

Technology Metals Report (04.19.2024): Government Roles Escalate, Rinehart and the Market Go Bull on Copper

written by Tracy Weslosky | April 19, 2024

Welcome to the latest issue of the Technology Metals Report (TMR), brought to you by the [Critical Minerals Institute](#) (CMI). In this edition, we compile the most impactful stories shared by our CMI Directors over the past week, focusing on the significant shifts and investments in the critical minerals and technology metals industry. A notable development is the evolving dynamics of [resource nationalism](#), particularly in Chile and Indonesia, where control over vital minerals like lithium and nickel is increasingly dominated by local governments. This shift challenges traditional Western dominance and marks a move towards a multipolar resource governance era. Adding to the market dynamics, Australia's wealthiest, Gina Rinehart, has made aggressive moves into the critical minerals sector with her \$120 million [investment](#) in Ecuador's Linderos copper-gold project and significant stakes in rare earth companies, positioning her as a pivotal figure in global supply chains.

This week's TMR Report also highlights several significant developments aimed at enhancing the supply chain and infrastructure of critical minerals. The U.S. Department of Energy has released a pioneering [roadmap](#) to integrate clean energy projects more rapidly into the nation's electric grid, targeting a substantial reduction in project backlogs. In financial boosts, critical mineral projects in Queensland and South Australia have been [pledged \\$585 million](#) in government

loans, emphasizing the growing commitment to fostering local industries and reducing dependency on international suppliers. Additionally, [the closure](#) of the Cobre Panamá copper mine has sparked a surge in copper prices, underlining the critical role of stable mineral supplies in maintaining economic stability and supporting green energy transitions. Each story is presented in chronological order to provide a comprehensive view of the week's events, rather than by order of importance, ensuring readers receive a well-rounded perspective on the sector's latest developments.

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The Shifting Dynamics of Resource Nationalism as the Demand for Critical Minerals is Set to Soar: (April 18, 2024, [Source](#)) – As global demand for critical minerals like nickel, lithium, and rare earths surges, the dynamics of resource nationalism are evolving. Historically dominated by Western powers, control is shifting towards resource-rich countries asserting sovereignty over their natural assets. China's longstanding monopoly on rare earths exemplifies this trend, leveraging resources for economic and strategic autonomy—a strategy now mirrored by Chile and Indonesia in their respective lithium and nickel sectors. Chile's government, for instance, has moved to nationalize lithium extraction by partnering with SQM to form a national critical minerals company. Meanwhile, Indonesia mandates local processing for nickel, fostering a sustainable, self-sufficient industrial base. These strategic shifts are restructuring global supply chains, challenging traditional Western dominance and heralding a multipolar resource governance era. This realignment has profound implications for geopolitical dynamics and global power structures in resource management.

Billionaire Gina Rinehart Stakes Another Critical Minerals

Claim: (April 18, 2024, [Source](#)) – Gina Rinehart, Australia's richest person and head of [Hancock Prospecting Pty Ltd.](#), is diversifying her portfolio by targeting critical minerals, moving away from her traditional focus on iron ore. Her recent ventures include significant investments in South America and the rare earths market. Notably, she invested \$120 million in Ecuador's Linderos copper-gold project through a deal with [Titan Minerals Ltd.](#) (ASX: TTM), aiming for up to an 80% ownership. Additionally, she acquired a 49% stake in an Ecuadorian state-owned mining company. Rinehart also increased her influence in the rare earths sector by purchasing stakes in [Lynas Rare Earths Ltd.](#) (ASX: LYC) and [MP Materials Corp.](#) (NYSE: MP). Furthermore, she supported [Arafura Rare Earths Limited](#) (ASX: ARU) in Australia, which received a substantial [government backing](#) of A\$840 million in grants and loans last month. Rinehart's strategic investments mark her shift to a key player in the global market, enhancing supply chain security for technology and renewable energy resources.

DOE Releases First-Ever Roadmap to Accelerate Connecting More Clean Energy Projects to the Nation's Electric Grid: (April 17, 2024, [Source](#)) – The U.S. Department of Energy (DOE) has unveiled a roadmap aimed at speeding up the integration of clean energy sources like solar, wind, and batteries into the national transmission grid, addressing the existing backlog of nearly 12,000 projects. This comprehensive guide, developed by DOE's Interconnection Innovation e-Xchange (i2X), targets a variety of stakeholders, including transmission providers, state agencies, and equipment manufacturers. It proposes 35 solutions across four main areas: improving data access, enhancing the interconnection process, promoting economic efficiency, and ensuring grid reliability. The roadmap also sets forth ambitious goals for 2030 to facilitate the Biden-Harris Administration's objective of achieving 100% clean electricity by 2035. These

efforts are supported by DOE's Grid Deployment Office and various funding opportunities aimed at fostering grid resilience and interconnection efficiency.

Critical minerals projects in central Queensland and South Australia to receive \$585 million in government loans: (April 16, 2024, [Source](#)) – Critical minerals projects in Queensland and South Australia are set to receive \$585 million in federal government loans, marking a significant push by the Albanese government towards a “future made in Australia.” A major portion, \$400 million, will fund Australia's first high-purity alumina processing facility in Gladstone, central Queensland. This investment comes via the \$4 billion Critical Minerals Facility, Northern Australia Infrastructure Facility, and Export Finance Australia. An additional \$185 million is earmarked to accelerate [Renascor Resources Limited](#)'s (ASX: RNU) Siviour Graphite Project in South Australia. These projects aim to bolster the production of minerals essential for lithium-ion batteries and renewable technologies. This initiative aligns with national strategies to enhance renewable technology capabilities and drive economic growth through local job creation and sustainable industrial development.

