Technology Metals Report (03.22.2024): US pledges \$1.28B for ASX rare earths stocks and Biden takes a major step in tackling climate change

written by Tracy Weslosky | March 22, 2024 Welcome to the latest issue of the Technology Metals Report (TMR), brought to you by the <u>Critical Minerals Institute</u> (CMI). In this edition, we compile the most impactful stories shared by our CMI Director's over the past week, reflecting the dynamic and evolving nature of the critical minerals and technology metals industry. Among the key stories featured in this report are the US's pledge of \$1.28 billion to ASX-listed rare earths firms to lessen China's dominance in the sector, the looming uncertainty over the future of Flow-Through Financings in Canada as the METC deadline approaches, and Albemarle Corporation's groundbreaking lithium auction aimed at enhancing pricing transparency. Additionally, the Biden administration's ambitious rule to expand electric vehicles (EVs) and the examination of factors behind cooling EV sales growth emphasize the ongoing transformations and challenges within the critical minerals sector.

This week's TMR Report also highlights several significant developments that further shape our understanding and approach to the critical minerals industry. The urging by the US Energy Secretary for Congress to ban uranium imports from Russia supports domestic nuclear fuel development, while China's

rebound in graphite exports for batteries signals geopolitical tensions and strategic resource control. The US's efforts to incorporate Central Asia into its critical minerals supply chains, Indonesia's investment in a new HPAL plant by Vale to boost nickel production for EV batteries, and CATL's enduring ambitions despite a slight dip in quarterly earnings showcase the global landscape's complexity and interconnectedness. Furthermore, