in the lithium-rich Atacama salt flat. The government, signaling further interest in lithium ventures beyond Atacama and Maricunga, is also contemplating the establishment of a national lithium company and emphasizes environmental protection and indigenous community involvement in new projects.

China to challenge Biden’s electric vehicle plans at the WTO: (March 27, 2024, [Source](#)) – China has filed a complaint with the World Trade Organization (WTO) against the United States, alleging that U.S. electric vehicle (EV) subsidy policies unfairly discriminate against Chinese products. This action comes in response to the U.S. Inflation Reduction Act, which, from January 1, disqualifies EVs from receiving tax credits if their critical minerals or battery components are sourced from Chinese, Russian, North Korean, or Iranian companies. China argues that these policies distort fair competition and disrupt the global EV supply chain by excluding Chinese products. The outcome of this dispute is uncertain, particularly if the U.S. appeals a ruling against it, due to the current dysfunction of the WTO’s Appellate Body. This complaint underscores the growing tensions in the global EV market, where China is a dominant player in battery technology and aims to expand its auto industry globally.

France’s Orano studying plan to build U.S. uranium enrichment plant: (March 27, 2024, [Source](#)) – French nuclear fuel company Orano, previously known as Areva, is exploring the possibility of constructing a uranium enrichment plant in the United States, as part of efforts to decrease U.S. dependency on Russian

uranium imports. The plan, which had been shelved following the Fukushima disaster due to a surplus in enrichment capacity, is being revisited amidst growing demand and geopolitical tensions. Orano, which is state-owned, aims to support the U.S., the world's largest nuclear power producer, in bolstering its domestic fuel production capabilities. This initiative aligns with recent U.S. legislative moves, including President Biden's approval of significant funding for domestic uranium production. Orano also plans to expand its existing uranium enrichment capacity in France to meet U.S. demand and reduce reliance on Russian supplies.

EU May Water Down Harsh 2035 EV Mandate And Reprieve Hybrids: (March 27, 2024, [Source](#)) – The European Union and Britain's ambitious plans to phase out combustion engine vehicles by 2035 in favor of electric vehicles (EVs) are facing scrutiny and potential adjustments. Experts suggest that hybrids may be given more leeway to ensure a smoother transition. The automotive industry is at risk of being dominated by more cost-effective Chinese EVs, prompting concerns over the financial viability of European carmakers in the shift to electric. Stricter CO2 emissions targets are also causing unease among manufacturers. Reports indicate that EV sales growth is slowing, and the current market offerings are deemed too expensive for widespread adoption, with technology and infrastructure not fully meeting consumer needs yet. There's lobbying for regulatory review and more flexible approaches, including a broader acceptance of hybrid models and other technologies to reduce emissions. The upcoming review by the EU, along with potential geopolitical shifts and industry collaborations, could influence the pace and nature of Europe's transition to electric mobility.

Electric cars will decide the outcome of the American election: (March 26, 2024, [Source](#)) – President Biden's

aggressive promotion of electric vehicles (EVs) may jeopardize his political standing, particularly in critical Midwestern swing states. His administration's focus on EVs, marked by substantial price differences and practicality issues compared to traditional vehicles, risks alienating a significant voter base. This strategy, characterized by stringent mileage requirements and incentives for EV adoption, could undermine the traditional auto industry, a cornerstone of states like Michigan and Wisconsin. Furthermore, the policy may inadvertently bolster China's position in the global EV market, while threatening job losses across America's automotive sector, including sales, maintenance, and after-market services.

World's Top Uranium Miner Seeks to Boost Exports to US: (March 26, 2024, [Source](#)) – Kazakhstan, the leading uranium producer globally, is intensifying efforts to increase its uranium exports to the United States. This initiative follows discussions on energy cooperation with U.S. Senator Steve Daines. Kazakhstan already holds contracts for uranium product supply until 2032 with key U.S. energy companies. The push for expanded uranium exports comes at a time when the demand for this critical metal is rising, driven by a global shift towards nuclear power to combat climate change. Furthermore, the U.S. is contemplating a ban on imports of enriched Russian uranium, used in both nuclear reactors and weapons, highlighting the strategic importance of identifying alternative uranium sources.

Mining company touts Bitterroot gallium deposits: (March 26, 2024, [Source](#)) – U.S. Critical Materials is stepping up its public outreach concerning its mining claims in the Bitterroot's headwaters, with a focus on valuable gallium deposits over 6,700 acres, essential for semiconductors, 5G, smartphones, satellite systems, and defense technologies. The U.S. government, recognizing the strategic importance of gallium—especially amidst a Chinese export embargo—is heavily involved in funding

and driving the production of REE and other critical minerals, with significant contributions from federal agencies. Preliminary exploration at Sheep Creek has seen support from the DOD and collaboration with academic and geological institutions, utilizing advanced survey techniques. Amidst concerns over national security due to dependency on imported gallium, U.S. Critical Materials boasts high-grade gallium deposits and is exploring environmentally sustainable separation processes. The company's partnership with Idaho National Laboratories aims to develop new processing methods to establish a domestic supply chain, a crucial step given the current lack of processing facilities in North America and the environmental and commercial challenges of existing separation technologies.

Department of Energy announces largest-ever investment to decarbonize industry: (March 25, 2024, [Source](#)) – The Department of Energy has announced a substantial \$6 billion funding for 33 projects across the U.S. to reduce emissions in energy-intensive industries. This effort, part of the largest-ever investment to decarbonize industry, leverages the Bipartisan Infrastructure Law and Inflation Reduction Act, aiming for a combined investment of \$20 billion including company contributions. Targeting major sectors like steel, aluminum, cement, and food production, the initiative is expected to cut down 14 million metric tons of CO₂ annually, equivalent to removing 3 million gas-powered cars from the roads. Highlighted projects include Constellium's zero-carbon aluminum plant in West Virginia, with potential federal funding up to \$75 million, and Kraft Heinz's \$170.9 million investment to electrify and decarbonize food production at 10 facilities. Additionally, nearly 80% of the projects are located in disadvantaged communities, emphasizing the investment's broader social and environmental benefits.

Brazilian Rare Earths Limited (ASX:BRE) Announces New Rare Earth Discovery – the Pele Project: (March 25, 2024, [Source](#)) –

Brazilian Rare Earths Limited (ASX:BRE) has unveiled the Pele Project, a significant new rare earth discovery in Bahia, Brazil, positioned 60km southwest of their Monte Alto Project. This district-scale endeavor is set to explore ultra-high grade REE-Nb-Sc mineralization across a target area vastly exceeding that of Monte Alto. Key findings include extensive geophysical anomalies, the largest known hard rock monazite outcrop extending over 30m, and promising high-grade monazite sand intercepts. Initial results suggest a substantial rare earth mineralization potential, mirroring the successful exploration techniques employed at Monte Alto. With comprehensive surveys and an imminent diamond drilling program, CEO Bernardo da Veiga anticipates accelerating exploration to uncover this area's full potential, marking another stride in expanding their rare earth province footprint.

America's lithium laws fail to keep pace with rapid development: (March 25, 2024, [Source](#)) – Efforts to make the United States a leading global lithium producer are hindered by a tangled set of state regulations, creating a significant barrier against reducing dependence on foreign lithium supplies, particularly from China. Confusion over ownership, valuation, and processing of lithium resources across states like Texas and Louisiana, combined with fluctuating commodity prices and technical challenges, are major obstacles. This situation complicates the Biden administration's ambitions for electrification and increasing domestic lithium production. Despite the urgent need for regulatory clarity to attract investment and advance projects, states vary widely in their approaches to lithium extraction and regulation. The uncertainty around regulatory frameworks is delaying the development of lithium projects, thus affecting the U.S.'s ability to meet its lithium production and electrification goals.

Pilbara Minerals and China's Ganfeng agree to study for lithium

chemical plant: (March 24, 2024, [Source](#)) – Australia's Pilbara Minerals and China's Ganfeng Lithium have agreed to study the feasibility of building a lithium chemical plant capable of producing 32,000 metric tons of lithium carbonate or hydroxide annually, at an undecided location. The study, set to complete by March 2025, explores potential sites, including Australia, aiming for greater supply chain diversification. Pilbara Minerals, which has partnerships in other lithium projects, seeks to reduce transportation volumes and carbon footprint through midstream lithium chemicals production. Preliminary discussions have shown strong international interest in the venture, with incentives such as economic benefits and support for permitting. The venture would be a 50:50 partnership, with Ganfeng considering a stake sale based on U.S. Inflation Reduction Act benefits. Pilbara is increasing spodumene production to 1 million tons annually and may expand further, committing 300,000 tons annually to this project if it proceeds.

CATL in talks with Tesla, global automakers for US licensing, WSJ reports: (March 25, 2024, [Source](#)) – Contemporary Amperex Technology Co. Ltd. (CATL), a leading Chinese electric-vehicle battery maker, is currently in discussions with Tesla Inc. (NASDAQ: TSLA) and other automakers to license its battery technology in the U.S. This approach comes as an alternative to establishing its own manufacturing facility in the country. These negotiations, still in the early stages, revolve around the extent of the collaboration and the specifics of the technology Tesla would license, influenced by the EV giant's financial health. CATL's existing partnership with Ford, which recently adjusted its investment strategy for a Michigan battery plant to use CATL's licensed technology amid legislative pushback, serves as a blueprint for potential agreements with other U.S. car manufacturers. This development is amidst a global downturn in EV demand and tighter U.S. regulations on the

battery sector to curb Chinese influence, with CATL also focusing on innovations like faster charging batteries for Tesla.

CATL Working With Tesla on Fast-Charging Cells, Supplying Nevada: (March 25, 2024, [Source](#)) – CATL is enhancing fast-charging batteries for Tesla, targeting an electric car under \$25,000. Emphasizing cost-efficiency and longevity, CATL's collaboration extends to supplying Tesla's Nevada factory and innovating in battery technology. Despite global EV market challenges, CATL sustains growth through a diversified clientele including BMW and Mercedes-Benz, and is adapting to U.S. market restrictions by licensing its technology, notably to Ford. With geopolitical tensions affecting trade, CATL values client trust and plans to expand production in Europe and Southeast Asia. The company's strong financial standing allows it to delay further funding rounds, focusing instead on technological advancement and strategic partnerships to navigate the evolving electric vehicle landscape.

Investor.News Critical Minerals Videos:

- March 25, 2024 – Western Uranium & Vanadium's George Glasier on Gearing up for SMC to Commence Production in Colorado <https://bit.ly/3ITmUVA>

Critical Minerals IN8.Pro Member News Releases:

- March 28, 2024 – American Clean Resources Group

Establishes Environmental Sustainability Board
<https://bit.ly/43JkN0o>

- March 28, 2024 – Scandium Canada Forms a Strategic Advisory Committee and Confirms its Initial 3 Members
<https://bit.ly/3ISuHTM>
 - March 28, 2024 – Nano One Reports Q4 2023 Results and Provides Progress Update <https://bit.ly/3IXI2Km>
 - March 26, 2024 – Voyageur Pharmaceuticals Files Audited Annual Financial Statements and Grants Stock Options
<https://bit.ly/4a0gTFV>
 - March 26, 2024 – First Phosphate Reports Published Research Studies for its Lac à l'Original, Mirepoix and Bégin-Lamarche Properties in the Saguenay-Lac-St-Jean region of Quebec, Canada <https://bit.ly/3T0TEWq>
 - March 26, 2024 – Kraken Energy Confirms Elevated Radioactivity in Both Initial Drill Holes at Harts Point Property, Utah <https://bit.ly/3VskYem>
 - March 25, 2024 – Bechtel contract to support ASM with engineering at the Dubbo Project <https://bit.ly/3Vsx8E3>
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**Technology Metals Report
(03.15.2024): U.S. Makes a
\$2.6B Lithium Loan while
Australia Invests \$840M**

into Rare Earths

written by Tracy Weslosky | April 12, 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 Biden administration's massive \$2.26 billion loan to Lithium Americas Corp. for the Thacker Pass mine in Nevada, aiming to boost domestic lithium production for electric vehicles; the Australian government's significant A\$840 million investment in Arafura Rare Earths Limited to secure a sovereign supply of rare earth elements; and the Canadian federal government's investment in Saskatoon's Saskatchewan Research Council to enhance its Rare Earth Processing Facility. These developments underscore a global effort to secure critical mineral supplies, reduce dependence on foreign sources, and advance the transition towards cleaner energy and technology.

This week's TMR Report also highlights several other important developments in the critical minerals sector. Notable stories include the criticism from the Canadian Automobile Dealers Association regarding Quebec's decision to phase out electric vehicle purchase incentives, adjustments in electric vehicle strategies by major automakers amid shifting market dynamics, and the UK's trade pact with Texas aimed at boosting the green industry. Additionally, the report covers POSCO International's significant deals to supply rare earth permanent magnets to North American and European automakers, signs of recovery in the global lithium market after a massive downturn, geopolitical competition for the Democratic Republic of the Congo's mineral wealth, Greece's emergence as a significant source of critical

minerals, the U.S. Department of Defense's initiative to establish a "mine-to-magnet" supply chain, challenges and opportunities in Canada's mining industry, and the call by global miners for the London Metal Exchange to introduce a green premium for nickel. These stories provide a comprehensive overview of the current state and future prospects of the critical minerals and technology metals industry, reflecting its importance to technological advancement, national security, and the global transition to green energy. To become a CMI member, click here (<https://criticalmineralsinstitute.com/join>)

Biden Jump-Starts Electric-Vehicle Push With Massive Lithium Loan (March 14, 2024, [Source](#)) – The Biden administration is energizing the U.S. electric vehicle (EV) sector with a \$2.26 billion loan to [Lithium Americas Corp.](#) (TSX: LAC | NYSE: LAC) for its Thacker Pass mine in Nevada, aiming to fortify domestic lithium production for EV batteries. This investment, part of a broader initiative to secure half of new vehicle sales as EVs by 2030, will fund a refining plant critical for producing battery-grade lithium. Despite a recent slowdown in EV sales and a plunge in lithium prices, the project seeks to reduce U.S. dependence on foreign battery minerals, notably from China. Expected to start in 2027, the Thacker Pass mine will significantly contribute to the domestic EV industry, promising to supply lithium for up to 800,000 EVs annually. This move aligns with efforts to transition towards cleaner energy and reduce reliance on international sources.