A \$10 billion Panamanian copper mine has been sitting idle since November – and it's part of why the metal's price is surging: (April 16, 2024, [Source](#)) – The Cobre Panamá mine, a major \$10 billion copper-producing site, has been inactive since November, significantly contributing to the global copper shortage. This closure has led to an 11% increase in copper prices this year, reaching a peak not seen in over a year. Operated by Canada-based [First Quantum Minerals Ltd.](#) (TSX: FM), the mine previously supplied 1.5% of the world's copper, enough to build five million electric vehicles annually. The shutdown resulted from a tax dispute with the Panamanian government, which sought more favorable terms. This has exacerbated a copper supply crisis,

with the Bank of America declaring that the lack of new mining projects is now severely impacting refined copper production. This shortage coincides with increased demand for copper in green energy projects, further driving up prices.

SRC Expects to Produce 400 Tonnes of Rare Earth Metals Per Year Beginning in 2025: (April 15, 2024, [Source](#)) – The [Saskatchewan Research Council](#) (SRC) has entered into a five-year agreement with Vietnam's Hung Thinh Group to import up to 3,000 tonnes of rare earth carbonate annually starting in June 2025. This will enable SRC's Rare Earth Processing Facility in Saskatchewan to produce about 400 tonnes of rare earth metals per year. These metals are crucial for manufacturing modern technologies such as cellphones, electric vehicles, and green technologies. The deal, which stems from Saskatchewan's diplomatic efforts in Vietnam, positions SRC as a pioneer in North America with a fully integrated commercial rare earth processing facility. The Saskatchewan Government's \$71 million investment in the facility aims to boost the local and national resource sectors by enhancing mid-stream supply chain capabilities. SRC, a major Canadian research entity, expects this initiative to catalyze industry investment and growth.

U.S. Department of State Minerals Security Partnership (MSP) Aims to Support Biden Policies on Critical Minerals: (April 15, 2024, [Source](#)) – The U.S. Department of State's Minerals Security Partnership (MSP) was established to advance President Biden's policies on critical minerals and enhance supply chain security. Led by Under Secretary [Jose Fernandez](#), the MSP collaborates with various countries and the European Union to foster sustainable mineral supply chains, prioritizing environmental, social, and governance (ESG) standards. The partnership focuses on diversifying supply chains, boosting investments, promoting high ESG standards in mining, and increasing recycling. Companies involved must meet stringent ESG criteria, including responsible

environmental practices and ethical community engagement. Despite challenges such as varying international ESG standards, the MSP remains dedicated to “greening” economic activities and addressing climate change through global cooperation.

Tesla supplier Piedmont Lithium gets key North Carolina mining permit: (April 15, 2024, [Source](#)) – [Piedmont Lithium](#) (Nasdaq: PLL | ASX: PLL), a supplier to Tesla, has secured a crucial mining permit from North Carolina regulators to develop a significant U.S. lithium source near Charlotte. Despite the permit’s conditional approval, requiring a \$1 million reclamation bond, the company faces ongoing financial challenges and local regulatory hurdles. The project, which could be a major U.S. lithium producer, is opposed by local residents due to environmental concerns. Additionally, Piedmont must obtain local zoning approval and substantial funding, estimated over \$1 billion, potentially through U.S. Department of Energy loans. The state has imposed stringent conditions, including regular environmental monitoring and a modified waste storage protocol. The project’s progress hinges on overcoming local opposition and securing necessary permits and funding.

Glencore-backed nickel miner fails to secure financing after rising costs: (April 15, 2024, [Source](#)) – Horizonte Minerals PLC (TSX: HZM | AIM: HZM), backed by Glencore PLC (LSE: GLEN), is facing financial difficulties with its Araguaia nickel mine project in Brazil due to a significant increase in estimated costs, now exceeding \$1 billion, and concerns about market oversupply from Indonesia. As a result, the company is considering options such as selling the mine, liquidation, or securing subsidiary-level financing, though none are expected to benefit shareholders significantly. Following the news, the company’s shares plummeted by 84%. This setback reflects broader challenges for nickel projects outside Indonesia, given the country’s dominant market position. Horizonte’s struggles

highlight investor reluctance to finance high-capital, early-stage projects amid unfavorable market conditions dominated by Indonesian supply, affecting not only Horizonte but also other nickel producers worldwide.

United States and United Kingdom Take Action to Reduce Russian Revenue from Metals: (April 12, 2024, [Source](#)) – The United States and the United Kingdom have jointly announced new prohibitions aimed at reducing Russia's income from metal exports, specifically aluminum, copper, and nickel. The U.S. Department of the Treasury, in coordination with the UK, issued measures to prohibit the importation of these metals into the U.S. and restrict their use on global metal exchanges and in derivatives trading. These actions are intended to follow through on commitments made in the G7 Leaders' Statement to cut off revenue streams that support Russia's ongoing military activities in Ukraine. Treasury Secretary Janet L. Yellen emphasized that the measures are targeted to undermine Russian revenue while minimizing negative impacts on allies. UK Chancellor Jeremy Hunt highlighted the collaborative nature of these efforts, stressing their importance in impeding Russia's war capabilities. As a result, major metal exchanges like the London Metal Exchange and Chicago Mercantile Exchange will no longer accept newly produced Russian metals from April 13, 2024.

