Technology Metals Report (01.03.2025): China to Cap Lithium Exports and Constellation Energy Lands $1B Nuclear Power Contract with U.S. Govt

written by Tracy Hughes | January 3, 2025

This week, significant developments unfolded regarding China's strategic maneuvers in the critical minerals and electric vehicle (EV) technology sectors. The Chinese commerce ministry has put forward proposals for new export curbs on technology essential for battery components and critical minerals processing, such as lithium and gallium. These measures are designed to safeguard China's dominant 70% market share in lithium processing for EV batteries and to support its domestic battery manufacturing giants, including Contemporary Amperex Technology Co. Limited (SHE: 300750), Gotion High-Tech Co., Ltd. (SHE: 002074), and EVE Energy Co., Ltd. (SHE: 300014). This move could significantly impact Western lithium producers who depend on Chinese technology, potentially stalling their operations and affecting the global expansion of these Chinese corporations.

In the automotive sector, BYD Company Limited (SHE: 002594) reported a record-breaking year, with sales reaching 4.3 million EVs and hybrids in 2024, although it still slightly lagged behind Tesla, Inc. (NASDAQ: TSLA) in terms of total EVs sold globally. Despite substantial government subsidies bolstering the Chinese EV market, intense competition is prompting industry consolidation. This environment, while challenging for smaller

players, has seen significant sales achievements from companies like Li Auto Inc. (NASDAQ: LI), Leapmotor, and Xiaomi Corporation (HKG: 1810), with the latter aiming to double sales of its SU7 sedan in the coming year. Such growth underscores China's accelerating shift towards becoming a dominant player in the global EV market.

On the international front, Brazil's Serra Verde Group is making strides in the rare earth sector by expanding production to challenge China's dominance. With significant investment backing from entities like Denham Capital, Energy and Minerals Group, and Vision Blue Resources Ltd., Serra Verde is planning to ramp up its output of rare earth oxides significantly. This expansion not only diversifies the global supply chain away from Chinese control but also aligns with broader efforts by various countries to secure more stable and sustainable sources of critical minerals, essential for modern technological applications including renewable energy and EVs.

In addition to the developments in the electric vehicle and critical minerals sectors, the uranium industry has also experienced significant events. Cameco Corp. (TSX: CCO | NYSE: CCJ) announced the suspension of production at the Inkai uranium mine in Kazakhstan, a joint venture with National Atomic Company Kazatomprom JSC. This suspension was due to the failure to secure a timely extension for the necessary project documentation, leading to a halt in operations to comply with Kazakh law. This development underscores the challenges within the uranium sector, particularly in terms of regulatory compliance and operational stability.

Furthermore, Constellation Energy Corporation (NASDAQ: CEG) secured a $1 billion contract to supply the U.S. government with nuclear power over the next decade, marking a significant commitment to nuclear energy within the United States' energy

mix. This contract aims to provide over 10 million megawatt-hours of electricity annually to various federal agencies, highlighting the strategic importance of nuclear power in achieving energy security and sustainability goals.

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Critical Minerals Institute (CMI)