The Australian Government Steps into the Critical Minerals Supply Chain Ring (March 14, 2024, [Source](#)) – The Australian government's backing of Arafura Rare Earths Limited (ASX: ARU) with A\$840 million underscores a strategic push to lessen reliance on Chinese critical mineral sources, aiming to secure a sovereign supply of rare earth elements vital for electric vehicles and renewable technologies. This investment signals

Australia's intent to lead in the global rare earth market, enhancing private sector confidence as evidenced by rising values in related investments, including those by Gina Rinehart's Hancock Prospecting. The move highlights Australia's ambition to not only overcome immediate financial challenges in the mining sector but also to establish itself as a crucial player in renewable energy technology, fostering global supply chain resilience and advancing the green energy transition.

Ottawa invests \$6M in Saskatoon rare earth processing facility (March 14, 2024, [Source](#)) – The Canadian federal government is investing \$6 million in Saskatoon's Saskatchewan Research Council to boost its Rare Earth Processing Facility, marking a significant step in processing critical minerals for high-tech uses like electric vehicle batteries and wind turbines. This funding will commercialize a process for extracting rare earth oxides from waste and develop an automated smelting process for commercial-quality metals, aiming to enhance sustainable and efficient production. The investment reflects a collaboration between federal and provincial governments, highlighting the national importance of establishing a domestic rare earth supply chain. It promises economic growth and job creation, positioning Saskatoon as a key player in meeting global demand for critical minerals and supporting the transition towards a greener economy.

A Step Backwards for Quebec's Automotive Electric Transition (March 13, 2024, [Source](#)) – The Canadian Automobile Dealers Association (CADA) criticizes the Quebec government's 2024 Budget decision to phase out electric vehicle (EV) purchase incentives amid an affordability crisis. This move is seen as detrimental to Quebec's leading position in EV adoption, fueled by an effective incentive program. CADA refutes the government's claim of a narrowing price gap between EVs and traditional vehicles, highlighting that price parity is not expected until

2033. The association warns that removing incentives could slow EV adoption, contrasting with the successful examples of Quebec and British Columbia, which offer substantial financial incentives. CADA urges the government to reconsider, emphasizing the importance of incentives in achieving environmental goals and maintaining affordability for Quebecers.

EV euphoria is dead. Automakers are scaling back or delaying their electric vehicle plans (March 13, 2024, [Source](#)) – Automakers are adjusting their electric vehicle (EV) strategies amid fading EV euphoria, scaling back or delaying plans despite initial optimism. Industry giants like Ford, General Motors, Mercedes-Benz, Volkswagen, Jaguar Land Rover, and Aston Martin are shifting towards a more balanced vehicle offering, incorporating gas-powered, hybrid, and electric vehicles. This approach reflects a slower transition to an all-electric future, diverging from previous ambitious EV growth targets. Despite a reduction in growth expectations, the demand for EVs continues to rise, albeit at a slower pace, with sales still predicted to increase significantly. The industry acknowledges the necessity of hybrid models to bridge the transition to electrification and meet emission standards. This recalibration underscores the automotive sector's response to less-than-expected consumer uptake of EVs and the reality of current market conditions, suggesting a more gradual shift towards electrification.

UK Signs Trade Pact With Texas in Effort to Boost Green Industry (March 12, 2024, [Source](#)) – The UK has signed a trade pact with Texas to enhance cooperation in green energy, aerospace, and advanced technologies, marking the eighth non-binding memorandum of understanding (MoU) with a US state since Brexit. This agreement aims to boost the collective GDP of these states to \$6.8 trillion, a quarter of the US economy. It includes mutual recognition of engineering qualifications to facilitate talent exchange for infrastructure projects. The pact also focuses on

making business easier in sectors like hydrogen and carbon capture. Despite not being the comprehensive Free Trade Agreement that Brexit supporters hoped for, this deal reflects the UK's strategy of forming state-level agreements in the US. Texas, the UK's ninth largest trade partner, exchanged £14.7 billion in goods with the UK in 2023. However, some critics argue these MoUs do little to reduce tariffs and aren't sufficiently promoted.

POSCO International signs deal for permanent magnet supply with US, European automakers (March 12, 2024, [Source](#)) – POSCO International has inked deals worth 1.16 trillion won (\$885 million) to supply rare earth permanent magnets, essential for electric vehicle (EV) motors, to North American and European automakers. These contracts aim to diversify the supply chain away from China, utilizing materials from the US, Australia, and Vietnam. The company's U.S. subsidiary will supply a North American carmaker with magnets worth 900 billion won from 2026 to 2031, while its German subsidiary will provide a European brand with magnets valued at 260 billion won from 2025 to 2034. Star Group, Korea's exclusive rare earth magnet producer, will handle production. This marks a strategic entry into markets dominated by China, reflecting POSCO's efforts to expand its global footprint and secure additional orders with car and motor manufacturers.

After Massive Bust, Global Lithium Market Shows Signs of Life (March 12, 2024, [Source](#)) – The global lithium market, vital for electric vehicle batteries, is witnessing a cautious revival after a drastic downturn. Prices for lithium carbonate in China have surged to a post-December high following an over 80% fall in 2023, with futures contracts also seeing significant gains. This rebound is amidst a global supply glut that previously tanked prices. Leading producers remain hopeful, with giants like Albemarle Corporation (NYSE: ALB) and Sociedad Química y

Minera de Chile S.A. (“SQM”) (NYSE: SQM) continuing expansions despite the market’s volatility. Efforts to rebalance include production cutbacks by some firms. However, analysts warn that the recovery could be fragile, with environmental regulations in China and a persistent supply surplus posing challenges to a sustained rally. Skepticism remains regarding the end of the bear market amidst these tentative gains.

The (Bidding?) War For the DRC (March 12, 2024, [Source](#)) – The Democratic Republic of the Congo (DRC) is a focal point for global powers due to its rich deposits of critical minerals essential for modern technologies and green economies. China, Saudi Arabia, the United Arab Emirates, and Russia are the main players, each with distinct strategies and impacts. China has a controversial history in DRC’s mining sector, while Saudi Arabia’s investment approach fosters a positive development model. The UAE’s agreement aims to enhance artisanal mining, and Russia’s involvement hints at a Cold War-style influence game. In contrast, US and European engagement in securing these vital resources has been relatively minimal. These dynamics underscore the geopolitical competition over the DRC’s mineral wealth, pivotal for technological advancement and climate change mitigation.

Critically important metals are found (March 11, 2024, [Source](#)) – Greece is emerging as a significant potential source of critical minerals essential for the clean energy transition, attracting investor interest. The Ministry of Environment and Energy, bolstered by Rockfire Resources PLC’s positive findings in Molaoi, southern Greece, indicates substantial deposits of germanium, gallium, lead, silver, and zinc. Germanium’s uses span fiber-optics to solar panels, while gallium, extractable from Greece’s abundant bauxite, is vital for electronics. The EU has noted Mytilineos’ pilot project for gallium extraction from bauxite, potentially satisfying European demand. Additionally,

Mytilineos explores scandium production, beneficial in aerospace and electric vehicles, forecasting a significant demand increase. Rockfire Resources plans further exploration and a viability study post-summer. Greece's untapped resources, including antimonite in Chios and bismuth near Xanthi, underscore its strategic position in supporting Europe's energy transition and reducing reliance on imports, especially from China.

DOD Looks to Establish 'Mine-to-Magnet' Supply Chain for Rare Earth Materials (March 11, 2024, [Source](#)) – The Defense Department is actively pursuing the establishment of a domestic “mine-to-magnet” supply chain for rare earth materials, crucial for manufacturing permanent magnets used in significant U.S. military systems and commercial applications. Recognizing the vulnerability of relying on foreign sources, notably China, for these materials, the DOD aims to enhance national security through self-reliance. It has allocated over \$439 million since 2020 to develop this supply chain, covering mining, separation, refining, and manufacturing processes within the U.S. This initiative is guided by the National Defense Industrial Strategy and seeks to achieve a resilient, domestic supply chain capable of meeting all U.S. defense requirements by 2027. Critical defense systems, such as the F-35 Lightning II aircraft, Virginia and Columbia class submarines, and various missile and radar systems, depend heavily on these rare earth materials. The DOD's strategy includes significant investments in U.S.-based companies and technologies to ensure the country's self-sufficiency in rare earth element production and magnet manufacturing, aiming to eliminate dependency on foreign sources and secure the future needs of both defense and commercial sectors.

Critical minerals mining industry requires more of everything if Canada to be a global player (March 11, 2024, [Source](#)) – The

KPMG in Canada survey reveals optimism among Canadian mining leaders regarding the potential for Canada to be a global leader in critical minerals. However, they acknowledge significant obstacles, including the need for more investment, government support, and favorable tax policies. Challenges like decarbonization, lack of domestic refining capacity, raising capital, environmental, social, and governance risks, cost reduction, and regulatory hurdles are highlighted. The survey indicates that only a minority of companies have committed to comprehensive carbon emission reductions by 2050, with many still planning or not having a strategy for emission reduction. Furthermore, the Critical Mineral Exploration Tax Credit (CMETC) has boosted exploration activities but is seen as complex and limited in scope. Respondents call for broader and more innovative tax policies to encourage investment and development in the sector.

Global miners call on LME to introduce green premium for nickel (March 5, 2024, [Source](#)) – Global mining giants, including BHP Group (ASX: BHP | NYSE: BHP) and Wyloo Metals, have urged the London Metal Exchange (LME) to create a green premium for sustainably produced nickel amidst concerns over environmental damage caused by “dirty” nickel, particularly from Indonesia. Indonesia, a major player in the nickel industry, has been criticized for deforestation, pollution, and high carbon emissions due to its reliance on coal-fired power. The LME, however, responded that the market for green nickel isn’t yet large enough to support a dedicated futures contract. BHP and others argue for differentiating between green and dirty nickel, highlighting the environmental impact differences. The LME supports trading low carbon nickel but cites the need for more development in identifying a credible green premium. Meanwhile, Indonesia’s low-cost nickel production is poised to dominate the global market, raising concerns over environmental standards and

the need for responsible sourcing guidelines that include emissions metrics.

Investor.News Critical Minerals Media Coverage:

- March 14, 2024 – The Australian Government Steps into the Critical Minerals Supply Chain Ring <https://bit.ly/3Vm9NDR>
- March 12, 2024 – The (Bidding?) War For the DRC <https://bit.ly/4aaKMz0>

Investor.News Critical Minerals Videos:

- March 14, 2024 – Neo Performance's Rahim Suleman on being 'the most vertically integrated rare earth magnetics company in the world.' <https://bit.ly/3PkS8IY>
- March 14, 2024 – Darren Hazelwood on Panther Metals' VMS Project Scale and the Graphite Potential Near Thunder Bay <https://bit.ly/4920z0M>
- March 14, 2024 – Codemge's CEO on Leveraging Minas Gerais' Position as Brazil's Niobium Mining Powerhouse <https://bit.ly/48Pfo8U>
- March 13, 2024 – Chris Berlet on the benefit of MineralPrices' real-time pricing information <https://bit.ly/3TA1i6Q>
- March 11, 2024 – Power Nickel's Terry Lynch on "the least expensive high-grade nickel sulfide exploration play in the world" <https://bit.ly/3VgWdBF>
- March 11, 2024 – Tom Drivas Explores the Initial Rare Earth Mineral Resource Estimate from Appia's PCH Ionic Adsorption Clay Project in Brazil <https://bit.ly/3VdU9KL>
- March 11, 2024 – Chad Clovis on Real Environmental Benefits through the Karbon-X Carbon Credit App <https://bit.ly/3Tt6jy6>
- March 11, 2024 – Stephen Burega on Romios Gold's Recent

Strides Forward in High-Grade Copper Exploration in Nevada
<https://bit.ly/4a9HA7E>

- March 11, 2024 – Sean Cleary on Strategic's plans to revitalize former producer of 10% of the world's vanadium
<https://bit.ly/3IwVZP9>

Critical Minerals IN8.Pro Member News Releases:

- March 14, 2024 – Technology Advancement: NEO Battery Expands Production Yield and Capacity with Manufacturing Innovation <https://bit.ly/43f7Efj>
 - March 13, 2024 – Voyageur Achieves Milestone with Rain Cage Royalty Agreement for Sustainable Carbon Drug Development <https://bit.ly/3TzarN0>
 - March 13, 2024 – First Phosphate and Groupe Goyette Sign MOU for Logistics Footprint at the Hebertville-Station Intermodal Facility in the Saguenay-Lac-St-Jean Region of Quebec, Canada <https://bit.ly/3PlqXxL>
 - March 13, 2024 – Fathom Announces Completion of Drilling at Albert Lake Project and Commencement of Drilling at the Gochager Lake Project <https://bit.ly/3wPQFnA>
 - March 12, 2024 – American Clean Resources Group Enters Well Water Purchase Agreement with Road and Highway Builders LLC <https://bit.ly/3w0X2aT>
 - March 11, 2024 – Critical Metals PLC Appointment of Non-Executive Director <https://bit.ly/43cATiI>
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Technology Metals Report (03.01.2024): Biden Calls Chinese EVs a Security Threat and the Greenest Car in America May Surprise You?

written by InvestorNews | April 12, 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 members 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 President Joe Biden's initiatives to restrict Chinese electric vehicles (EVs) citing national security concerns, the American Council for an Energy Efficient Economy's report naming the Toyota Prius Prime SE as the greenest car in America, and insights into the lithium market with investors remaining keen despite a price plunge. We also delve into the broader context of these developments, including the potential solution to the rare earth crisis through tetrataenite, BYD's exploration for a factory location in Mexico, and the ongoing challenges and opportunities facing the global electric vehicle and critical minerals markets.

This week's report also highlights various strategic collaborations and developments, including the significant challenge posed by China's EV industry to Detroit's Big Three automakers and Australia's navigation of a critical minerals market meltdown amidst declining prices for key exports such as

iron ore, nickel, and lithium. Furthermore, we cover Lynas Rare Earths Ltd.'s (ASX: LYC) call for government vigilance in the volatile nickel market, China's lithium-ion battery industry facing excess inventory and production capacity issues, Energy Fuels Inc.'s (NYSE American: UUUU | TSX: EFR) record net income and uranium production ramp-up, and Mercedes-Benz's adjustment of its electrification goal. These stories underscore the rapidly changing landscape of the technology metals and critical minerals industry, spotlighting strategic collaborations, market dynamics, and the critical role of innovation and policy in shaping the future of sustainable technology and energy.

Biden Calls Chinese Electric Vehicles a Security Threat (February 29, 2024, [Source](#)) – President Joe Biden has initiated measures to potentially restrict the entry of internet-connected Chinese electric vehicles (EVs) into the U.S. market, citing national security concerns over their ability to transmit sensitive data to Beijing. The Commerce Department has launched an investigation into these security threats, marking the beginning of a broader strategy to prevent low-cost Chinese EVs from undermining U.S. automakers. This move comes amid growing tensions between the U.S. and China over trade and technology, with Biden emphasizing the need to protect the domestic auto industry from unfair Chinese practices. The investigation, a result of discussions with major automakers and unions, could lead to new regulations on vehicles using Chinese software, which is feared to collect extensive data on American users. This action is part of Biden's wider efforts to bolster U.S. technology restrictions against China and maintain competitiveness in the global auto market.

The 'greenest' car in America might surprise you (February 29, 2024, [Source](#)) – A new report from the American Council for an Energy Efficient Economy challenges the common perception that electric vehicles (EVs) are the greenest cars in America by

naming the Toyota Prius Prime SE, a plug-in hybrid, as the top environmentally friendly vehicle. The Prius Prime SE can travel 44 miles on electricity before switching to hybrid mode, combining electric and gasoline power. The report assesses over 1,200 vehicles on their road and manufacturing emissions, including pollutants beyond carbon dioxide. Despite the growing market for EVs, the report emphasizes that a car's green credentials depend on factors like weight, battery size, and overall efficiency, not just its electric capabilities. Plug-in hybrids like the Prius Prime offer a balance for drivers by allowing short electric commutes and longer gas-powered trips, presenting a practical alternative amidst America's evolving charging infrastructure. Critics argue that fully electric vehicles remain the best option for environmental benefits, especially as renewable energy sources increase. However, the report suggests the importance of offering consumers a range of environmentally friendly choices to suit different needs.

Lithium Investors Are Looking Beyond Price Plunge, Chile Minister Says (February 28, 2024, [Source](#)) – Despite a recent downturn in lithium prices, investors remain keen on new lithium projects in Chile, as confirmed by the country's Mining Minister, Aurora Williams. This interest is fueled by the long-term prospects associated with the global shift towards renewable energy and electric vehicles, rather than short-term price fluctuations. Chile, home to the world's largest lithium reserves, has seen prices drop significantly since the introduction of a new public-private partnership model aimed at attracting investment while ensuring major deposits remain under state control. Despite this, major international companies like Rio Tinto Group and Tsingshan Holding Group have continued discussions with Chilean authorities, demonstrating a sustained interest in the sector. Chile plans to offer exploration rights in certain salt flats, with the possibility of private investors

gaining either minority or majority stakes depending on the strategic importance of the area. This initiative is part of a broader effort to maintain Chile's status as a key player in the global lithium market, amidst growing competition and as the country also seeks to bolster its position in the copper industry.

Navigating the Climate Change Storm of ESG Withdrawal and Climate Change Commitment (February 28, 2024, [Source](#)) – Recent decisions by JPMorgan, State Street, and Pimco to exit Climate Action 100+ (CA+), amid political pressures, have sparked debate over the fate of global ESG initiatives. Nevertheless, CA+'s extensive network, including over 700 members and its collaborations with high-emission companies for a low-carbon transition, exemplifies the resilience of ESG efforts. Despite these withdrawals, the broader commitment to ESG principles, especially in the extractive industries with initiatives like Copper Mark and Responsible Steel, remains robust. This commitment is further reinforced by regulatory measures against greenwashing and heightened public activism for environmental protection and equitable benefits. These trends underscore that, far from diminishing, ESG remains a crucial driver of corporate strategy and societal expectations, suggesting a sustained impact on global business practices.

Tetrataenite as a solution to the rare earth crisis (February 28, 2024, [Source](#)) – The rare earth crisis, pivotal for modern technologies such as electric motors and wind turbines, stems from the scarcity and environmental impact of mining rare earth elements like yttrium and neodymium. As demand for these materials grows due to their importance in reducing fossil fuel reliance and combating climate change, shortages are anticipated. A potential breakthrough in 2023 by an international research team suggests tetrataenite, a meteorite mineral with similar magnetic properties to rare earths, as a

solution. Unlike its natural slow formation in space, the team discovered a method to synthesize tetrataenite on Earth rapidly using common materials like iron, nickel, and phosphorous, potentially offering an alternative to address the rare earth crisis.

Chinese automaker BYD looking for Mexico plant location, executive says (February 28, 2024, [Source](#)) – Chinese electric vehicle manufacturer BYD is scouting locations in Mexico for a new factory, targeting the local market to enhance its share, as stated by BYD Americas CEO Stella Li. With an annual production capacity of 150,000 cars, the company plans to finalize the plant location by year-end. Recently surpassing Tesla in global EV sales, BYD's expansion into Mexico signals a potential competitive challenge to U.S. auto companies, amidst concerns from the Alliance for American Manufacturing about low-cost Chinese cars impacting the U.S. auto sector's viability. BYD's strategy focuses on serving the Mexican market, particularly eyeing central and southern regions for factory sites. The company's cost competitiveness is attributed to early investments in EV technology and extensive vertical integration. BYD also announced the launch of its Dolphin Mini EV in Mexico, priced significantly lower than the cheapest Tesla, aiming to make electric cars accessible to more Mexican consumers. However, challenges remain, such as the limited network of charging stations in Mexico.

China's Electric Vehicles Are Going to Hit Detroit Like a Wrecking Ball (February 27, 2024, [Source](#)) – China's electric vehicle (EV) industry, led by automakers like BYD, poses a significant challenge to Detroit's Big Three (Ford, General Motors, and Stellantis). Despite recent profits and optimistic forecasts for 2024, these American giants are struggling with their EV sales goals amidst the rapid emergence of affordable and efficient Chinese EVs. BYD, in particular, has sold millions

of electrified vehicles, expanding its global manufacturing footprint to meet increasing demand. The competitive pricing and technological efficiency of Chinese EVs underscore China's evolving industrial capabilities, transitioning from basic manufacturing to complex, high-tech production including cars and batteries. This shift represents a broader challenge to American automakers, who must navigate a changing market landscape while addressing structural vulnerabilities in their business models, heavily reliant on sales of trucks and SUVs to a niche market. The U.S. government faces a delicate balance of supporting domestic industries through subsidies and trade restrictions while fostering a competitive environment that encourages innovation and adaptation to the global shift towards electrification.

Australia's Precarious Position: Navigating a Critical Minerals Market Meltdown (February 26, 2024, [Source](#)) – Australia is at a critical juncture, facing a significant downturn in the prices of key exports such as iron ore, nickel, and lithium, which underscores the country's vulnerability due to its heavy reliance on these commodities and its dependence on China, its main buyer. The global implications of this market meltdown are profound, with the economic viability of mining and refining operations being challenged, as demonstrated by Lynas Rare Earths Ltd.'s (ASX: LYC) struggles at its Kalgoorlie ore processing plant. The decline in the nickel industry has uncovered manipulations of market prices, reflecting China's strategic dominance over the global supply chain for rare earth elements and other critical minerals. In response, Australia is attempting to reduce dependence on Chinese processing by offering subsidies to local mining and processing operations, while also dealing with the economic repercussions of collapsing metal prices. This situation necessitates a strategic reevaluation of Australia's role in the global minerals market,

exploring options like underwriting national processing facilities to enhance the value of its mineral exports and diversify its economic base amidst changing global trade dynamics.

Rare earths leader Lynas warns govt on nickel fallout (February 26, 2024, [Source](#)) – Lynas Rare Earths Ltd. (ASX: LYC), a leading rare earths producer, has highlighted the importance of government vigilance in response to the nickel market's volatility and its broader impact on the mining sector. The company reported a 74% decrease in net profit to \$39.5 million for the half-year ending December 31, attributing this decline to subdued prices for critical minerals, largely due to China's dominance in supply. Despite the market challenges, Lynas, the largest producer of rare earths outside China, emphasizes its strategy of being a low-cost producer to sustain profitability even in a weak market. Lynas is expanding its operations, including projects in the United States, and making contingency plans for potential disruptions in supply chains, such as sourcing sulphuric acid due to the possible closure of BHP's nickel refinery. The company's experience underscores the interconnected nature of the minerals industry and the need for strategic planning and government engagement to ensure resilience and competitiveness, especially in securing sovereign supplies of critical minerals.

China's lithium-ion battery industry faces excess inventory, production capacity as EV market downshifts: industry analysts (February 25, 2024, [Source](#)) – China's lithium-ion battery industry, pivotal in the global EV market, is navigating through a phase of excess inventory and production capacity due to decreased demand for electric vehicles. Analysts predict a challenging year ahead, with companies facing losses amidst a price war triggered by overcapacity. The situation has led to significant price drops in lithium carbonate and battery cells,

exacerbated by reduced subsidies for EVs. With production far exceeding installation into products, further price declines are expected. The market is undergoing a clearing phase, with expectations of breaking even next year. Investment in new capacity is likely to decelerate. Despite a forecasted slowdown in domestic EV sales growth, the global lithium market faces a ballooning excess supply, raising concerns over the long-term growth prospects for lithium. Top battery and lithium mining firms may only see profitability by 2025, as the industry grapples with these challenges.

Energy Fuels Announces 2023 Results: Record Net Income and Earnings per Share, Uranium Production Ramp-Up, and Near-Term Production of Separated Rare Earth Elements (February 23, 2024, [Source](#)) – In 2023, [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR) announced significant achievements including a record annual net income of nearly \$100 million and the commencement of uranium production across three mines, aiming for a production rate of 1.1 to 1.4 million pounds per year by mid-to-late 2024. The company highlighted a strong balance sheet with over \$220 million in liquidity and no debt. Revenue was primarily driven by uranium sales, with significant contributions from rare earth elements (REE) and vanadium. The sale of the Alta Mesa project funded investments in uranium and REE production. Energy Fuels is preparing for the near-term production of separated REEs, anticipating to become a leading producer outside of China. With a focus on growth, the company is also exploring expansions into additional uranium and REE sources, aiming to significantly increase production capabilities while capitalizing on market opportunities in both sectors.

Mercedes-Benz delays electrification goal, beefs up combustion engine line-up (February 22, 2024, [Source](#)) – Mercedes-Benz announced a postponement of its electrification target by five years, aiming for electrified vehicles to comprise up to 50% of

its sales by 2030, a shift from the initial 2025 goal focused mainly on all-electric cars. This adjustment reflects a broader trend among automakers recognizing the slower-than-anticipated adoption of electric vehicles (EVs), as investments in EV technology and capacity have surpassed current demand. CEO Ola Kaellenius highlighted that even in Europe, a complete switch to electric vehicles by 2030 is unlikely, noting that EVs currently represent a small fraction of total sales. Mercedes-Benz reassured investors and customers of its commitment to refining its combustion engine vehicles alongside its EV ambitions, with plans for a significant lineup refresh by 2027. The announcement, coupled with a €3 billion share buyback program, positively impacted the company's stock, which saw a 5.9% increase. However, challenges such as economic slowdowns, supply chain issues, and geopolitical tensions have led the automaker to anticipate lower sales and reduced profitability for 2024.

Investor.News Critical Minerals Media Coverage:

- February 28, 2024 – Navigating the Climate Change Storm of ESG Withdrawal and Climate Change Commitment <https://bit.ly/3SXymnP>
- February 26, 2024 – Australia's Precarious Position: Navigating a Critical Minerals Market Meltdown <https://bit.ly/3uWQo0Z>

Investor.News Critical Minerals Videos:

- February 29, 2024 – PDAC President Raymond Goldie Bolsters

Toronto's Status as Global Mining Investment Capital in Lead-Up to PDAC 2024 <https://bit.ly/42VBDss>

Critical Minerals IN8.Pro Member News Releases:

- March 1, 2024 – Voyageur Pharmaceuticals Ltd. Announces Closing of Private Placement <https://bit.ly/432eRzi>
- February 29, 2024 – Ucore Rare Metals to Present at the 2024 PDAC Conference <https://bit.ly/3TglcUa>
- February 28, 2024 – First Phosphate and Craler Sign MOU for the Development of Global Logistical Competencies to and from the Saguenay-Lac-St-Jean region of Quebec, Canada <https://bit.ly/49xD5DI>
- February 27, 2024 – American Rare Earths to present at two leading industry conferences in March PDAC and International Battery Seminar <https://bit.ly/49uaFuu>
- February 27, 2024 – Nano One Commences Feasibility Study for First Commercial LFP Plant and “Design-Once-Build-Many” Growth Strategy <https://bit.ly/3TaFtum>
- February 27, 2024 – Media Advisory – Neo Performance Materials Inc. Fourth Quarter 2023 Earnings Release & Conference Call <https://bit.ly/3uSkeU0>
- February 26, 2024 – Appia Reports High-Grade Total Rare Earth Oxide Results up to 22,339 ppm or 2.23% on Diamond Drill Hole #1 Within Target IV at PCH IAC Project, Brazil <https://bit.ly/48DKQHe>
- February 26, 2024 – Kraken Energy Commences Drilling at Harts Point & Provides Corporate Update <https://bit.ly/49r02bS>

Technology Metals Report (02.23.2024): Yellen to Visit Chile for Critical Minerals and Biden's EV Dreams Are a Nightmare for Tesla

written by Tracy Weslosky | April 12, 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 members over the past week, reflecting the dynamic and evolving nature of the critical minerals and technology metals industry. From the Inflation Reduction Act's challenges for the American EV industry to China's lithium market developments and Treasury Secretary Janet Yellen's strategic visit to Chile, our report covers a wide array of developments crucial for stakeholders. The unveiling of Tesla Inc.'s (NASDAQ: TSLA) lithium refinery in Texas, alongside CATL's confirmation of its lithium mine's normal operations, paints a picture of the industry's efforts to navigate through pricing volatilities, supply chain complexities, and geopolitical tensions. Moreover, the significant moves by major financial institutions in the uranium market and Gecamines' strategic overhaul in the DRC underline the shifting paradigms in the mining and investment landscapes of technology metals.

This TMR report also highlights the broader implications of these developments on the global stage, including efforts to

diminish reliance on China for essential metals, the impact of Tesla's pricing strategies on the used EV market, and the strategic dialogues around rare earths markets. The visit by US Treasury Secretary Janet Yellen to Chile is spotlighted as a key initiative to bolster ties around critical minerals, emphasizing the urgency of diversifying supply chains amid growing demands for green transition materials. Additionally, the narrative around the challenges posed by the Inflation Reduction Act for Tesla and the US car industry, coupled with BHP's cautionary stance on the Australian nickel sector, illustrates the complex interplay between policy, market dynamics, and strategic resource management. As we delve into these stories, our aim is to provide a comprehensive overview that informs and stimulates discussion among policymakers, industry leaders, and stakeholders, navigating the intricate pathways towards a sustainable and competitive future for critical minerals and technology metals.

MP Materials swings to quarterly loss on falling rare earths prices (February 22, 2024, [Source](#)) – MP Materials Corp. (NYSE: MP) reported a fourth-quarter loss, attributed to declining rare earths prices and increased production costs, despite expectations of a larger deficit. Amidst unsuccessful merger discussions with Lynas Rare Earths Ltd. (ASX: LYC) and competition from Chinese firms, CEO Jim Litinsky emphasized the potential for mutual learning and cost reduction among companies. Despite a 2.7% drop in shares on Thursday, a slight recovery was observed in after-hours trading. The company experienced a significant shift from previous year's profit to a \$16.3 million loss. Sales of rare earths concentrate to China decreased by 34% due to lower production at its Mountain Pass mine, exacerbated by facility issues. However, MP is advancing in refining rare earths domestically, with ongoing projects in California and Texas, and has initiated production in a new

facility in Vietnam.

Stalling the American EV Industry: The Unintended Consequences of the Inflation Reduction Act's Attempt to Bypass China for Critical Minerals (February 22, 2024, [Source](#)) – The Inflation Reduction Act (IRA), integral to President Joe Biden's environmental strategy, seeks to transition the American automotive industry towards a US-centric electric vehicle (EV) supply chain, reducing reliance on Chinese materials. This shift, exemplified by initiatives like Tesla Inc.'s (NASDAQ: TSLA) lithium refinery in Texas, aims to enhance the competitiveness of American-made EVs. However, the IRA's stringent requirements for sourcing materials domestically or from approved countries by 2024 pose significant challenges, complicating efforts by major manufacturers to maintain affordability and quality. Jack Lifton, an expert in the field, highlights the complexity of creating a new EV supply infrastructure and the strategic challenges of overtaking China's advanced position in the EV sector. The article emphasizes that realizing the IRA's vision demands innovation, strategic foresight, and time, presenting both obstacles and opportunities for the U.S. automotive industry in its quest for sustainability and energy independence.

Battery factories: Europe's mechanical engineering companies are lagging behind (February 22, 2024, [Source](#)) – The report "Battery Manufacturing 2030: Collaborating at Warp Speed" by Porsche Consulting and the German Engineering Federation (VDMA) highlights the expansion of battery factories, with around 200 set to be constructed worldwide in the next decade, predominantly in Europe. Despite this growth, European mechanical engineering firms are trailing behind their Asian counterparts, particularly in supplying high-tech equipment for these factories, with only 8% of such technology currently coming from Europe. This low market share limits Europe's

influence on technical development in the battery sector. The study suggests that to avoid technological dependency and enhance their market position, European companies must aim for at least a 20% market share, requiring significant growth and collaboration to offer integrated factory solutions competitive with turnkey plants from China. The study emphasizes the potential for growth and the critical need for European firms to innovate and collaborate to secure a substantial stake in the rapidly expanding battery production technology market, estimated at 300 billion euros by 2030.

“This is a very important article, because it illustrates that the EV battery manufacturing industry has become technologically dependent upon Chinese manufacturing technology for efficient and economical production. Is this the beginning of the end for any attempt by the non-Chinese world to catch up? No, we’ve already reached that point, and what other manufacturing industries in the West are circling the drain?” – Jack Lifton, CMI Co-Chair & Co-Founder

China’s CATL says its lithium mine operating normally (February 22, 2024, [Source](#)) – Chinese battery giant Contemporary Amperex Technology Co. (CATL) has confirmed that its lithium mine in Jiangxi province is operating normally, amidst market speculation of a halt due to falling lithium prices. The Jianxiawo mine, rich in hard rock lepidolite and a subsidiary of CATL, faced rumors of reduced or stopped production due to economic challenges. However, CATL asserts production is ongoing as planned, despite market rumors suggesting otherwise. After the Lunar New Year holiday, it was noted that only one of two production lines resumed operation. The mine, which began phase-one production recently, aims for a 200,000 tons capacity of lithium carbonate equivalent (LCE) upon completion of all phases. Despite high production costs compared to current market prices, analysts predict significantly lower output this year

than initially expected, with potential delays in future expansion due to these costs. The speculation had earlier boosted Australian lithium stocks.

China's lithium carbonate futures jump on talk of environmental crackdown (February 21, 2024, [Source](#)) – On Wednesday, China's lithium carbonate futures prices experienced a significant rally, driven by market speculation regarding potential environmental inspections in a key production area. This speculation raised concerns about possible output restrictions, leading to a 6.35% increase in the most-active July contract on the Guangzhou Futures Exchange, reaching 99,600 yuan per metric ton. Speculation centered around Yichun, a major lithium production city in Jiangxi province, facing environmental checks that could limit operations for producers failing to properly manage lithium slag. Despite these rumors, major producers in Jiangxi continued their operations as planned, with some undergoing scheduled maintenance. The price surge, reflecting concerns over supply constraints, followed a rally in Australian lithium stocks prompted by rumors that Chinese battery maker CATL had closed its Jianxiawo mine.

Yellen to Visit Chile in Push to Boost Ties on Critical Minerals (February 21, 2024, [Source](#)) – US Treasury Secretary Janet Yellen is scheduled to visit Chile next week as part of an effort to strengthen the United States' ties with Chile, focusing on the South American nation's significant role in the green transition through its contribution to renewable energy policies and as a supplier of critical minerals. This visit is a strategic move by the US to diversify its critical minerals supply chain and reduce its dependence on China, which currently leads the market for essential metals necessary for energy transition technologies. Chile, possessing one of the world's largest lithium reserves, is seeking foreign investment to expand its capacity within the global battery supply chain. The

visit, which follows Yellen's attendance at a G20 finance ministers' meeting in Sao Paulo, aims to deepen bilateral economic relations, particularly in the context of Chile's potential to benefit from President Biden's green stimulus program due to a free-trade agreement with the US, thereby supporting North American electric vehicle production.

Tesla's price cuts are driving down car values so much that EV makers are sending checks to leasing firms to compensate them (February 21, 2024, [Source](#)) – Tesla's price reductions have significantly lowered the resale value of used electric vehicles (EVs), prompting automakers to issue compensation to leasing companies like Ayvens to cover these losses. This adjustment comes as the industry is pushed to sell more EVs to avoid fines, with leasing firms seeking protections against further depreciation in the \$1.2 trillion second-hand car market. The demand for used EVs fell due to Tesla's price cuts, affecting companies that play a vital role in the corporate car market. To mitigate risks of depreciation, negotiations for buyback agreements and re-leasing options are underway. Regulatory pressures for lower fleet emissions compound the issue, as unstable used-EV pricing challenges the transition to electric mobility by 2035. Corporate shifts, like SAP SE discontinuing Teslas for employees, underscore the broader impacts of volatile EV pricing on the industry.

Biden's EV Dreams Are a Nightmare for Tesla and the US Car Industry (February 20, 2024, [Source](#)) – The Inflation Reduction Act (IRA), initiated by President Joe Biden to foster a US-centric electric vehicle (EV) supply chain and reduce reliance on Chinese components, poses significant challenges for Tesla and other American car manufacturers. Despite Tesla's initial steps towards compliance, including sourcing batteries from within the US and building a lithium refinery in Texas, the company's substantial procurement of Chinese lithium-ion

batteries underscores the complexity of shifting away from China's supply network. The IRA mandates stringent sourcing requirements for battery components and raw materials, aiming to cut China's dominance in the EV sector. However, these measures have compelled carmakers to navigate a difficult transition, risking the affordability and competitiveness of EVs. As Tesla, GM, Ford, and others strive to adapt to these evolving standards and develop alternative supply chains, they face the daunting task of balancing economic, environmental, and strategic objectives in a rapidly changing global market dominated by geopolitical tensions and the strategic distribution of critical minerals.

Goldman, hedge funds step up activity in physical uranium as prices spike (February 20, 2024, [Source](#)) – Investment banks Goldman Sachs and Macquarie, along with some hedge funds, are increasingly engaging in the uranium market, driven by a spike in uranium prices to 16-year highs. While many banks remain cautious, these institutions are actively trading physical uranium and, in Goldman's case, its options. This shift is fueled by utilities' need for new supplies amid shortages. The interest in uranium is also growing among hedge funds and financial institutions, a notable change after the sector's stagnation post-Fukushima disaster. Uranium prices have doubled over the past year, reaching \$102 a pound, prompted by production cuts from top producers and a renewed interest in nuclear energy as a means to reduce carbon emissions. Goldman Sachs has also introduced options on physical uranium for hedge funds, marking a significant development in the market. This increased activity reflects a broader appeal of uranium to financial investors, with notable investments in physical uranium as well as equities related to the sector.

Gecamines plans overhaul of mining JVs in world's top cobalt supplier (February 20, 2024, [Source](#)) – Gecamines, the state

miner of the Democratic Republic of Congo, is seeking to renegotiate terms of its copper and cobalt joint ventures to increase its stakes and gain more control. Aiming to leverage global demand for minerals essential for the green energy transition, Gecamines plans to secure better off-take contracts and ensure local representation on venture boards for improved asset management. The strategy addresses past oversights, focusing on rectifying prolonged indebtedness and insufficient investment by some partners. Recent deals, like the one with China's CMOC Group, exemplify Gecamines' efforts towards securing equitable terms, demonstrating a push for enhanced returns, community benefits, and transparency in the world's top cobalt supplier and a leading copper producer.

Industry Leaders Lifton and Karayannopoulos China's Influence on Rare Earth Prices and Markets Today (February 19, 2024, [Source](#))

– In an insightful interview, Jack Lifton and Constantine Karayannopoulos delve into the complexities of the rare earths market. Karayannopoulos, wary of current market trends, notes a decline in prices for key elements like neodymium and praseodymium and maintains a cautious outlook due to the industry's cyclical nature. Lifton points out the impact of China's economic struggles on low rare earth prices, advocating for strategic investments in mining and processing at this juncture. Both experts discuss the discrepancy between market expectations and reality, particularly in the context of China's economic growth and the slower-than-anticipated expansion of its magnet industry, vital for electric vehicle production. They emphasize the significance of investing in raw materials and processing to navigate and leverage China's market dominance effectively, offering a comprehensive view on economic trends, geopolitical strategies, and investment opportunities in the rare earths sector.

BHP says Australian support for nickel miners 'may not be

enough' to save industry (February 19, 2024, [Source](#)) – BHP Group (ASX: BHP | NYSE: BHP) warned that Australian government efforts to support the nickel industry might not suffice amid challenges, as a write-off in its nickel operations led to a nearly 90% drop in first-half net profit. The crisis in Australia's nickel industry is due to a price collapse from a supply glut in Indonesia. Despite government measures like production tax credits and royalty relief, BHP's CEO, Mike Henry, suggested these might be inadequate due to structural market changes. BHP, facing a \$3.5 billion pre-tax impairment charge on its Nickel West operation, is contemplating suspending its activities there, despite healthy nickel demand from the electric vehicle sector. However, Henry highlighted copper, potash, and iron ore as stronger growth areas for BHP. The company announced a higher-than-expected interim dividend, reflecting robust copper and iron ore performance, and anticipates stability in commodity demand from China and India.

US Bid to Loosen China's Grip on Key Metals for EVs Is Stalling (February 19, 2024, [Source](#)) – The U.S. is striving to diminish its reliance on China for crucial metals like gallium and germanium, vital for electric vehicles and military technology. Efforts have been hampered by the diminished efficacy of the U.S. National Defense Stockpile and budget cuts, revealing vulnerabilities to supply shocks. Despite the Biden administration's initiatives to diversify metal sources through international deals and domestic projects, China's control over the global metal supply remains strong. Recent legislative reforms aim to enhance strategic stockpiling and procurement flexibility, but challenges in establishing a coherent strategy and securing stable mineral supplies continue. The situation underscores the complex dynamics of global supply chains and the critical nature of these metals for technological and defense applications.

JPMorgan, State Street quit climate group, BlackRock steps back (February 15, 2024, [Source](#)) – JPMorgan Chase and State Street's investment arms exited the Climate Action 100+ coalition, a global investor group advocating for reduced emissions, withdrawing nearly \$14 trillion in assets from climate change initiatives. BlackRock scaled back its participation by shifting its membership to its international arm. These moves follow the coalition's request for members to intensify actions against companies lagging in emission reductions. Despite political pressure from Republican politicians accusing financial firms of antitrust and fiduciary duty breaches, none cited politics as a reason for their departure. State Street cited conflicts with the coalition's new priorities, which include engaging policymakers and public emission reduction commitments, as misaligned with its independent approach. BlackRock aims to maintain independence while prioritizing climate goals for its clients.

Investor.News Critical Minerals Media Coverage:

- February 22, 2024 – Stalling the American EV Industry: The Unintended Consequences of the Inflation Reduction Act's Attempt to Bypass China for Critical Minerals <https://bit.ly/3T8IpYE>
- February 22, 2024 – Revolutionizing Energy Storage with NEO Battery Materials' Strategic Advances in Silicon Anode Technology <https://bit.ly/3T5r080>

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Videos:

- Industry Leaders Lifton and Karayannopoulos China's Influence on Rare Earth Prices and Markets Today <https://bit.ly/3SNSuZk>

Critical Minerals IN8.Pro Member News Releases:

- February 22, 2024 – American Rare Earths Announces A\$13.5m Placement to advance Halleck Creek Project <https://bit.ly/3wuU1fB>
- February 22, 2024 – First Phosphate Project Receives Letter of Support from Mario Simard, Canadian Parliamentary Deputy for the Riding of Jonquière, Québec <https://bit.ly/3S0AP3i>
- February 21, 2024 – Nano One Adds 4 More Lithium Battery Manufacturing Patents in Asia – Boosts Total to 40 <https://bit.ly/3I6EmFL>
- February 21, 2024 – Power Nickel Expands on High Grade Cu-Pd-Pt-Au-Ag Zone 5km northeast of its Main Nisk Deposit <https://bit.ly/433eJj3>
- February 20, 2024 – American Clean Resources Group Acquires SWIS Community, LLC, an Environmental Water Technology Company <https://bit.ly/3T6iSis>
- February 20, 2024 – First Phosphate Provides Update on Plans for a Purified Phosphoric Acid Plant at Port Saguenay, Quebec <https://bit.ly/4bINV54>
- February 20, 2024 – Western Uranium & Vanadium Receives over \$4.6M from Warrant Exercises <https://bit.ly/3UI3DxH>
- February 20, 2024 – Appia Unveils Significant REE, Cobalt and Scandium Assay Results From 47 RC Drill Holes at the

Buriti Target Within Its PCH IAC REE Project, Brazil
<https://bit.ly/3ST4GIG>

- February 20, 2024 – Fathom Nickel Announces the Closing of Its Second and Final Tranche of Private Placement
<https://bit.ly/3wjSSr7>
- February 20, 2024 – Canadian GoldCamps to Earn 50% of Murphy Lake for \$10M Exploration Spend
<https://bit.ly/4bBbtz0>

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Technology Metals Report (02.16.2024): Australia makes Nickel a 'Critical', Hastings Rare Earth Deal with Baotou, and Uranium Market Continues to Rise

written by Tracy Weslosky | April 12, 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 members 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 Australian government's decision to classify nickel as a

'critical' mineral, entitling it to support from a significant stimulus fund, and the emerging competitive landscape in Africa as Western countries endeavor to reduce China's dominance in the critical minerals sector, particularly in cobalt production.

This week's report also highlights various strategic collaborations and developments, including Hastings Technology Metals Ltd.'s (ASX: HAS) offtake agreement with Baotou Sky Rock for the Yangibana Project, and the U.S. Department of Energy's funding allocation for projects aimed at extracting rare earth elements and critical minerals from coal-based resources. Furthermore, we cover the notable surge in uranium prices to a 17-year high and the strategic expansion plans by Energy Fuels Inc., alongside LG Energy Solution's efforts to secure lithium supply through a second agreement with WesCEF. Lastly, we touch on the advancements in battery technology, such as the pilot production of battery-grade purified phosphoric acid by First Phosphate Corp. and the formation of the China All-Solid-State Battery Collaborative Innovation Platform (CASIP) by leading Chinese battery and automobile manufacturers, including CATL and BYD, aiming to propel the development of all-solid-state batteries.

Australia classifies nickel as a 'critical' mineral to protect ailing industry (February 16, 2024, [Source](#)) – The Australian government has recognized nickel as a critical mineral, making it eligible for support from a A\$6 billion stimulus fund due to concerns over the nickel industry's decline, exacerbated by a supply glut from Indonesia and falling EV demand. This move aims to protect thousands of jobs and key producers like IGO Limited (ASX: IGO) and BHP Group (ASX: BHP | NYSE: BHP) from the impacts of falling nickel prices, which have dropped 43% in the past year. BHP has announced a significant impairment charge on its Nickel West division, highlighting the industry's dire situation. The government's intervention, including potential

low-interest loans and grants, is a response to the challenges posed by cheaper Indonesian nickel, driven by Chinese investment and a ban on nickel ore exports from Indonesia. This situation has led to reduced investment and operational suspensions in Australia's nickel sector, threatening its survival and the country's ambition to develop alternative supply chains to China.

West challenges China's critical minerals hold on Africa (February 16, 2024, [Source](#)) – In a significant development in the global minerals market, China's CMOC Group has surpassed Glencore PLC (LSE: GLEN) to become the leading producer of cobalt, primarily through its operations at the Kisanfu mine in the Democratic Republic of Congo. This surge in production has created one of the largest cobalt surpluses in recent years, despite a drastic fall in cobalt prices. Western countries, recognizing the strategic importance of cobalt and other critical minerals for clean energy and military applications, are challenging China's dominance in Africa. They are particularly focused on the rich copper and cobalt reserves in the Copperbelt region, which spans Zambia and the Congo. Western entities, including companies backed by prominent investors like Bill Gates and Jeff Bezos, are venturing into this region, despite political and infrastructural challenges. The U.S. and other Western nations are supporting infrastructure and energy projects to facilitate mining and reduce logistical costs. Efforts to de-risk mining in the Copperbelt include upgrading rail lines and developing solar power projects. Meanwhile, the Congolese government is asserting more control over its mineral resources, revising deals with Chinese companies and aiming to formalize artisanal mining to secure a fairer share of the revenue from its mineral wealth. This marks a pivotal shift in the geopolitics of critical minerals, highlighting the strategic competition between the West and China over Africa's mineral

resources.

Hastings And Baotou Sky Rock Sign Binding Term Sheet For Integrated Tolling And Offtake Arrangement (February 16, 2024, [Source](#)) – Hastings Technology Metals Ltd. (ASX: HAS) has entered into a binding term sheet with Baotou Sky Rock Rare Earth New Material Co., Ltd for an integrated tolling and offtake arrangement concerning the Yangibana Project's rare earth concentrate. This arrangement allows Hastings to toll treat its concentrate in China, transforming it into separated rare earth oxides, and sell them, improving Hastings' revenue and cash flows beyond previous models. The agreement, lasting seven years with a possible five-year extension, guarantees a minimum of 10,000tpa of concentrate processing. This deal complements Hastings' existing contract with thyssenkrupp and is part of negotiations with other potential customers for further offtake agreements. The updated financial model reflecting this integrated approach will support the project's funding, showcasing significantly enhanced project economics, including a notable increase in post-tax NPV, IRR, and life of mine free cashflow, while reducing the capital payback period.

The Up and Coming Uranium Boom (February 15, 2024, [Source](#)) – In an interview with Hallgarten + Company's Christopher Ecclestone and the [Critical Minerals Institute](#)'s (CMI) Tracy Weslosky, the discussion centered around the uranium market's burgeoning prospects. Ecclestone expressed skepticism regarding the effectiveness of a US ban on Russian uranium, suggesting that Russian uranium could be rerouted through Kazakhstan. He highlighted the challenges Western countries might face in replacing Russian uranium sources. Ecclestone described the uranium market as vibrant, contrasting it with the stagnation in battery metals, and emphasized uranium's unique investment appeal. He advised investors to focus on proven assets from previous booms, cautioning against investing in new, unproven

fields. Ecclestone also critiqued the hype around thorium and small modular nuclear reactors, advocating for their potential but also indicating a need for realism. Lastly, he mentioned Argentina and the Athabasca region as key areas for uranium investment, highlighting the importance of geographic and asset-based considerations in the uranium industry.

DOE Awards \$17M To Conduct FEED Studies for Production of Rare Earth Elements, Critical Minerals (February 15, 2024, [Source](#)) –

The U.S. Department of Energy (DOE) is allocating over \$17 million to three projects for extracting rare earth elements and critical minerals from coal-based resources. Funded by the Bipartisan Infrastructure Law, this initiative aligns with President Biden's Investing in America agenda to diminish reliance on foreign critical minerals vital for clean energy technologies, including solar panels and electric vehicles. Leveraging America's substantial coal reserves and waste, the projects aim to foster a self-reliant supply chain, enhance national security, support environmental sustainability, and create quality jobs. This strategic move towards utilizing domestic resources for critical mineral production underscores a significant push towards energy independence, aligning economic revitalization with clean energy advancements.

India to Capitalise on Coveted 'Critical Minerals Club' to Acquire Overseas Assets (February 15, 2024, [Source](#)) – India is strategically enhancing its position in the global critical minerals market by focusing on acquiring overseas assets through collaborations with Western countries and leveraging partnerships within the US-led Minerals Security Partnership (MSP). This international coalition aims to ensure reliable critical mineral supply chains amidst global disruptions. India, which joined the MSP in 2023, is encouraging public sector undertakings (PSUs) like Coal India Limited, NLC India Ltd., and NTPC Ltd. to secure strategic assets in lithium, cobalt, and

graphite to bolster its green energy transition and manufacturing capabilities in electronics, including electric vehicles and semiconductors. Deals have been made, notably with Australia and countries in South America and Africa, to secure these essential materials. The initiative reflects India's ambition to become self-reliant in critical minerals crucial for the technology-driven world economy, particularly as it aims to accelerate its green energy transition and indigenous manufacturing.

Uranium Prices at a 17-Year High, Energy Fuels Rapidly Increases Uranium Production in 2024 (February 14, 2024, [Source](#)) – Uranium prices have surged to a 17-year high at \$106/lb, driven by reduced supply and increased demand, with [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR) poised to benefit significantly. The uranium market's optimism is further bolstered by a commitment from over 20 countries at COP28 to triple nuclear energy capacity by 2050, highlighting a significant shift towards nuclear energy to meet clean energy goals. Additionally, 118 governments have pledged to triple renewable energy capacity by 2030. Energy Fuels, the leading uranium producer in the USA, has initiated production at three mines, targeting a significant increase in uranium output to over 2 million lbs by 2025, alongside exploring additional production avenues. With uranium's strategic importance in the clean energy transition underscored, Energy Fuels is leveraging favorable market conditions and long-term growth prospects, underlined by its ambitious expansion and production plans.

LG Energy signs 2nd agreement with WesCEF to expand lithium supply (February 13, 2024, [Source](#)) – LG Energy Solution from South Korea and Wesfarmers Chemicals, Energy, and Fertilisers (WesCEF) from Australia have signed their second agreement to expand LG's lithium supply chain. WesCEF will supply LG with 85,000 tons of lithium concentrate, expected to yield about

11,000 tons of lithium hydroxide, sourced from the Mt. Holland project in Western Australia, set to start in early 2025. This agreement builds on a previous deal for 50,000 tons of lithium hydroxide in 2022. Additionally, LG Energy is focusing on expanding its presence in India's electric vehicle market, already leading in supplying battery cells to e-scooter makers. In 2023, LG secured a deal with Chile's SQM for 100,000 tons of lithium for seven years, highlighting its efforts to bolster its supply chain amidst increasing lithium demand for rechargeable batteries.

First Phosphate Corp. Completes Pilot Production of LFP Battery-Grade Purified Phosphoric Acid (February 13, 2024, [Source](#)) – [First Phosphate Corp.](#) (CSE: PHOS) announced the successful completion of a pilot project that converts high purity phosphate concentrate into battery-grade purified phosphoric acid (PPA) for the lithium iron phosphate (LFP) battery industry. In collaboration with Prayon Technologies SA, the company has transformed phosphate concentrate into merchant grade phosphoric acid and then into PPA, conforming to food and battery-grade specifications. This achievement enables the production of LFP cathode active material and battery cells from a North American source of battery-grade PPA. First Phosphate aims to integrate its mining operations in Quebec, Canada, into the supply chains of LFP battery producers, emphasizing high purity, responsible production, and a low carbon footprint.

CATL, BYD, others unite in China for solid-state battery breakthrough (February 12, 2024, [Source](#)) – In a bold move to spearhead the electric vehicle (EV) revolution, China's leading battery and automobile manufacturers, including CATL and BYD, have joined forces under the government-led China All-Solid-State Battery Collaborative Innovation Platform (CASIP). Established in January, CASIP aims to commercialize all-solid-state batteries by 2030, enhancing EV performance with greater

energy density and safety. This initiative, uniting industry rivals and leveraging AI technology, seeks to position China at the forefront of the next-generation battery technology, challenging current leaders like Japan and Western countries. With the participation of major companies and state support, China is poised to transform the EV market and maintain its global leadership in automotive battery innovation.