Investor.News Critical Minerals Media Coverage:

- April 18, 2024 – The Shifting Dynamics of Resource Nationalism as the Demand for Critical Minerals is Set to Soar <https://bit.ly/3W63V28>
- April 18, 2024 – Billionaire Gina Rinehart Stakes Another Critical Minerals Claim <https://bit.ly/3U2G0xU>

- April 17, 2024 – InvestorNews.com Offers Real Time Access through the Revolutionary IR Mobile App, Now Offered Through Stock Marketing Inc. <https://bit.ly/3TYrwPz>
- April 16, 2024 – Tuan Tran Joins the Critical Minerals Institute (CMI) as the Newest Board Member <https://bit.ly/49DlucM>
- April 15, 2024 – U.S. Department of State Minerals Security Partnership (MSP) Aims to Support Biden Policies on Critical Minerals <https://bit.ly/3Ji332z>

Investor.News Critical Minerals Videos:

- April 19, 2024 – Terry Lynch on Power Nickel's 'New Crown Jewel Discovered on its NISK Project' <https://bit.ly/3JrQT7k>
- April 17, 2024 – Critical Metals' Russell Fryer on the Rising Tide for Copper and Cobalt in Africa <https://bit.ly/4aFoWFa>

Critical Minerals IN8.Pro Member News Releases:

- April 17, 2024 – Gary Stanley, Former Director of the Office of Critical Minerals and Metals at the U.S. Department of Commerce, Joins the First Phosphate Advisory Board <https://bit.ly/3UkxbAL>
- April 17, 2024 – Successful completion of Institutional Placement to raise A\$15M; Entitlement Offer to be undertaken <https://bit.ly/3W2SKHl>

- April 16, 2024 – Appia Files NI 43-101 Technical Report on Maiden Indicated and Inferred Mineral Resource Estimate for the PCH Ionic Adsorption Clay Project in Goias, Brazil <https://bit.ly/3xAahwd>
 - April 16, 2024 – NEO Battery Materials Appoints Renowned Battery Industry Pioneer Mr. Ricky Lee as Lead Managerial Advisor <https://bit.ly/3UikF4C>
 - April 16, 2024 – Fathom Intersects Rottenstone-Like Nickel Tenor in Drillhole AL24077 at the Albert Lake Project <https://bit.ly/3JlIfY8>
 - April 16, 2024 – Appia Engages Generation IACP to Provide Market Making Services <https://bit.ly/43XNEhv>
 - April 16, 2024 – F3 Intersects Radioactivity Across Multiple Zones <https://bit.ly/442U0fv>
 - April 15, 2024 – Power Nickel Releases Initial Assay on New Crown Jewel Discovered on its NISK Project <https://bit.ly/4bdvDlh>
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Billionaire Gina Rinehart Stakes Another Critical Minerals Claim

written by InvestorNews | April 19, 2024

Gina Rinehart, Australia's wealthiest individual, has recently expanded her investment portfolio through several strategic acquisitions, focusing on the mining sector, specifically in critical minerals. As the Executive Chairman of Hancock Prospecting Pty Ltd., Rinehart has driven her company's interest

in global mining projects, leveraging opportunities in South America and rare earth elements to diversify away from traditional iron ore.

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 19, 2024

Welcome to the latest issue of the Technology Metals Report (TMR), brought to you by the [Critical Minerals Institute](#) (CMI). In this edition, we compile the most impactful stories shared by our 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>

Investor.News Critical Minerals 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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Will the magnet rare earths prices rise in 2024?

written by Matt Bohlsen | April 19, 2024

Today we take a look at the magnetic rare earths sector and two leading rare earth companies and what we can expect in 2024 and beyond.

The magnet rare earths prices have fallen in 2022 and 2023

The magnet rare earths sector was hit hard in 2023 with China's Neodymium (Nd), Praseodymium (Pr), and Dysprosium (Dy) prices falling as the global economy and EV demand slowed.

Neodymium prices came crashing down in 2022 and 2023 as demand

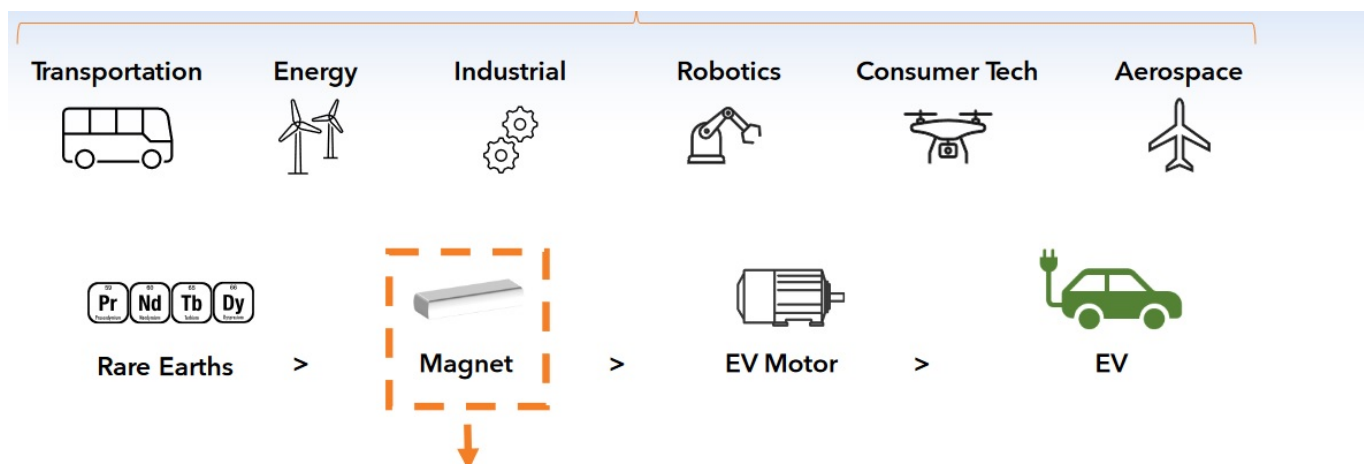
slowed after the 2021 growth rate boom in EV sales – Now at CNY 530,000/t



Source: [Trading Economics](#)

Global plugin electric car sales [grew by 108%](#) in 2021 causing a huge spike in EV metal prices. Then in 2022, the growth rate slowed to 56% at a time when supply of most EV metals surged. Finally in 2023, the growth rate slowed further to an estimated 28%, resulting in further price decline for the magnet metals such as neodymium.

