

Technology Metals Report (09.27.2024): World Economic Forum Urges Critical Minerals Investment as Global Banks Pledge to Triple Nuclear Capacity

written by Tracy Hughes | September 27, 2024

This week in the **Technology Metals Report** (TMR) Australia expressed strong interest in collaborating with Vietnam on rare earth exploitation and processing, aiming to enhance Vietnam's significant resources, the second-largest globally. This partnership could introduce advanced technologies to optimize rare earth production, essential for electronics, batteries, and wind turbines. Meanwhile, the World Economic Forum's latest report underscored the urgent need for investment and innovation in the critical minerals supply chain to support the global energy transition, highlighting the importance of ramping up mineral processing and recycling efforts.

In the energy sector, fourteen major global banks, including Bank of America and Goldman Sachs, pledged support to triple nuclear capacity by 2050, marking a notable shift toward nuclear energy as a key low-carbon solution. Additionally, Fission Uranium Corp.'s sale to Paladin Energy has faced legal challenges from Chinese investors, while in the automotive sector, Chinese carmaker NIO emerged as a potential buyer for Audi's Brussels facility amid restructuring, reflecting China's growing influence in both automotive and energy-related sectors.

Ganfeng Lithium continued its strategic expansion in Africa, making notable investments in the region. Among its key projects is the Goulamina spodumene mine in Mali, which is set to significantly boost global lithium supply, with production expected to reach up to 1 million tons of lithium concentrate annually, further emphasizing Africa's growing role in the global lithium supply chain.

For more information on the **CMI**, [click here](#), or to become a member (CAD\$250 annually), [click here](#)

Ganfeng eyes more lithium ties with Africa (September 27, 2024, [Source](#)) – Ganfeng Lithium is escalating its investments in Africa to enhance lithium mining cooperation. The company is developing the Mboukoumassi potassic salt ore project in Africa, featuring sylvite and bromine resources, with ongoing lithium exploration. Additionally, it has initiated the Goulamina spodumene mine project in Mali, expected to commence production this year with a starting phase capacity of 506,000 metric tons of lithium concentrate, potentially expanding to 1 million tons. Chairman Li Liangbin expressed intentions to integrate advanced technologies and cultivate local talent through these projects. Amidst surging demands in China's EV and battery sectors, Chinese companies have substantially invested in global lithium resources, notably in Africa, which is set to significantly increase its share in the global lithium supply, highlighted by recent projections and studies.

Harris Calls for US Critical Minerals Reserve, Tax Credits (September 26, 2024, [Source](#)) – U.S. Vice President Kamala Harris has announced plans to establish a national stockpile of critical minerals to bolster economic and national security. These minerals, essential in numerous applications including batteries and defense systems, are at the core of a \$100 billion industrial policy initiative laid out by Harris' campaign. The

strategy emphasizes boosting domestic production through incentives and emergency powers under the Defense Production Act. Additionally, Harris proposed “America Forward” tax credits for the energy, manufacturing, and agricultural sectors, with funding partly from an international tax system overhaul. This initiative is a response to mitigate risks like supply disruption and reduce dependence on China, which currently leads in the production of many critical minerals. The House Select Committee has also backed the idea, highlighting the need for a reserve to shield U.S. producers from market volatility and protect against potential economic threats from China.

Cyclic Materials Secures USD \$53M Series B Funding to Accelerate Global Expansion of Rare Earth Recycling Infrastructure (September 25, 2024, [Source](#)) – Cyclic Materials has successfully secured a \$53 million Series B funding, pushing its total equity raised to over \$83 million. This new investment will boost the company’s global expansion, particularly in constructing rare earth recycling facilities in the US and Europe. Led by ArcTern Ventures and supported by multiple new and existing investors, including BDC Capital’s Climate Tech Fund and Microsoft’s Climate Innovation Fund, this round was notably oversubscribed. The funds will also support hiring to enhance operations. Cyclic Materials, founded in 2021, focuses on creating a sustainable circular supply chain for rare earth elements (REEs), crucial for technologies like electric vehicles and wind turbines. Their recycling process not only supports sustainable production but also significantly reduces environmental impacts compared to traditional mining. This investment reflects a strong confidence in Cyclic Materials’ technology and its potential to revitalize North American and European leadership in the rare earths industry.

American Rare Earths Secures EXIM Bank Support with US\$456M Letter of Interest for Wyoming Rare Earth Project (September 24,

2024, [Source](#)) – [American Rare Earths Limited](#) (ASX: ARR | OTCQX: ARRNF | ADR: AMRRY) has [obtained](#) a non-binding Letter of Interest from the [Export-Import Bank of the United States](#) (EXIM) for up to US\$456 million in debt financing. This funding is aimed at supporting the construction and development of the Cowboy State Mine at the Halleck Creek Project in Wyoming, representing a critical advance in establishing a U.S. domestic rare earths supply chain. The financing will cover the initial capital costs for the mine, which is vital for extracting essential magnet metals like neodymium and praseodymium, crucial for technologies such as electric vehicles and wind turbines. This initiative aligns with EXIM's goals to boost U.S. exports and reduce reliance on foreign critical materials, particularly from China, enhancing U.S. competitiveness in the global market. This project, expected to be a significant long-term asset, will also bolster U.S. exports and job creation.

Biden Administration and International Partners Expand MSP Finance Network to Combat China's Critical Mineral Dominance (September 24, 2024, [Source](#)) – The Biden Administration, through the Minerals Security Partnership (MSP), is tackling China's dominance in critical minerals by expanding its Finance Network, announced at the United Nations General Assembly on September 23, 2024. Launched in 2022, MSP aims to bolster global supply chains crucial for clean energy and national security. This initiative, supported by development finance institutions, export credit agencies, and private sectors from 14 countries and the EU, focuses on diversifying mineral sources to enhance supply chain resilience. Key projects include Australian Strategic Materials' Dubbo Project for rare earth elements, Electra Battery Materials' cobalt refinery in Ontario, and Lifezone Metals' nickel-cobalt project in Tanzania. The network's growth underscores a commitment to sustainable practices and reducing dependency on monopolized markets,

promoting a stable and diversified global supply framework for critical minerals.

Schneider Electric and Glencore collaborate to drive copper circularity (September 24, 2024, [Source](#)) – Schneider Electric and Glencore have partnered to enhance copper supply chain management and boost decarbonization efforts. This collaboration focuses on digitalization, automation, and circular initiatives, including advocating for high recycled content in copper and implementing end-of-life take-back programs. Schneider Electric, renowned for its sustainability and leadership in digital transformation, will assist Glencore in adopting advanced technologies such as the AVEVA PI System and ETAP for energy data management and process electrification. Together, they aim to develop sustainable procurement practices, improve energy consumption reporting, and lower CO2 emissions associated with copper supplies. This partnership also includes joint ventures in recycling initiatives like lithium-ion batteries and electronic waste, emphasizing a comprehensive approach to supply chain decarbonization and circular economy practices.

Unraveling the Complexity of Critical Minerals: A Call for Expertise (September 23, 2024, [Source](#)) – The treatment of critical minerals in industry analyses is often superficial, marked by a pervasive misunderstanding of their chemical and metallurgical complexities. Frequent errors in technical reports stem from analysts' insufficient knowledge, compromising the economic evaluations of these essential resources. Many evaluations overlook the elaborate processes that minerals undergo—from extraction to refinement—necessary to transform these raw materials into usable forms. Elevating standards in mineral assessments is crucial, as it guides more informed investments and policies, preventing misguided decisions. This call for true expertise in the sector is vital for accurate economic valuations and for supporting the technologies that

will power the future, ensuring that critical decisions are based on sound scientific principles.

Australia keen to collaborate with Vietnam on efficient rare earth exploitation, processing: envoy (September 23, 2024, [Source](#)) – Australia is keen on partnering with Vietnam to enhance the exploitation and processing of rare earth elements, a key initiative highlighted by Australian Ambassador Andrew Golezdzinowski. He expressed this interest to the Commission for the Management of State Capital at Enterprises (CMSC), suggesting that such collaboration could introduce new technologies to optimize Vietnam's significant rare earth resources—the second largest globally. These elements are vital for manufacturing in the electronics, batteries, and wind turbine sectors. Already, Australian companies like EVN, Petrovietnam, and Vinacomin are engaged in related projects. Additionally, the CMSC is updating legal frameworks to mitigate environmental risks associated with rare earth processing. Recent agreements between Vietnamese and Australian companies further underscore this growing cooperation, despite some operational challenges.

World's biggest banks pledge support for nuclear power (September 23, 2024, [Source](#)) – Fourteen leading global banks, including Bank of America, Morgan Stanley, and Goldman Sachs, have pledged to enhance their support for nuclear energy, aiming to triple the world's nuclear capacity by 2050 as set out at COP28. This commitment was announced during an event in New York with White House advisor John Podesta. The backing from these financial giants marks a significant shift towards recognizing nuclear energy's crucial role in transitioning to low-carbon solutions. Historically, the complexity and controversy surrounding nuclear energy financing have hindered new developments, especially in the West. However, this new wave of support could lead to increased direct lending, project

financing, and the facilitation of bond sales and private equity for nuclear projects. The move also reflects a broader acceptance of nuclear energy as essential for achieving carbon neutrality by 2050, supported by entities ranging from tech giants to international banks.

New Report Shows How Critical Minerals Can Drive Global Energy Transition (September 23, 2024, [Source](#)) – A new report by the World Economic Forum, in partnership with McKinsey & Company, highlights the critical role of minerals like lithium and rare earth elements in the global energy transition. Titled “Securing Minerals for the Energy Transition: Unlocking the Value Chain through Policy, Investment and Innovation,” the report addresses the pressing supply shortages that threaten to stall climate goals and exacerbate social and economic issues, especially in developing regions. It stresses the necessity of ramping up investment, fostering innovative technologies in mineral processing, enhancing recycling efforts, and advancing demand-side management through material substitution. The report identifies major barriers including financial, regulatory, and ESG-related challenges, advocating for targeted policy reforms, cross-sector collaboration, and broad innovation to secure a sustainable and equitable mineral supply critical for clean energy technologies.

Chinese investors trying to block Kelowna uranium company’s sale to Australian buyers (September 22, 2024, [Source](#)) – Fission Uranium Corp. (TSX: FCU | OTCQX: FCUUF), based in Kelowna, has encountered complications in its planned sale to Australian giant Paladin Energy Limited (ASX: PDN | OTCQX: PALAF). The agreement, made in June and valued at about \$1.14 billion in stock, was approved by shareholders on September 9. However, CGN Mining Company Limited, a subsidiary of China General Nuclear Power Corp. and holder of an 11.26% stake in Fission, is challenging the transaction in court. Legal proceedings began on

September 13 in B.C. Supreme Court and are set to conclude by September 26. Fission owns the Patterson Lake South uranium property in Saskatchewan, aiming to develop it into a high-grade uranium mine and mill. Paladin owns 75% of the Langer Heinrich Mine in Namibia and is a significant uranium producer.

The House Rejects the Biden EV Mandate (September 20, 2024, [Source](#)) – The House of Representatives voted 215-191 to overturn the Environmental Protection Agency's vehicle emissions rule, which mandates significant increases in electric vehicle (EV) sales despite opposition from some Democrats and the auto industry. The EPA's rule sets ambitious targets that would reduce the market share of gas-powered vehicles to no more than 30% by 2032, requiring a 15-fold increase in EV sales from current levels. This shift poses a significant challenge for U.S. manufacturers, particularly those specializing in trucks and SUVs, as they face higher production costs and logistical issues compared to sedans. Several automakers, including Ford and Stellantis, are scaling back on EV investments due to economic losses and slowing demand, with Ford cancelling plans for new EV models and Stellantis delaying a factory conversion for EV production despite federal subsidies. The mandate's political and economic implications have sparked controversy, particularly in Michigan, affecting the auto industry and union jobs.