Investor.News Critical Minerals Media Coverage:

- February 15, 2024 – The Up and Coming Uranium Boom <https://bit.ly/3uAUdcv>
- February 14, 2024 – Uranium Prices at a 17-Year High, Energy Fuels Rapidly Increases Uranium Production in 2024 <https://bit.ly/48wVY8N>

Investor.News Critical Minerals Videos:

- February 13, 2024 – Tom Drivas on the 3 world-renowned rare earths experts on Appia's Critical Minerals Advisory Committee <https://bit.ly/49bVMNj>

Critical Minerals IN8.Pro Member News Releases:

- February 15, 2024 – First Phosphate and Integrals Power sign Joint Development Agreement to Produce Environmentally Compliant Battery Grade Iron III Phosphate Precursor for the LFP Battery Industry <https://bit.ly/3uDdslR>
- February 14, 2024 – Imperial Mining Announces Effective Date of New Trading Symbols after TSXV Approves of Name Change to Scandium Canada Ltd. <https://bit.ly/48hRyl0>
- February 13, 2024 – Western Uranium & Vanadium Mining

Operations Update <https://bit.ly/4bvDKHr>

- February 13, 2024 – Donald Swartz, CEO American Rare Earths, to speak at “The Future Panel” <https://bit.ly/3UF2M05>
 - February 13, 2024 – First Phosphate Corp. Completes Pilot Production of LFP Battery-Grade Purified Phosphoric Acid <https://bit.ly/3P51pF5>
 - February 13, 2024 – Defense Metals Updates Metallurgical Test Work and Preliminary Feasibility Study Progress for its Wicheeda Rare Earth Elements Project <https://bit.ly/3HYiV9R>
 - February 13, 2024 – Power Nickel extends resource mineralization at Nisk Main <https://bit.ly/49aJCE9>
 - February 12, 2024 – F3 Hits 66.8% U3O8 over 0.5m within 42.4% over 2.0m at JR <https://bit.ly/3HUa60a>
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Riding the EV Revolution Rollercoaster Amid the West's Electric Car Climbdown

written by Tracy Weslosky | April 12, 2024

Embarking on the electric vehicle (EV) revolution journey has felt like being on a rollercoaster filled with surprising developments, especially when we consider the insights from Jack Lifton, the Co-Chairman of the [Critical Minerals Institute](#) (CMI), who recently shared his thoughts on the opinion published in The Telegraph titled [The West's humiliating electric car climbdown has begun](#). Lifton's sharp analysis

pierces through the prevailing chatter, offering a lucid view of the EV market's complex trajectory. He navigates us through the shifting sands of government and auto manufacturers' strategies, the intensifying competition from the East, and the shifting tides of consumer demand. Lifton's insights serve as a guiding light for deciphering the intricate forces shaping the EV landscape.

The recent shifts in the electric vehicle (EV) industry, as observed by Jack Lifton, Co-Chairman of the Critical Minerals Institute (CMI) and a notable expert in the field of technology metals, illuminate the complex interplay of government policy, market dynamics, and consumer preferences. Lifton's insights provide a nuanced understanding of the challenges and potential misalignments within the EV sector, particularly as it pertains to the impact of government strategies, competition, and market dynamics, and the role of consumer demand in shaping the industry.

Impact of Government Strategies on the EV Market

Lifton critiques the effectiveness of state-led industrial strategies in the rapidly evolving EV market, highlighting the retreat of major manufacturers like Renault and Volvo from their ambitious EV initiatives. This move, compounded by a reduction in government support, raises questions about the foresight and adaptability of such strategies. Lifton notes, "It shows that, as always, the invisible hand of the market rules... the automotive companies have suddenly discovered the market's supply demand... government doesn't dictate markets." This observation underscores the limitations of state intervention in forecasting and influencing market demands and suggests a need for more market-responsive approaches.

Competition and Market Dynamics

The competition from Chinese manufacturers has significantly influenced the trajectory of the Western electric vehicle industry. Lifton points out the stark reality facing Western EV manufacturers, stating, "The cost of making electric vehicles in the United States is too high... People are buying a Chevrolet EV for \$50,000. That car cost \$100,000 to make." This price disparity, alongside the aggressive expansion of Chinese EV manufacturers into global markets, underscores the challenges Western companies face in maintaining competitiveness. The scenario posits a crucial reflection on the sustainability of the current business models and the need for innovation and efficiency improvements.

The Role of Consumer Demand in Shaping EV Industry

Lifton's commentary on the shift in consumer preference back to petrol models reveals a significant misalignment between the production of EVs and actual market demand. He remarks on the sudden interest in hybrids by companies like General Motors, indicating a rapid strategic pivot to align with consumer preferences for efficiency and practicality. Lifton argues, "Hybrids... maximize the efficiency of electric and internal combustion and therefore will allow us to have the longest supply of fuels." This perspective highlights the importance of flexibility in product offerings and the need to closely monitor and adapt to consumer demand trends.

Jack Lifton's insights offer a candid reflection on the electric vehicle industry's current state, pointing towards a future where adaptability, market intelligence, and innovation are paramount. His observations remind us that success in the EV

market is not solely about ambitious government strategies or manufacturing prowess but about understanding and responding to the nuanced dance of supply, demand, and the global competitive landscape. As we consider the path forward, Lifton's analysis underscores the importance of striking a balance between visionary goals and the pragmatic realities of consumer needs and market dynamics. The electric vehicle revolution is far from over, and its success will hinge on the industry's ability to navigate these challenges with agility and foresight.

Technology Metals Report (02.02.2024): Rumors between MP and Lynas, Tesla EV Recall – the Rightsizing of Critical Minerals Begins?

written by Tracy Weslosky | April 12, 2024

Welcome to the latest Technology Metals Report (TMR), where we highlight the Top 10 news stories that members of the [Critical Minerals Institute](#) (CMI) have forwarded to us over the last 2 weeks.

In early 2024, the rare earths sector is witnessing significant strategic movements amidst a backdrop of declining prices and geopolitical tensions. Lynas Rare Earths Ltd. and MP Materials Corp., key players outside China, are rumored to be considering a mega-merger in response to falling rare earth prices and to

mitigate the impact of Chinese trade restrictions. This potential consolidation aims to strengthen their production capabilities and align with the Australian and US governments' efforts to reduce reliance on Chinese supplies, particularly for defense applications.

CMI's Jack Lifton comments, "In the swirling rumors of a mega-merger between MP Materials and Lynas Rare Earths, it's clear that the OEM industry's disdain for single sourcing of critical materials is being overlooked. Litinski is eager to deploy his capital before it devalues, while Lacaze eyes a boost in share price ahead of her retirement. This scenario is akin to two veterans of the trade, unadorned and stark, facing the harsh daylight. Both MP and Lynas are in a precarious position, each with a singular customer and seemingly devoid of new strategies to navigate the market's tumultuous waters."

Concurrently, the industry is adjusting to market corrections, as highlighted by the Critical Minerals Institute's [observations](#) on the electric vehicle (EV) materials market, indicating a shift towards efficiency and cost management. Meanwhile, initiatives like Controlled Thermal Resources Holdings Inc.'s funding quest for its lithium brine project and [Appia Rare Earths & Uranium Corp.](#)'s (CSE: API | OTCQX: APAAF) exploration successes underscore the ongoing diversification and expansion within the critical minerals domain. These developments reflect a broader industry trend towards securing resilient supply chains for critical minerals amidst fluctuating market dynamics and geopolitical pressures.

Also breaking news today, Tesla Inc.: The EV maker [is recalling](#) 2.2 million vehicles, or nearly all of its electric vehicles in the United States, due to incorrect font size on warning lights, which increases the risk of a crash, the National Highway Traffic Safety Administration (NHTSA) said. This is more than

the 2.03 million vehicles it recalled in the United States two months back, its biggest-ever such move at the time, to install new safeguards in its Autopilot advanced driver-assistance system. The latest recall includes vehicles across Tesla's various models, including the Model S, Model X, 2017-2023 Model 3, Model Y, and 2024 Cybertruck vehicles, the NHTSA said. Separately, U.S. safety regulators said they have upgraded their probe into Tesla vehicles over power steering loss to an engineering analysis – a required step before they could potentially demand a recall.

Lynas linked to rare earths mega-merger as price falls bite (February 2, 2024, [Source](#)) – Amid a sharp decline in rare earths prices and concerns over Chinese trade restrictions, there are speculations that [Lynas Rare Earths Ltd.](#) (ASX: LYC) may be considering a merger with its New York-listed rival, [MP Materials Corp.](#) (NYSE: MP). Industry insiders suggest that the two companies, both leading non-China producers of essential rare earth materials used in defense and various industries, could be in talks to create a mega-merger. The exact details of the deal are unclear, given the current slump in rare earth prices and Western concerns about China's dominant position in the supply chain. However, a potential merger between Lynas, based in Western Australia and Malaysia, and MP, operating in California's Mountain Pass, aligns with efforts by the Australian and US governments to strengthen collaboration between their resource companies for critical minerals extraction and processing, reducing dependency on China. Both Lynas and MP have suffered significant stock price declines, and a merger could help them bolster production capabilities and meet growing demands, particularly from the US Department of Defense, which aims to reduce reliance on Chinese supplies. *Referral, CMI Co-Chairman [Jack Lifton](#)*

Critical Minerals “rightsizing” in reaction to governments’

efforts to regulate market (February 1, 2024, [Source](#)) – The critical minerals industry is undergoing significant changes in the electric vehicle (EV) materials market. Jack Lifton, Co-Chairman of the [Critical Minerals Institute](#) (CMI), views recent price declines in key EV component materials as a natural market correction rather than a disaster, emphasizing minimal regulatory intervention. Declining profits for industry leaders, including China Northern Rare Earth, result from overestimated EV demand, economic factors, and falling sales, especially in California. Lifton advises investors to focus on efficient, low-cost producers, particularly in neodymium. The January [2024 CMI Report](#) notes the U.S. government's plan to ban Pentagon battery purchases from major Chinese companies and hints at potential recovery in lithium prices. Lynas Rare Earths' revenue drop reflects market trends but also strategic capacity expansion. In summary, the industry faces short-term challenges but underscores the importance of efficiency, cost management, and adaptability for long-term success. *Source, [Investor.News](#)*

GM, Stellantis-Backed Lithium Startup Seeks More Than \$1 Billion for Brine Project (February 1, 2024, [Source](#)) – Controlled Thermal Resources Holdings Inc., (CTR) a US lithium startup backed by Stellantis N.V. (NYSE: STLA) and General Motors (NYSE: GM), seeks over \$1 billion in funding for its California lithium brine project. This initiative defies the industry's 80% drop in lithium prices since late 2022. CTR's unconventional approach focuses on geothermal brine deposits, seen as a potential future lithium supply source once technology challenges are overcome. This aligns with US government efforts to establish a domestic EV commodity supply chain. The funding plan includes equity and debt financing, with Goldman Sachs as the lead bank. Stellantis and GM have previously invested significantly in CTR to secure lithium for EV production. *Referral, CMI Co-Chairman [Jack Lifton](#)*

Attention set on rare earths in Canada and Brazil, Appia hits

2024 running (January 31, 2024, [Source](#)) – [Appia Rare Earths & Uranium Corp.](#) (CSE: API | OTCQX: APAAF) is focusing on its rare earths projects in Canada and Brazil: the Alces Lake Project and the PCH Ionic Clay Project. The Alces Lake Project in Canada is recognized for its high-grade rare earths and gallium in monazite ore. Recent drill results have shown up to 1.57 wt.% Total Rare Earth Oxides (TREO) with mineralization extending to a depth of < 85 meters. In Brazil, the PCH Project offers a simplified extraction process for rare earths essential for electric motor magnets in most EVs. Hole RC-063 reported a total weighted average of 3.87% TREO. Appia's expansion of mining claims and plans for a Maiden Resource in Q1, 2024, signal their commitment to these projects, with a market cap of C\$27 million suggesting a potentially significant year ahead in 2024. *Source, [Investor.News](#)*

China EVs: lithium producers Ganfeng, Tianqi issue profit warnings, blame price plunge for battery material as stocks sink (January 31, 2024, [Source](#)) – Chinese lithium producers Ganfeng Lithium and Tianqi Lithium have issued profit warnings, attributing their declining profits to a significant drop in lithium prices. Ganfeng expects its 2023 net profit to plummet by 70-80% to between 4.2 billion yuan and 6.2 billion yuan. After accounting for non-recurring items, net profit will range from 2.3 billion yuan to 3.4 billion yuan, down 83-88.5% from 2022 levels. Tianqi anticipates a net profit decline of 62.9-72.6% to 6.62 billion yuan – 8.95 billion yuan. Both companies attribute their struggles to the cyclical nature of the lithium industry and declining lithium prices. The average price of China-produced lithium hydroxide exported to South Korea fell by 45% last month. While electric vehicle sales are still growing, the rate has slowed, impacting lithium demand. However, global lithium demand is expected to rise by 27% this year, with a surplus expected before a deficit in 2026.