Demand for the magnet rare earths in electric motors is driven by multiple sources with electric vehicle sales being a key driver. (90% of EV motors use rare earth magnets)



Rare earths present a single point-of-failure threat to industries that drive prosperity and security.



Source: [MP Materials company presentation](#)

Will the magnet rare earths prices rise in 2024?

The answer to this question will largely depend on recovery in China and the global economy driving increased demand for EVs, wind turbines, and other magnets used in various industrial applications. Given the most recent trend globally has been towards future interest rate decreases (notably in the USA and China), it bodes well for a recovering consumer and hence demand. This may take a good part of 2024 to flow through with excess inventories across many sectors still needing to be worked off. If we get a strong pickup in EV demand (>40% YoY increase) in 2024, then the magnet rare earths sector woes could soon disappear.

China's December 2023 EV sales give some hope as they jumped to a record [945,000 units](#), achieving a superb 47% YoY growth rate.

Lynas Rare Earths Ltd. (ASX: LYC) ("Lynas") update

The big recent Lynas news ([announced December 7, 2023](#)) is that the first feed of material from the Mt Weld Mine has been introduced into the new Kalgoorlie Rare Earths Processing Facility in Western Australia, leading to first production and ramp-up of the Facility. A great achievement for Lynas, especially given that the Kalgoorlie Rare Earths Processing Facility is Australia's first value-added rare earths processing facility. Lynas [stated](#):

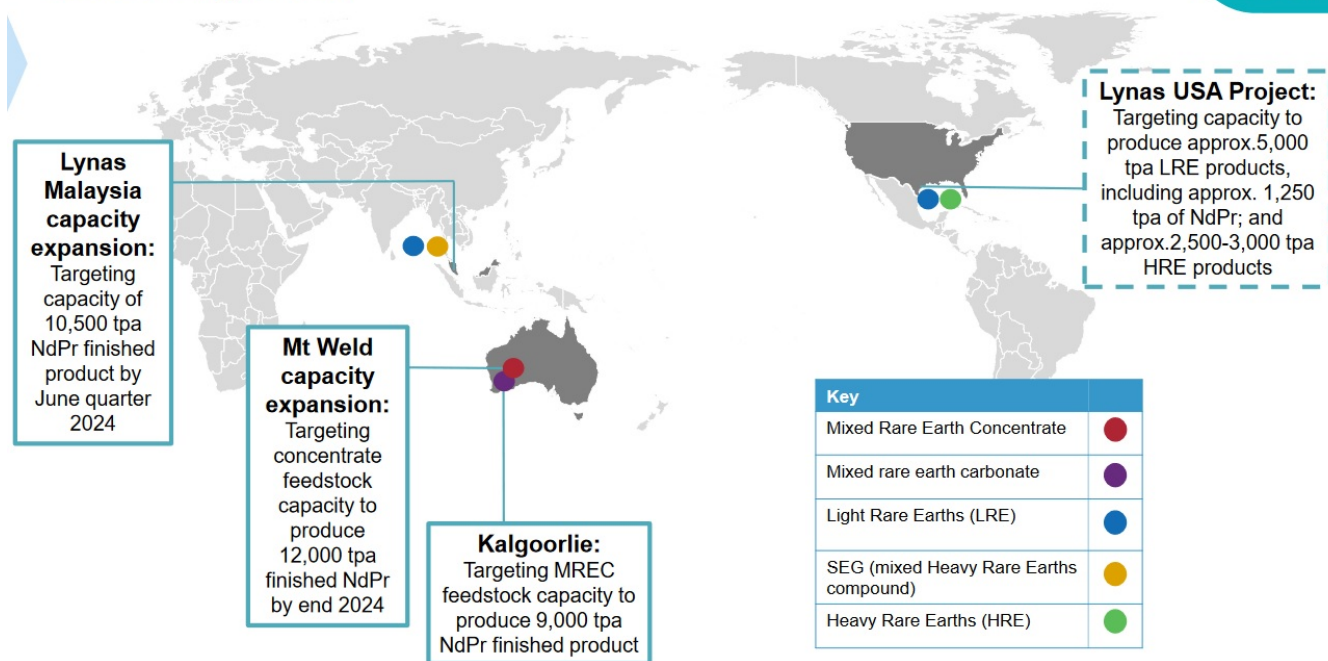
The Lynas Malaysia plant is currently shutdown as works to increase downstream processing capacity are completed. Production will recommence in January 2024. Mixed Rare Earth Carbonate (MREC) from the Kalgoorlie Rare Earth Processing Facility will be progressively introduced to the Lynas Malaysia plant commencing late in the March quarter and increasing as the controlled ramp up of the Kalgoorlie facility is progressed...."

Once their expansions are completed, Lynas intend to increase their production capacity to [10,500tpa NdPr](#) (Neodymium-Praseodymium). Lynas produced [6,142t of NdPr](#) in FY 2023.