Chinese carmaker NIO named as potential buyer for Audi Brussels (September 19, 2024, [Source](#)) – Chinese carmaker NIO is emerging as a key potential buyer for Audi's Brussels production facility. This interest comes amid restructuring plans at Audi Brussels due to decreased demand for the Q8 e-tron models. The facility, which currently employs about 3,000 people, faces a significant threat of closure, with up to 2,600 jobs potentially being cut starting this October. NIO's exploration of the site follows recent visits by its delegation to the plant. The

company, known for its electric vehicles and presence in the European market since 2021, has been seeking production opportunities within Europe in response to EU tariffs on Chinese-made electric vehicles. While union representatives express cautious optimism regarding NIO's interest, the ultimate decision awaits a bid submission to Volkswagen Group.

The Great China Car Blitzkrieg (September 18, 2024, [Source](#)) – China has launched a significant push in the global automotive market, expected to export 6 million cars this year, securing its status as the leading car exporter globally. These cars, priced on average at \$19,000, are notably cheaper than vehicles in the U.S. and Europe, compelling consumers around the world to opt for Chinese brands like Chery and BYD over traditional favorites such as Chevy and Honda. The impact is profound in regions like Thailand, where Chinese automakers are rapidly gaining market share, significantly disrupting markets long dominated by Japanese brands. Similarly, in Brazil, Chinese car shipments have surged by 450% over the previous year, greatly affecting American and European manufacturers. The competitive advantages of Chinese manufacturers, including scale, speed, integrated supply chains, and subsidies, are reshaping global automotive markets, challenging the century-long dominance of Western automakers.

Investor.News Media Highlights:

- September 24, 2024 – American Rare Earths Secures EXIM Bank Support with US\$456M Letter of Interest for Wyoming Rare Earth Project <https://bit.ly/3TBu075>
- September 24, 2024 – Biden Administration and International Partners Expand MSP Finance Network to Combat China's Critical Mineral Dominance <https://bit.ly/3MXipeP>
- September 23, 2024 – Unraveling the Complexity of Critical

Minerals: A Call for Expertise <https://bit.ly/4gBGTaU>

Investor.News Video Highlights:

- September 23, 2024 – Power Nickel’s Terry Lynch Highlights 50% Expansion of Lion Zone at Nisk Project, a High-Grade Nickel-Copper-PGE Discovery in Quebec <https://youtu.be/FwgvMyNPNXk>

Investor.News Member News:

- September 27, 2024 – AGM date and director nominations <https://bit.ly/3ZHy5uq>
- September 27, 2024 – Fulcrum Metals: Further Subscription to Raise circa £130,000 <https://bit.ly/4eCE086>
- September 26, 2024 – Defense Metals and The Saskatchewan Research Council Enter into a MOU to Enhance the Domestic Rare Earth Element Supply Chain <https://bit.ly/3N1yhwR>
- September 26, 2024 – Nano One Awarded US\$12.9M by US Department of Defense to Support the Expansion of North American LFP Production at Candiac Facility <https://bit.ly/3TLpsLj>
- September 26, 2024 – Appia Confirms Discovery of Uranium and Rare Earth Element Mineralization in Exploratory Drill Holes at the Loranger Project, Saskatchewan, Canada <https://bit.ly/3TKl0fM>
- September 25, 2024 – Voyageur Pharmaceuticals Grants Stock Options <https://bit.ly/3BnqXt2>
- September 25, 2024 – ArcStone Securities and Investments Corp. Announces Strategic Global Expansion with the Launch of ArcStone Israel Securities and Investments USA Corp. as New Partners <https://bit.ly/3Bk5kK4>
- September 24, 2024 – Voyageur Pharmaceuticals Strengthens

Leadership Team with Strategic Appointment of Dr. Ibrahim Hashmi as VP of Business Development
<https://bit.ly/4guLT0R>

- September 24, 2024 – EXIM Bank Issues Letter of Interest to Fund up to US\$456M for Wyoming Rare Earth Project
<https://bit.ly/4gBAPPF>
- September 23, 2024 – Scandium Canada Ltd. files patent application for aluminium-scandium alloys for 3D printing
<https://bit.ly/3TDAsuh>