Referral, CMI Co-Chairman [Jack Lifton](#)

Mining analyst-turned-Vital Metals CEO eyes much larger Nechalacho reboot (January 29, 2024, [Source](#)) – Geordie Mark, CEO of Vital Metals Limited (ASX: VML), aims to revamp the Nechalacho rare earths project in the Northwest Territories, leveraging 15 years of experience as a mining analyst. Recognizing the growing demand for rare earth elements in the technology and electric vehicle (EV) markets, Mark plans to shift Vital's strategy towards a bulk tonnage operation targeting lighter rare earths like praseodymium and neodymium. This comes after the failure of the company's processing division and a Chinese investment lifeline in 2023. A comprehensive scoping study is crucial for long-term viability, and Mark expects demand for praseodymium and neodymium to rise significantly in the next decade, particularly in China and Europe. Shenghe Resources' investment provides vital capital for Nechalacho's development, positioning it to compete with North America's only rare earths mine, [MP Materials Corp.](#)'s (NYSE: MP) Mountain Pass operation. *Referral, CMI Co-Chairman [Jack Lifton](#)*

The Critical Minerals Institute Report (01.25.2024): U.S. government bans Pentagon battery purchases from major Chinese companies starting October 2027 (January 25, 2024, [Source](#)) – The January 2024 Critical Minerals Institute (CMI) report highlighted key economic and geopolitical developments. U.S. inflation in December 2023 impacted interest rate reduction plans, while the S&P 500 rose by 2.04% year-to-date. China's economy slowed, with falling home prices, and global tensions persisted. In the global electric vehicle (EV) market, December 2023 set a record for plugin electric car sales, led by China. However, the EV sector's growth rate slowed compared to previous years. The U.S. reported a surge in EV sales and enacted Zero Emission Vehicle mandates to boost adoption. In the EV battery sector, the U.S. government announced a ban on Pentagon battery

purchases from major Chinese companies, starting October 2027. Challenges in the critical minerals sector included depressed prices due to oversupply and slowing EV market growth. Recovery in lithium prices was anticipated in late Q1 or early Q2 2024. The report emphasized a negative supply response from producers and expected a potential recovery in the second half of 2024, assuming reasonable EV sales growth. *Source, [Investor.News](#)*

Tesla Projects Slower Growth in 2024 as EV Demand Softens (January 24, 2024, [Source](#)) – Tesla Inc. (NASDAQ: TSLA) anticipates slower growth in 2024 amid a challenging landscape for the electric vehicle (EV) industry. CEO Elon Musk desires greater control, aiming for a 25% ownership stake to deter activist shareholders. This follows Musk's ultimatum to shift focus to AI and robotics if control isn't achieved. Tesla faces declining demand, shrinking profit margins, heightened competition, and recent price cuts. Despite doubling fourth-quarter net income to \$7.9 billion, costs for projects like the Cybertruck and AI research impact profitability. Tesla's valuation, historically tied to sales and Musk's vision, faces uncertainty. Challenges include Hertz selling EVs and Chinese automakers [overtaking Tesla](#). EV enthusiasm wanes due to pricing, charging concerns, and range limitations. Tesla plans cost reduction for future vehicles but encounters short-term cost pressures. Despite this, strong Cybertruck demand is expected, with production scaling up gradually. *Referral, CMI Director, [Alastair Neill](#)*

Rare-earths miner Lynas' Q2 revenue halves on falling prices, lower China demand (January 24, 2024, [Source](#)) – Australia's Lynas Rare Earths reported a significant drop in its second-quarter revenue, falling by 51.7% to A\$112.5 million due to plummeting rare earth prices and reduced demand in China, particularly in the appliance sector amid a construction slowdown. This decline in revenue, which missed analysts'

forecasts, led to a 30-month low in its share prices. Despite this downturn, Lynas has continued to expand its operations, including the near-completion of its Kalgoorlie processing plant in Australia, upgrades to its Malaysian facilities, and ongoing work at the Mt Weld mine. The company, a major supplier outside China, has also been working on a new facility in Texas to serve the U.S. Department of Defense. Despite these efforts, Lynas' challenges are compounded by the lower average selling price of its products, which has more than halved compared to last year. Referral, CMI Director, [Russell Fryer](#)

Investors turn to copper, gold and uranium amid battery metals rout (January 24, 2024, [Source](#)) – In 2024, investors are shifting their focus away from battery metals, such as nickel and lithium, due to significant price declines. Instead, they are turning to commodities like copper, gold, and uranium. Copper prices have rebounded following supply shortages and disruptions in production by key global producers. Gold is experiencing renewed interest, driven by geopolitical crises and a weakening US dollar, with forecasts predicting it to trade above \$2,000 per ounce in the coming year. Uranium has gained substantial momentum, reaching decade-high prices, driven by limited supply and increased demand for nuclear energy in Western countries. Investors are diversifying their portfolios, seeking better prospects in these alternative commodities. Referral, CMI Director, [Russell Fryer](#)

China, in comic strip, warns of 'overseas' threats to its rare earths (January 22, 2024, [Source](#)) – China's State Security Ministry released a comic strip on social media, depicting foreign threats to its rare earth resources. The narrative shows security officers uncovering covert operations by foreign-looking characters, suggesting overseas interest in China's strategic minerals. China, the leading producer of rare earths essential for high-tech industries, has imposed [export](#)

[restrictions](#) on these elements and related technologies, citing national security. The move has heightened tensions, particularly with the United States, amidst accusations of economic coercion. The comic underscores the importance of safeguarding these resources against international competition and espionage. The state-controlled Global Times highlighted the story, reflecting on the global race for rare earths, vital in military, consumer electronics, and renewable energy sectors, as a national security issue. *Referral, CMI Director, [Alastair Neill](#)*

Tanzanian, Canadian firms to search for rare metal (January 22, 2024, [Source](#)) – Tanzanian firm Memnon Project Management Services Company Limited and Canadian company Anibesa Energy Metals Corp. are set to collaborate in prospecting for niobium in Mbozi District, Songwe Region, with an anticipated investment of up to \$50 million. They have obtained regulatory approvals and are finalizing the acquisition of three licenses for niobium minerals, while three more geologists are expected to join the exploration team. Memnon Project Management Services is involved in various projects, including the Kongwa Lithium Project and solar energy initiatives. Niobium, a rare metal, enhances the strength of alloys and is used in various industries, including aerospace and construction. As of 2022, Brazil held the largest niobium reserves globally. The partnership aligns with Tanzania's goal of attracting international companies to boost the mining industry by focusing on valuable critical metals projects. *Referral, CMI Director, [Alastair Neill](#)*

Investor.News Critical Minerals Media Coverage:

- February 01, 2024 – Critical Minerals “rightsizing” in reaction to governments’ efforts to regulate market <https://bit.ly/49f78zC>
- January 31, 2024 – Attention set on rare earths in Canada

- and Brazil, Appia hits 2024 running <https://bit.ly/3ueaxjg>
- January 25, 2024 – The Critical Minerals Institute Report (01.25.2024): U.S. government bans Pentagon battery purchases from major Chinese companies starting October 2027 <https://bit.ly/4961zU0>
 - January 22, 2024 – Unveiling Insights from Ecclestone on the Future of Mining and Investment from Riyadh's Future Minerals Forum Event <https://bit.ly/491pV0S>

Critical Minerals IN8.Pro Member News Releases:

- February 2, 2024 – Appia Announces Plans for Drilling at the Loranger Uranium-Bearing Property, Saskatchewan, Canada <https://bit.ly/3Uphb0s>
- February 1, 2024 – Obonga: Wishbone Exploration Permit Application <https://bit.ly/3UlnF0j>
- February 1, 2024 – First Phosphate to Provide Project Update to the Federation of Chambers of Commerce of the Saguenay-Lac-Saint-Jean Region of Quebec, Canada <https://bit.ly/42ugvt1>
- January 31, 2024 – Defense Metals Announces Closing of its \$738,836 Non-Brokered Private Placement <https://bit.ly/3umNv9S>
- January 31, 2024 – First Phosphate Announces Launch of 25,000 m Drill Campaign at its Bégin-Lamarche Project <https://bit.ly/3SmPtPD>
- January 30, 2024 – Ucore Announces Closing of Debenture Offering <https://bit.ly/3SHT1xa>
- January 30, 2024 – Western Uranium & Vanadium Bolsters Mining Team to Scale-Up Uranium Production <https://bit.ly/47UTIHZ>
- January 30, 2024 – F3 Hits 2.05m Off Scale >65,535 CPS in First Hole of Winter Program at JR Zone <https://bit.ly/3SCxru9>

- January 29, 2024 – First Phosphate Confirms Two Additional New High-Grade Discoveries at Begin-Lamarche Property and up to 39.45% P2O5 at Larouche <https://bit.ly/30lGWew>
- January 29, 2024 – American Rare Earths Quarterly Activities Report for the Period Ending 31 December 2023 <https://bit.ly/3SB0QeM>
- January 29, 2024 – Australian Strategic Materials Quarterly Activities Report to 31 December 2023 <https://bit.ly/3UdGXVK>
- January 26, 2024 – Appia Rare Earths & Uranium Corp. Announces New Cooperation Agreement with the Ya'thi Néné Lands and Resources Office <https://bit.ly/30ke4TU>
- January 25, 2024 – First Phosphate, American Battery Factory and Integrals Power Sign MOU to Produce LFP Cathode Active Material and Battery Cells in North America <https://bit.ly/48MnCiU>
- January 23, 2024 – F3 Announces Commencement of Drilling at PLN <https://bit.ly/3Uc6C0o>
- January 23, 2024 – Power Nickel Announces Filing of Amended Technical Report <https://bit.ly/3HvYPUd>
- January 23, 2024 – First Phosphate Corp. Welcomes the Addition of Apatite (Phosphate) to the Critical and Strategic Minerals List of Quebec, Canada <https://bit.ly/48Pv7Wf>
- January 22, 2024 – First Phosphate Announces Closing of the Third and Final Tranche of Oversubscribed Private Placement Financing for Total Gross Proceeds of \$8.2 Million <https://bit.ly/3U5Vl2l>
- January 22, 2024 – Elcora Develops Innovative Process To Extract Vanadium From Its Moroccan Vanadinite Deposit <https://bit.ly/3Hu8Zon>
- January 22, 2024 – American Rare Earths Announces Breakthrough Metallurgical Results <https://bit.ly/3096trp>
- January 22, 2024 – F3 Expands PLN Project with Acquisition

Technology Metals Report (01.05.24): The Intensifying Competition of BYD Surprises Tesla

written by Tracy Weslosky | April 12, 2024

Welcome to the latest **Technology Metals Report (TMR)** where we highlight the Top 10 news stories that members of the [Critical Minerals Institute](#) (CMI) have forwarded to us over the last 2-weeks.

Key highlights in this **Technology Metals Report** includes Tesla's impressive Q4 delivery record, overshadowed by BYD's surge as the top EV maker, underscoring the intensifying competition in the electric vehicle market. Energy Fuels Inc. has made significant strides, first by entering into an MOU with Astron Corporation to bolster the U.S. rare earths supply, and then by expanding its uranium production in response to favorable market conditions. Nio Inc. has made a technological leap with its innovative EV battery, boasting a 1,000km range, while global trends in the critical minerals and EV market show shifts influenced by economic and political developments. Notably, Codelco and SQM's new lithium venture in Chile represents a strategic move in the lithium market. The impact of China's rare earths export ban stands as a significant moment, compelling the

U.S. to foster technological self-reliance. The landmark merger between Allkem and Livent to form Arcadium Lithium marks a major consolidation in the lithium industry. Atomionics' innovative use of AI and gravity in mining exploration showcases a technological breakthrough. The EU's ambitious goals for critical minerals, despite challenges, indicate a strong commitment to securing essential resources for its green transition. Lastly, KoBold Metals' ambitious global lithium exploration, backed by industry giants, highlights the growing importance of lithium in the clean energy sector.

The 10-stories selected for this edition of the TMR with source links to source stories for this fast-paced sector are listed chronologically for your ease and review.

Tesla delivers record Q4 cars, but China's BYD steals top EV spot (January 3, 2024, [Source](#)) – In the fiercely competitive electric vehicle (EV) market, Tesla Inc. (NASDAQ: TSLA) achieved a significant milestone by delivering a record 484,507 vehicles in the fourth quarter of 2023, surpassing market expectations and fulfilling its annual target. Despite this success, Tesla was eclipsed by China's BYD in terms of sales volume, losing its position as the leading EV manufacturer. BYD, backed by Warren Buffett, delivered 526,409 vehicles, primarily in China, indicating a consumer preference for more affordable models in an economy burdened by high interest rates. Although Tesla's aggressive sales strategies led to a notable 11% growth over the previous quarter and a total production of 1.85 million units in 2023, it fell short of CEO Elon Musk's ambitious target of 2 million. The company's stock remained stable amidst a generally declining market. Meanwhile, BYD's strategy of price cuts appears to be paying off, gaining market share despite potential impacts on profit margins. Tesla, in a bid to boost sales, offered discounts and incentives, such as six months of free fast charging for deliveries made by the end of December. This

strategy was partly in response to some models of its Model 3 sedan losing U.S. federal tax credits in 2024. Tesla's delivery performance stands out in comparison to domestic U.S. car companies, but it is also facing challenges like regulatory scrutiny over its self-driving technology and the need to adapt to changing tax credit policies.

Energy Fuels' Strategic MOU with Astron: Shaping the Future of the U.S. Rare Earths Supply Chain (December 30, 2023, [Source](#)) – [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR) has recently entered into a significant Memorandum of Understanding (MOU) with Astron Corporation Ltd. to jointly develop the Donald Rare Earth and Mineral Sands Project in Victoria, Australia. This collaboration, [announced](#) on December 27, 2023, marks a crucial step in establishing a U.S.-focused rare earths supply chain, vital for meeting future national needs. The project will provide Energy Fuels with 7,000 to 14,000 metric tons of rare earth concentrate annually from the Donald deposit, processed at their White Mesa Mill in Utah. This arrangement not only utilizes the mill's capacity to manage radioactive elements but also supports the production of critical minerals like uranium. The project is set to initially produce 800 – 1,000 metric tons of Neodymium-Praseodymium (NdPr) oxide by Q1 2024, with prospects for expansion. This development is strategically important in light of the U.S. government's impending policy to restrict critical minerals sourced from Foreign Entities of Concern, effective from 2025. By fostering a sustainable, competitive, and independent supply chain, Energy Fuels' initiative is poised to significantly impact the electric vehicle and clean energy sectors in the U.S., reducing dependency on foreign sources, especially China, and bolstering national security and technological advancement.