2024 will see the Mt Weld Mine expansion and further work on Lynas' US Rare Earths Processing Facility Project targeted to be operational by [July 2025 – June 2026](#).

Lynas is expanding its rare earths mining and processing capabilities through to 2025/26

Growing scale and increasing capacity to meet forecast demand growth



23

Source: [Lynas company presentation](#)

MP Materials Corp. (NYSE: MP) (“MP Materials”) update

MP Materials owns and operates the Mountain Pass Rare Earth Mine and Processing Facility in California, USA. In the past MP Materials had to ship their concentrate to China for processing; however, they have a target to bring this back to the USA.

Their target is to grow their mine output by 50% over the next four years and to build separation capacity in the USA with annual production of 6,000 tpa NdPr oxide. The third stage of their plan is to build a greenfield production facility in Texas targeting ~1,000tpa of finished NdFeB (Neodymium Iron Boron) magnets. They already have General Motors (NYSE: GM) as a foundational customer.

MP Materials is working towards Stage II and Stage III of their plan to bring rare earths processing and magnets production to

the USA



Stage I: Concentrate Production

- Largest ex-China producer
- ~15% global market share in 2022
- "Upstream 60K" strategy to grow output 50% over the next four years

Stage II: RE Separations

- Separation, refining and finishing capabilities to convert RE concentrate into separated REOs
- >6k mt NdPr oxide annual production target
- Lanthanum, Cerium and SEG+ production

Stage III: RE Magnets

- Greenfield production facility in Texas targeting ~1k mtpa of finished NdFeB magnets
- General Motors as foundational customer
- To deliver intermediate product ahead of magnet completion
- Buy, build and/or JV

Source: [MP Materials company presentation](#)

Closing remarks

2024 should see a year of consolidation for the rare earths sector as some experts are telling me. Some [forecasts](#) are for NdPr supply deficit to begin as early as 2024; however, this will largely depend on China demand, the global economy, EV sales, and new NdPr supply hitting the market.

The two Western magnet rare earths leaders Lynas and MP Materials (and some other key players) are progressing their plans to further build a western supply chain and should be largely complete within the next 2-4 years if it goes to plan. This all supports the building of an end-to-end Western rare earths and magnets sector this decade. Stay tuned.

Malaysia's Decision is a Game Changer for Lynas Rare Earths

written by Tracy Weslosky | April 19, 2024

Lynas Rare Earths Ltd. (ASX: LYC), the Australian mining giant, recently breathed a sigh of relief. Malaysia's government granted the firm a pivotal extension on their operating license, allowing them to continue importing and processing raw materials laden with naturally occurring radioactive elements until March 2026.

A Landmark Moment: U.S. Dept. of Defense Makes Bold Moves in Rare Earth Magnet Manufacturing

written by Jack Lifton | April 19, 2024

The world of rare earth permanent magnet manufacturing just received a jolt of excitement. A new announcement from the Department of Defense has revealed a significant investment in a domestic manufacturing plant, a move that holds implications not just for defense, but also for the wider commercial sphere.

Insights on Lynas Rare Earths' Fiscal Year Report and Expert Commentary

written by Jack Lifton | April 19, 2024

Lynas Rare Earths Ltd. (ASX: LYC) recently unveiled its financial statistics for the fiscal period culminating on 30 June 2023. The firm's financial year was marked by significant operational feats, most notably setting new benchmarks in concentrate and NdPr production during the latter half.

Lynas Surges Ahead with Expansion Plans, Record Production & Solid Quarterly Results Despite Tesla's Rare Earths Comments

written by InvestorNews | April 19, 2024

[Lynas Rare Earths Limited](#) (ASX: LYC) ("Lynas") recently announced some positive news that the Malaysian authorities have advised that their license to import and process lanthanide concentrate is now valid until 1 January 2024, effectively a 6-month extension to get their Malaysian rare earths unit in line with environmental requirements.

Meanwhile, Lynas continues to oppose the Malaysian government's 'new' rules and is working on alternate facilities in Western Australia. Should the Malaysian situation not be resolved then Lynas has a backup plan. The announcement [stated](#):

"The licence variation allows the Lynas Malaysia cracking and leaching plant to continue to operate until 1 January 2024 and will remove the requirement for a shutdown at the Lynas Malaysia plant prior to 1 January 2024."

At the heart of the issue is that the Malaysian authorities say the cracking and leaching plant generates radioactive waste. Lynas argues that they are meeting the conditions as per their original agreement with the Malaysian government. Lynas stated:

"Lynas had applied to the MOSTI Minister for the removal of the conditions which limit operations at the Lynas Malaysia facility as they represent a significant variation from the conditions under which Lynas made the initial decision to invest in Malaysia."

We will have to wait until January 1, 2024, to see what happens next regarding Lynas operating its cracking and leaching plant in Malaysia.

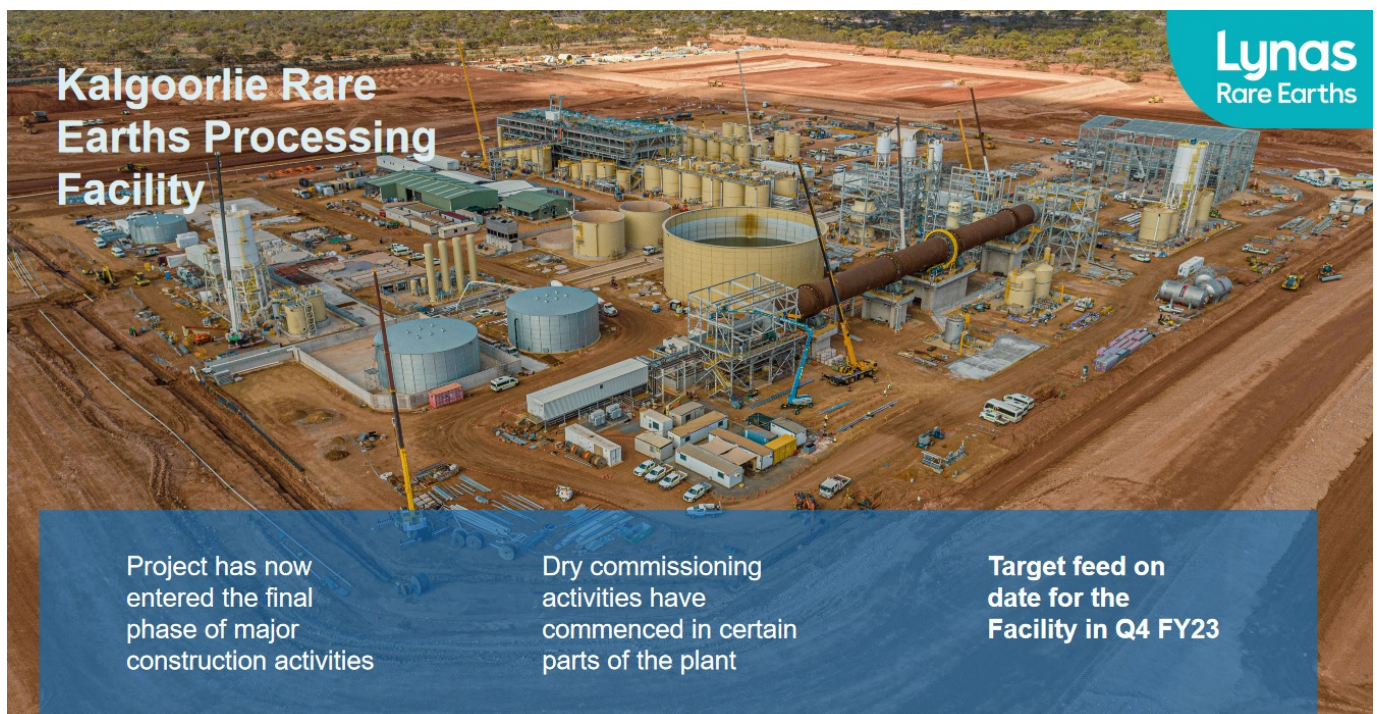
Lynas' Kalgoorlie Rare Earths Processing Facility is in the final stages of construction, feed to start this quarter (Q4/FY23 – Ending June

30)

Lynas has been rapidly building a backup rare earths processing facility in Kalgoorlie, Western Australia. Lynas [stated](#) that the facility “has now entered the final phase of major construction activities, dry commissioning activities have commenced in certain parts of the plant, target feed on date for the Facility in Q4 FY23.”

Lynas plans to use rare earths carbonate feed from their Mt Weld Mine to feed the new Kalgoorlie rare earths processing facility once complete (noting a ramp-up period applies). The product would then be shipped to Malaysia for final processing.

FIGURE 1: Lynas’ under construction rare earths processing facility in Kalgoorlie Western Australia

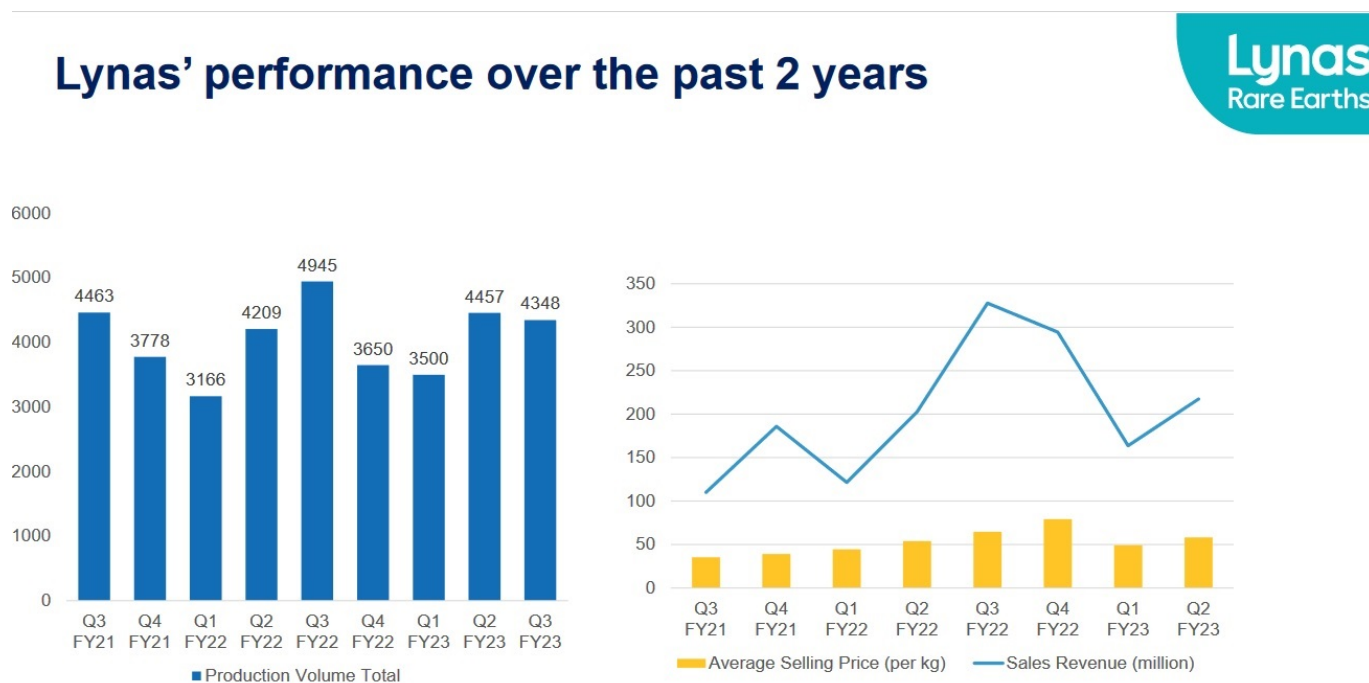


Source: [Lynas company presentation](#)