Purity			02.Jan.25	Month % Change	31.Dec.24	Year to Date % Change	Year End 31.Dec.24
	ALUMINUM (Al)	$ USD/ lb.	**$1.16**	0.0%	$1.16	0.0%	$1.16
99.65% fob China	ANTIMONY (Sb)	$ USD/ tn	**$30,436**	0.0%	$30,436	0.0%	$30,436
	COBALT (Co)	$ USD/ lb.	**$11.19**	0.0%	$11.19	0.0%	$11.19
	COPPER (Cu)	$ USD/ lb.	**$3.92**	0.0%	$3.92	0.0%	$3.92
>99.99%	GALLIUM (Ga)	$ USD/ lb.	**$134.2**	0.0%	$134.2	0.0%	$134.2
	GOLD (Au)	$ USD/ oz.	**$2,659.8**	1.3%	$2,624.6	1.3%	$2,624.6
	NATURAL GRAPHITE North America (C)	$ USD/ lb.	**$0.57**	0.0%	$0.57	0.0%	$0.57
>99%	LITHIUM METAL (Li)	$ USD/ lb.	**$4.93**	-0.2%	$4.94	-0.2%	$4.94
>99%	PRAESODYMIUM (Pr)	$ USD/ kg.	**$78.98**	0.0%	$78.98	0.0%	$78.98
>99.5%	NEODYMIUM (Nd)	$ USD/ kg.	**$71.90**	0.0%	$71.90	0.0%	$71.90
	NICKEL (Ni)	$ USD/ lb.	**$6.85**	0.0%	$6.85	0.0%	$6.85
0.999	NIOBIUM PENTOXIDE (Nb_2O_5)	$ USD/ kg.	**$45.00**	0.0%	$45.00	0.0%	$45.00
	PLATINUM (Pt)	$ USD/ oz.	**$926.69**	2.2%	$906.76	2.2%	$906.76
	SILVER (Ag)	$ USD/ oz.	**$29.57**	2.4%	$28.89	2.4%	$28.89

The critical minerals pricing chart is supplied by the CMI Partners – MineralPrices.com

Now for the critical mineral news highlights of the week….

China proposes further export curbs on battery, critical minerals tech (January 2, 2025, Source) – China's commerce ministry has suggested new export curbs on technologies essential for producing battery components and processing critical minerals like lithium and gallium. These proposals, outlined in a recent document, aim to preserve China's dominant 70% market share in processing lithium for electric vehicle (EV) batteries and support its domestic battery supply chains. The potential restrictions could challenge Western lithium producers who rely on Chinese technology and could also impede the

international growth of major Chinese battery manufacturers such as CATL, Gotion, and EVE Energy. Additionally, certain gallium extraction technologies might face limitations. These proposals, still open for public feedback until February 1, align with Beijing's ongoing strategy to control critical mineral resources and technologies amidst global trade tensions, especially with the upcoming second term of Donald Trump, who is known for imposing trade restrictions.

China's electric-vehicle leader BYD posts record sales in 2024 (January 2, 2025, Source) – In 2024, China's leading car manufacturer BYD achieved record global sales, selling 4.3 million electric vehicles (EVs) and hybrids, with 1.76 million being pure EVs. Despite this significant number, BYD remained behind Tesla (NASDAQ: TSLA), which sold 1.79 million cars, maintaining its position as the top EV seller globally. Other Chinese companies like Li Auto, Leapmotor, and Xiaomi also exceeded their sales goals. China's EV market, bolstered by substantial government subsidies and a trade-in scheme, is anticipated to surpass internal combustion engine vehicle sales in 2025. However, the competitive landscape is tough, pressuring smaller companies and leading to industry consolidation. Notable is Xiaomi's success with its SU7 sedan, aiming to double its sales in the next year. The sector's growth was acknowledged by President Xi Jinping, highlighting a significant milestone in China's automotive industry.

Brazilian Miner Boosts Rare Earths Output in Challenge to China's Grip (January 2, 2025, Source) – Brazilian miner Serra Verde Group is expanding its production of rare earth metals, aiming to challenge China's dominance in the sector amid US-China trade tensions. Serra Verde, which started production in Brazil's Goias state about a year ago, plans to produce 5,000 tons of rare earth oxide annually by 2026. The company is considering strategic partnerships to further enhance its

production and processing capabilities. These efforts align with global needs to find alternative sources to China, which controls a significant portion of the world's rare earth supply. Serra Verde's expansion is supported by investments from Denham Capital, Energy and Minerals Group, and Vision Blue Resources Ltd., totaling $150 million. The company also anticipates doubling its output before 2030 and is benefiting from increasing demand for rare earth metals, projecting an 8.5% annual increase in demand until 2035.

Cameco Says Output Suspended at Kazakh Uranium JV Mine (January 2, 2025, Source) – Cameco Corp. (TSX: CCO | NYSE: CCJ) announced that production at the Inkai uranium mine in Kazakhstan, a joint venture with National Atomic Company Kazatomprom JSC, has been suspended. This development followed the failure to secure a timely extension for submitting updated project documentation for uranium deposit development, which was expected by the end of 2024. Due to the delayed submission of necessary documents to the Ministry of Energy, Kazatomprom, holding a 60% stake and the controlling interest, directed a halt in operations starting January 1 to comply with Kazakh law and avoid legal issues. Cameco, owning a 40% share, expressed disappointment and surprise over the suspension, noting that previous reports had not indicated such a risk. The company is seeking clarifications and exploring ways to mitigate the impact on future production, finances, and dividends, and to possibly resume mining activities.

Constellation gets $1 billion in contracts to supply US government nuclear power (January 2, 2025, Source) – Constellation Energy Corporation (NASDAQ: CEG) has secured a $1 billion contract to supply the U.S. government with nuclear power for the next decade. As the nation's largest nuclear power plant operator, Constellation will provide electricity to 13 federal agencies via the U.S. General Services Administration

(GSA). This agreement marks the GSA's largest energy procurement and a significant move towards climate-focused policies by incorporating existing nuclear reactors. The deal, commencing April 25, entails delivering over 10 million megawatt-hours of electricity across 10 years, sufficient to power over 1 million homes annually. It will service 80 federal facilities within the PJM Interconnection region. Key recipients include the U.S. Department of Transportation and the Army Corps of Engineers. The agreement also allows Constellation to enhance plant output by approximately 135 megawatts and ensure fixed electricity costs for federal agencies for a decade.

AustralianSuper takes $100m hit from collapse of cobalt miner Jervois (January 2, 2025, Source) – AustralianSuper, Australia's largest superannuation fund with $341 billion under management, has suffered a significant financial hit with the bankruptcy of cobalt miner Jervois Global Limited (ASX: JRV | TSXV: JRV), losing over $100 million in invested capital. The company, previously valued at over $1 billion, will be delisted and taken private by Millstreet Capital Management LLC. AustralianSuper's investment, initially to capitalize on the global shift to electric vehicles and renewable energy, culminated in a total stake of 23%. Despite substantial investments since 2019, the current value of their stake is just $910,000. Jervois CEO Bryce Crocker acknowledged the disappointing outcome, citing a profound company recapitalization. The collapse in cobalt prices and the industry's instability, heavily concentrated in the DRC, further exacerbated Jervois' financial woes.

Mining start-up backed by Bill Gates and Jeff Bezos valued at $2.96bn (January 1, 2025, Source) – KoBold Metals, a Berkeley-based mining start-up backed by high-profile investors Bill Gates and Jeff Bezos, has reached a valuation of $2.96 billion after raising $537 million in its latest funding round. The series C round was co-led by T Rowe Price and Durable Capital

Partners, with participation from Gates' Breakthrough Energy Ventures, Andreessen Horowitz, and new investors including StepStone. KoBold, which has raised a total of $1 billion, uses artificial intelligence to identify untapped mineral deposits. It aims to compete with Chinese firms in producing critical minerals like copper, lithium, and nickel, essential for electric vehicles and defense industries. The company recently discovered a significant copper deposit in Zambia and plans to expand into new regions, including Finland and Botswana.

BMW, Yamaha Motor back US rare earths startup Phoenix Tailings (December 31, 2024, Source) – BMW and Yamaha Motor have invested in U.S.-based rare earths processing startup Phoenix Tailings through their venture capital divisions as part of a $43 million Series B funding round. Phoenix Tailings is developing a cleaner production method for rare earths, essential for electronics and electric vehicles, which contrasts with the traditional, environmentally harmful solvent extraction process. This investment comes as Beijing restricts rare earth exports, prompting Western companies to seek alternative technologies. Phoenix plans to utilize the funds to construct a $13 million facility in Exeter, New Hampshire, capable of producing 200 metric tons of rare earths annually by June 2025. The company, aiming for a future IPO, has already secured supply contracts worth over $100 million and plans to expand further if the Exeter facility succeeds.

China Plunders Rare Earth Minerals as Myanmar's Civil War Rages (December 30, 2024, Source) – China's extraction of rare earth minerals in Myanmar has surged amid ongoing civil conflict, with a 70% increase in imports in 2023, reaching 34,241 metric tons. This expansion by Chinese firms, particularly in Kachin state, has devastated local ecosystems, transforming areas of rich biodiversity into landscapes marred by mining pits. China, aiming to fortify against potential sanctions, has made Myanmar

its primary source for crucial rare earths like dysprosium and yttrium, which now supply about 40% of its needs. The environmental and health impacts on local communities are severe, with reports of widespread ecosystem destruction and health issues like skin diseases and organ damage. Despite international concerns and the withdrawal of Western companies due to military aggressions, Chinese companies operate largely unregulated, prioritizing resource accumulation over environmental and humanitarian standards.

Court ruling on lithium sends 'alarming message' about concessions in Mexico (December 30, 2024, Source) – In early December, Mexico's supreme court upheld state exclusivity over lithium production, alarming the mining industry about potential legislative arbitrariness and legal retroactivity. Andrés Abogado of Abolaw emphasized the court's decision, which invalidated rights under prior legal frameworks, undermines trust essential for long-term investments. The ruling rejected Bararal's appeal against the April 2022 reform, which nationalized lithium during Andrés Manuel López Obrador's presidency, reserving extraction strictly for the state and banning private concessions. This sets a precedent that any mining concession, even if obtained legitimately before the reform, could be revoked without adequate compensation. Abogado highlighted the growing legal risks in Mexico, warning companies of the high unpredictability and potential disregard for contracts and legal stability.

China Has Limited Firepower to Counter U.S. Tariffs (December 29, 2024, Source) – In response to the potential escalation of trade tensions with the U.S., China has showcased various economic tools it could use, including export restrictions and targeting U.S. companies. However, analysts caution that aggressive use of these measures could backfire by prompting the U.S. and its allies to further decouple their economies from

China. This decoupling would undermine China's economic model, which heavily relies on exports to Western markets. While China could use these tools strategically to negotiate or de-escalate situations, there are risks involved. Export restrictions could lead to increased global prices and encourage investment in alternative production. Similarly, targeting U.S. companies might lead to a reduction in their presence in China, ultimately weakening China's economic position. Despite having options like currency manipulation or a fire sale of U.S. Treasurys, China must consider the broader global implications of its actions.

Investor.News Media Highlights

- January 02, 2025 – The Rare Earth Landscape 2025: Part III – The American Economy as an Expertise Magnet for Magnet Makers https://bit.ly/403eVgQ
- January 01, 2025 – The Rare Earth Landscape 2025 Part II – Shifting Sands: From Engineering to Finance and the Erosion of Supply Chain Competence https://bit.ly/3VYAE8w
- December 31, 2024 – Resolutions and Consequences: A Look Ahead to the Geopolitical Landscape of 2025 https://bit.ly/401AzlE

Investor.News Member News

- January 2, 2025 – First Phosphate Closes Oversubscribed Private Placement Financing https://bit.ly/4gYFj2f
- January 2, 2025 – Appia Announces Closing of $425,000 Non-Brokered Flow-Through Private Placement https://bit.ly/4a8TqA4
- December 31, 2024 – Neo Announces the Completion of the Sale of its Quapaw, Oklahoma Rare Metals Facility

https://bit.ly/3W3pgZ5

- December 31, 2024 – Scandium Canada Announces Closing of Private Placements https://bit.ly/3PlhrKB
- December 30, 2024 – Panther Metals PLC – Dotted Lake: Uncovering Discovery of Gold & VMS Near Hemlo https://bit.ly/422rZpg

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The upcoming **CMI Summit IV**, themed *The War for Critical Minerals and Capital Resources*, is scheduled to take place in Toronto, Ontario, on May 13-14, 2025. This event aims to unite industry leaders to tackle pressing issues in the global critical minerals market. To learn more about the **CMI Summit IV**, click here – or to secure a **CMI Summit IV** 2-day Delegates Pass, click here