A Chinese EV company developed a battery with a 1,000km range – and its CEO tested it out on a 14-hour livestream (December 29,

2023, [Source](#)) – Chinese electric vehicle (EV) company Nio Inc., often compared to Tesla, recently showcased a groundbreaking development in EV technology by introducing a battery with an impressive 1,000km range. The company's CEO, William Li, widely regarded as China's answer to Elon Musk, embarked on a 14-hour live-streamed journey covering 1,044km from Shanghai to Xiamen to demonstrate the battery's capabilities. Despite challenging weather conditions, Li's Nio ET7, powered by the company's new 150 kWh battery with the highest energy density for a mass-produced EV battery, completed the trip with 3% charge remaining. Scheduled for mass production in April 2024, these batteries, though costly at around \$42,100, represent a significant advancement in EV technology. Nio's unique business model allows customers to buy cars without a battery, offering a subscription for battery swaps at over 2,000 stations across China. Despite financial challenges and each car resulting in a \$12,000 loss for Nio, this strategy has elevated Li's stature, drawing parallels with Tesla's Elon Musk. Li further showcased Nio's technological prowess at the annual "Nio Day," revealing the new ET9 flagship to thousands of Nio enthusiasts.

The Critical Minerals Institute Report (12.27.2023): Politics Driving Marketable Commodities into 2024 (December 27, 2023, [Source](#)) – The December 2023 [Critical Minerals Institute](#) report highlights key global economic and political developments influencing the critical minerals and electric vehicle (EV) markets. U.S. inflation decreases and potential interest rate cuts in 2024 have positively impacted equity markets, while China's anticipated economic recovery bodes well for commodity sectors. The EV market is experiencing significant growth, particularly in China, despite challenges from U.S. and EU policies aiming to reduce dependency on foreign entities. The U.S. Department of Energy's proposed FE0C guidelines and the EU's Critical Raw Materials Act reflect a strategic shift

towards stabilizing and localizing critical minerals supply chains. The report also notes significant fluctuations in the lithium market, with expectations of a bottom forming soon, and discusses the broader market dynamics of other critical minerals like cobalt, graphite, nickel, and manganese, in the context of a global economic slowdown. The performance of uranium in 2023 and the potential impact of lower interest rates in 2024 on the global economy and critical minerals demand are key areas of focus.

Chile's Codelco to control new lithium venture with miner SQM (December 27, 2023, [Source](#)) – Chile's state-owned copper miner, Codelco, has entered into a significant partnership with mining company Sociedad Química y Minera de Chile S.A. ("SQM") (NYSE: SQM), gaining majority control in a new lithium venture. This move aligns with President Gabriel Boric's directive for greater government involvement in lithium production. Chile, holding the title of the world's second-largest lithium producer, aims to revitalize its market share, which is at risk of declining due to aging mining projects and increasing global competition. The deal, marking a pivotal step in Boric's national lithium strategy, mandates public-private partnerships for all lithium projects. Set to start in January 2025, Codelco will take over SQM's existing contracts and collaborate on increasing lithium production in the Atacama Desert. This partnership is not only a strategic move to stabilize SQM's market position but also sets a precedent for future lithium contracts in Chile, potentially reshaping the country's role in the global lithium market.

Global Rare Earths Market Heats Up as China Implements Export Ban (December 21, 2023, [Source](#)) – The recent [ban by China](#) on the export of rare earth processing technology represents a pivotal moment in the global rare earths market, particularly impacting the strategic metals sector. This ban, covering technology for extracting, separating, and producing rare earth metals and

alloys, along with some magnet production technologies, has significant implications for industries like electronics, clean energy, and defense. Experts from the [Critical Minerals Institute](#), including Melissa Sanderson and Peyton Jackson, highlight the necessity for the United States to proactively respond by investing in both green technologies, such as bio-extraction, and traditional processing methods. They emphasize the risks of over-dependence on other nations and the importance of developing technological self-reliance. The U.S. government's funding of Lynas Rare Earths Ltd. (ASX: LYC) and Energy Fuels Inc.'s (NYSE American: UUUU | TSX: EFR) advanced solvent extraction system exemplifies a shift towards addressing these challenges through domestic initiatives. This strategic move is not only a reaction to China's export ban but also a step towards ensuring a more sustainable and secure future in the critical minerals sector.

Allkem shareholders approve \$10.6 billion Livent lithium merger (December 19, 2023, [Source](#)) – Australian lithium producer Allkem Limited (ASX: AKE | TSX: AKE) and U.S. company Livent Corporation (NYSE: LTHM) have agreed on a significant [\\$10.6 billion merger](#), marking a major move in the lithium industry. This decision, approved by 72% of Allkem's voting shareholders, will result in the formation of Arcadian Lithium PLC (NYSE: ALTM | ASX: LTM), a formidable entity in the global lithium market. The merger, which has received all necessary regulatory approvals, positions Arcadium Lithium as one of the world's largest lithium companies, with operations spanning Australia, Argentina, and Canada. The new company will be integral in supplying lithium, a critical component for electric vehicle batteries, to various battery manufacturers. Under the terms of the deal, Allkem shareholders will exchange their shares on a one-for-one basis for shares in Arcadium Lithium, owning 56% of the new company, while Livent shareholders will receive 2.406

shares in Arcadium for each of their shares. Livent CEO Paul Graves is set to lead the new company, which will be the world's third-largest lithium producer. The merger comes amidst a surge in dealmaking activity in the lithium sector and is recommended by independent financial advisors and proxy firms. Additionally, Livent plans to expand its operations in Western Australia's prominent lithium districts.

Singapore's Atomionics taps gravity, AI in hunt for critical minerals (December 19, 2023, [Source](#)) – Singapore-based startup Atomionics is transforming the mineral exploration industry with its innovative technology, Gravio, which combines gravity detection and artificial intelligence. This “virtual drill” technique offers a more precise and efficient method for locating ore bodies of critical minerals like copper, nickel, and zinc. Atomionics has already engaged with three major mining companies and is implementing its technology in Australia and the U.S. The technology's real-time data processing significantly accelerates the task of defining ore bodies, offering a cost-effective alternative to traditional exploration methods. The ability to build an accurate virtual picture of mineral deposits before physical drilling can greatly reduce costs, as exploratory drilling is expensive and often misses the target. Atomionics aims to decrease these unsuccessful attempts by at least half. This innovative approach holds the potential to be a game-changer in the mineral exploration sector, presenting a low-cost alternative to traditional methods and contributing to the energy transition.

EU sets critical mineral goals, but faces struggle to hit them (December 18, 2023, [Source](#)) – The European Union (EU) has ambitious targets for securing critical minerals essential for its green transition, as outlined in the Critical Raw Materials Act (CRMA), which aims to mine, recycle, and process significant portions of its annual needs for key materials like lithium and

cobalt by 2030. These efforts are crucial for manufacturing clean technology products and reducing dependence on China, the dominant player in global mineral processing. However, the EU faces considerable challenges, including funding shortages, high energy costs, local opposition, and the need to expedite project permits. Additionally, the EU's efforts are comparatively underfunded compared to massive investments in green subsidies by countries like the U.S. The situation is further complicated by higher EU energy costs leading to reduced metal production and delays in mining projects in Portugal and Serbia. Despite these hurdles, there are positive signs, such as potential projects meeting EU supply needs and innovations to minimize material use. The EU also seeks to diversify imports and forge global partnerships, aiming to position itself as a clean tech leader by focusing on high-value manufacturing and relying on reliable allies for mineral sourcing.

Billionaire-backed KoBold Metals widens lithium hunt across four continents (December 14, 2023, [Source](#)) – KoBold Metals, a California-based startup financially backed by prominent billionaires including Bill Gates and Jeff Bezos, is broadening its search for lithium, a crucial component in the clean energy and electric vehicle sectors, across four continents. Utilizing advanced artificial intelligence technology, CEO Kurt House announced plans to explore for lithium in regions such as South Korea, Quebec, the United States, Australia, and Africa, with specific emphasis on Namibia and the Democratic Republic of Congo. Previously focused on nickel and copper, with successful ventures in Quebec and Zambia, KoBold is now transitioning to include lithium in its mining portfolio. This strategic move aligns with their long-term goal to become the leading supplier of critical metals within 10 to 15 years. The startup, supported by Breakthrough Energy Ventures, collaborates with major players like BHP Group and Rio Tinto on projects in Australia and

Canada. This expansion reflects KoBold's ambition to fill the exploration void left by larger mining firms, which have recently prioritized operational efficiency and shareholder returns over new mineral discoveries.

InvestorNews Critical Minerals Media Coverage:

- January 3, 2024 – Rare earths company stock price has had a 'meteoric' rise of over 21x the past 15 months <https://bit.ly/3vo6Xn3>
- December 29, 2023 – Energy Fuels announces an MOU for a \$122M investment in Astron that will supply a "new U.S.-based supply chain for decades" <https://bit.ly/3tzBfm9>
- December 29, 2023 – Hallgarten Initiates Coverage of Edison Lithium: Pivoting to Sodium-Ion Battery Technology <https://bit.ly/3tG08wq>
- December 27, 2023 – The Critical Minerals Institute Report (12.27.2023): Politics Driving Marketable Commodities into 2024 <https://bit.ly/48sqnVU>
- December 21, 2023 – Global Rare Earths Market Heats Up as China Implements Export Ban <https://bit.ly/3TAClsv>
- December 21, 2023 – Setback for U.S. Rare Earth Industry: China Tightens Export Laws on Key Technologies, Impeding American Efforts to Gain Independence Despite Financial Incentives <https://bit.ly/4aGvQdQ>
- December 20, 2023 – An update on the graphite sector and what to expect in 2024 and beyond <https://bit.ly/3v8xLHG>
- December 19, 2023 – Australia updates their Critical Minerals List and Adds a second, introducing the Australian Strategic Materials List <https://bit.ly/3RQx7aG>

InvestorNews Critical Minerals Videos:

- December 30, 2023 – Jack Lifton with Mark Chalmers on

Energy Fuels Rare Earth Deal and Increasing US Uranium Production <https://bit.ly/3TM5wsK>

- December 30, 2023 – Mark Chalmers of Energy Fuels Discusses Increasing Uranium Production in the United States <https://bit.ly/3TDPH7k>
- December 30, 2023 – Energy Fuels' Strategic MOU with Astron: Shaping the Future of the U.S. Rare Earths Supply Chain <https://bit.ly/41PPujp>
- December 18, 2023 – Ucore's Strategic Leap: Pat Ryan Discusses the First Mover Advantage in Rare Earths Processing at Louisiana's Strategic Metals Complex <https://bit.ly/3GKa2jL>

Critical Minerals IN8.Pro Member News Releases:

- January 4, 2024 – Ucore Acquires Alexandria, Louisiana, Facility for Rare Earth Element Processing Plant <https://bit.ly/3RJC00s>
- January 2, 2024 – Panther Metals PLC Corporate Summary: Positioned to Succeed <https://bit.ly/3tDKSQI>
- January 2, 2024 – First Phosphate Closes Second Tranche of Oversubscribed Private Placement for Total Current Financing of \$7.5 Million <https://bit.ly/48jDCbP>
- December 29, 2023 – Panther Metals PLC: Obonga Project Awkward East Claim Purchase Agreement <https://bit.ly/3NKBeTr>
- December 28, 2023 – Appia Rare Earths & Uranium – A Year in Review <https://bit.ly/48xo3gh>
- December 28, 2023 – Kraken Energy Receives Permit to Resume Phase I Drill Program at Harts Point and Provides Corporate Update <https://bit.ly/48pALxM>
- December 27, 2023 – Energy Fuels Enters into MOU to Secure Near-Term, Large-Scale Australian Source of Rare Earth Minerals to Supply New U.S.-Based Supply Chain for Decades

<https://bit.ly/47lDF5v>

- December 27, 2023 – Ucore Comments on China's Ban on the Export of Rare Earth Technology <https://bit.ly/3RYiimD>
- December 27, 2023 – Appia Announces Closing of Non-Brokered Flow-Through Private Placement <https://bit.ly/41EDIbJ>
- December 27, 2023 – Defense Metals Completes Geotechnical Field Data Collection for Wicheeda Rare Earth Element Project Preliminary Feasibility Study <https://bit.ly/3RGLehB>
- December 27, 2023 – F3 to Spend \$16 Million on Drilling at PLN <https://bit.ly/4aCQwDc>
- December 22, 2023 – First Phosphate Announces Closing of Initial Tranche of Private Placement Financing Along with Date of Second Tranche Closing <https://bit.ly/48LgHWR>
- December 22, 2023 – Ucore Announces Extension of Debt <https://bit.ly/3S7KAev>
- December 22, 2023 – Fathom Nickel Announces the Closing of the First Tranche of Private Placement <https://bit.ly/3S6aCyF>
- December 21, 2023 – Imperial Mining Closes \$1M Critical Minerals Flow-Through Private Placement <https://bit.ly/4aEEsSh>
- December 21, 2023 – Western Uranium & Vanadium Provides Market and Company Updates <https://bit.ly/3tyzFAP>
- December 21, 2023 – Ucore Completes RapidSX(TM) Demo Plant Commissioning – Begins US Department of Defense Demonstration Program <https://bit.ly/3tjI4Iz>
- December 21, 2023 – In Response to Surging Prices, Supportive Government Policies, and a Domestic Focus on Security of Supply, Energy Fuels Has Commenced Production at Three of its U.S. Uranium Mines <https://bit.ly/3Ru3Lxv>
- December 20, 2023 – Panther Metals PLC: Financing Update <https://bit.ly/410C3jB>

- December 20, 2023 – Critical Metals PLC advances the Molulu Copper-Cobalt Project in DRC <https://bit.ly/3ts5TxH>
- December 19, 2023 – Auxico Announces Board Decisions on Key Assets and Filing of Technical Reports <https://bit.ly/3TyNxFY>
- December 19, 2023 – Automotive OEM Validates Nano One LFP and Kicks Off Tonne-Scale Evaluations <https://bit.ly/48g4KZ6>