Lynas achieved record NdPr production in Q3/FY23 (Ending March 31)

In Q3/FY23 Lynas produced [4,348 tonnes](#) of total rare earths oxide and a record [1,725 tonnes](#) of Neodymium-Praseodymium (“NdPr”). This resulted in [A\\$237.1 million](#) of revenue for the quarter. The chart below shows Lynas’ revenue trending slightly higher over the past 2 years on the back of solid production and prices.

FIGURE 2: Lynas’ last 2 years Total Rare Earth Oxides (“TREO”) production volumes and sales revenues



Source: [Company presentation](#)

USA LRE and HRE facilities update

The USA Light Rare Earth (“LRE”) and Heavy Rare Earth (“HRE”) facilities plan to be able to process both light and heavy rare

earths.

Lynas has secured a greenfield site in an existing industrial zone in Texas, further progressed the detailed engineering design, and engaged a preferred U.S. Engineering, Procurement, Construction, and Management (“EPCM”) contractor.

Tesla plans to use non-rare earths motors in their next generation vehicle

Lynas CEO, Amanda Lacaze, stated in the [Q3, FY 2023 earnings call](#):

“The neodymium iron boron [NbFe] magnet technology is the most energy efficient, because it is the lightest motor, and over the life time of the vehicle it gives you the best efficiency... ..and it has the lowest CO2 emissions... ..more are choosing NbFe technology than the alternative... ..today we find that demand still is ahead of our ability to service everyone who would like to buy Lynas NdPr... ..the current (price) softness is very much about internal China dynamics... ..but we at Lynas remain very confident of the long term trend and we know that the Chinese rare earth firms share that confidence. We remain committed to growing to meet the market and that’s one of the reasons why our ambitious capital investment plan continues.”

Closing remarks

Lynas is very well positioned in 2023 with [A\\$1.12 billion](#) in cash (as of March 31, 2023) and is on target with its expansion plans.

The 6-month Malaysian extension also means that Lynas' rare earths production can continue uninterrupted, at least until January 1, 2024. At that point, the Kalgoorlie facility should hopefully be operating smoothly and ramping up production and offer an alternative should the Malaysia cracking and leaching plant need to be shut down on January 1, 2024.

Lynas Rare Earths trades at a market cap of [A\\$6.82 billion](#) and a PE ratio (TTM) of [12.39](#).

Analyzing Conflicting Reports of a Rare Earths Technology Ban by China

written by Steve Mackowski | April 19, 2024

Dynamic Reading – Is this the prodigy of today's AI Report Writing phenomenon? I have been asked to write my thoughts on the latest news about potential rare earths technology bans from China. The first reference I received was written by Shunsuke Tabeta, a staff writer for Nikkei Asia: [China weighs export ban for rare-earth magnet tech](#)

The second reference I received was written by Jingyue Hsiao of DIGITIMES Asia, Taipei. This was in response to the Nikkei Asia news: [A rare earth war simmers as China reportedly to impose export ban](#)

I then received the preparatory title of a response from one of the InvestorIntel journalists: "[What happens next if China bans rare earths technology needed to process rare earths and to make](#)

[*high-performance magnets*](#)".

Lessons from the past

Got me thinking about how people's reading styles, capabilities, and mental processes appear to be controlling how they understand the reading matter and therefore influence the way they report or comment. Reminded me of a few years back when my granddaughter wasn't achieving at high school.

I purchased National Geographic subscriptions for us both and commenced a weekly telephone hook-up routine. We took turns investigating each article, with one being the interviewer developing the questions and the other, being the interviewee who had to answer the questions. Who, What, When, Where? With those satisfactorily answered you could then ask the key question: Why? Look at what this does. It focuses the mind to search for factual information BEFORE you look for answers that may be swayed by things such as bias, agendas, or less well-informed previous interactions. It also aids in memory retention.

Unpacking the articles

Look at the Nikkei headline: "export ban". The DIGITIMES headline reads: "Rare earth war". The InvestorIntel "What happens next". These all point to and highlight the differences in the author's history, experience, and understanding of the topic or their editorial bent.

I thought back and my favorite primary school teacher came to mind. She used these Who, What, When, Where, and Why prompts when I was learning to read. No, not read but understand. So Mrs. long-since-forgotten surname, thank you for your skills. But, I'll lay claim to the Dynamic Reading title. BTW, it's

about now I'm expecting some hi-tech whiz kid to jump in and say that this tool is similar but opposite to the AI report writers that aggregate multi-article "Who, What, When, Where, and Why" information. Strange place the past!

So I'll use Dynamic Reading to get to my response to the articles.

	Nikkei Asia (Japanese)	DIGITIMES Asia (Taiwanese)
Who	China. Un-named Beijing Officials	China
What	Considering prohibiting exports of certain rare earth magnet technology	China had updated a technology export restriction list which may ban the exports of certain rare earth elements
When	Later this year	Later this year
Where	Beijing	Beijing

What is really being written

Note already the difference in the What. Banning Rare earth magnet technology versus Rare earth elements. So, do I have enough to comment? To provide a Why? Well, not from that information, I need more.

The DIGITIMES Asia article cites Quartz as reporting that China is trying to defend its dominance in rare earths by increasing investments at home and abroad. This position is not supported by the Off-Market Sale of the East China Exploration (ECE) Group of their holdings in Arafura Resources Ltd. (ASX: ARU). Especially since Arafura is well progressed on its Nolans Project development schedule. And then Lynas Rare Earths Ltd. (ASX: LYC) is very well developed on their North American value-

adding schedule.

To be honest, I have always had difficulty in developing an overview of how China aggregates and controls the Rare Earth business in China. Although the quotas and technology strategies appear to be working well on paper (their paper), it is not without some resistance from the regions that want more self-governance over their resources. Go no further than looking at the resource development battle between the light rare earths in Baotou, the heavy rare earths in Guangzhou, and the historic separation plants around Nanjing.

My conclusions

My take? Well, I would question: Is the news real or not? Is it part of a grander plan? I am sure that China can see the many developments occurring outside of China. And I am sure that China sees the projected growth in rare earths that are needed and coming from developing towards a Net Zero Carbon future. And I am sure that China must acknowledge that its pre-eminent position is not so much as under threat but that it will lessen as the whole of the world looks to resource development for a global benefit.

So, my feelers are out for more information. Difficult though these days and especially now that TikTok bans are muddying the relationships. Let's just hope for everyone's future that China's People's Liberation Army ("PLA") venture into the Straights of Taiwan is not on, or part of, any strategic China agenda.

Oh, my granddaughter? She went from the bottom quartile of her class to be in the top 10%. And is now running her own business. Simply by being taught how to read.

Automotive's Existential Challenge – Supply Chain Awareness for EV Production

written by Jack Lifton | April 19, 2024

It has become necessary today for the OEM automotive assemblers to assert varying degrees of control over the component companies in the total supply chain for electric vehicle ("EV") storage batteries and, also, for rare earth permanent magnet motors, not only for those used in powering onboard accessories but also for the vehicle drive trains.

The automotive industry faces a new supply chain issue

Up until now OEM automotive relied on a tiered supplier system. For the supply of outsourced production parts (those that are actually on the finished car as delivered to the customer) the OEMs bought from prior approved, by them individually, Tier One vendors of the part. In turn, these Tier Ones were responsible for the selection of qualifiable (to the OEM) vendors to themselves, these would be the Tier Twos. The daisy chain continued until the anchor of the supply chain, the mine and/or the mineral processor was reached far, far away from the concern, or understanding, of the OEM automotive assembler's procurement operations.

The reliance on the daisy chain of tiered responsibility has been upended by the need for the fine chemicals required to

manufacture lithium-ion storage batteries and rare earth permanent magnet motors.

Those total supply chains with enough capacity to supply an OEM automotive assembler exist today only in China, which has been constructing those supply chains for at least 15 years.

Lack of understanding of key players in the supply chain

American (and European and non-Chinese Asian with the possible exception only of Japan) do not understand these supply chains well enough, much less the detail of their individual component companies, to identify the key players, much less to manage them from the standpoint of strict adherence to specifications, quality control, on-time delivery, and guaranteed pricing, the main pillars of OEM automotive procurement.

OEM automotive has thus embarked on what I like to call, The-Streetcar-named-Desire system of procurement selection, the industry depends on the kindness of strangers. The main barrier to success in such a system is the absence of experience among the procurement groups of almost any knowledge of the principal industries, mining, chemical engineering, and technology metal-enabled component manufacturing that need to be reconfigured to meet the rigid standards for qualification among the OEM automotive assemble industry.

Experience currently not driving government and business decisions

Just as an example of the pervasiveness in America of this dilemma, I asked the U.S. Dept of Defense why they chose the American rare earth mining company, [MP Materials Corp.](#) (NYSE: MP), and the Australian rare earth miner, initial processor,

[Lynas Rare Earths Ltd.](#) (ASX: LYC) to develop separation systems for “heavy” rare earths, when neither company had ever done such development work. The answer was “Both had large market capitalization, revenues, and significant retained earnings.” So, I guess, it will have been the “bean counters” who killed the program, not those who sought prior experience and proven capability among vendors.

The OEM automotive industry has embarked on an existential challenge, the total replacement of a well-understood technology, ICE drive trains, with a long-established and proven total supply chain, with a supply chain, that for storage batteries and rare earth permanent magnet drive motors with which they have no experience at all.

What is needed

The mining, refining, and fabrication of industrial precursor forms of the technology metals for the OEM automotive industry are not well developed outside of China.

The survival of the non-Chinese OEM EV automotive industry will depend on selecting the component vendors in the distinctly different total supply chains for lithium and rare earths. Sadly, this cannot be left to the battery and motor vendors, who mostly do not have the political and financial resources to address the problems involved.

Final thoughts

The key problem to be faced is finding the necessary experienced expert total supply chain advisors.

How is that to be done?

Addendum: Key minerals in the EV industry

For the storage batteries:

- Lithium
- Nickel
- Cobalt
- Manganese
- Copper
- Aluminum
- Steel
- Tin

For the rare earth permanent magnet motors:

- Neodymium
- Praseodymium
- Dysprosium*
- Terbium*
- Cobalt
- Gallium
- Copper
- Steel
- Tin

**Super critical*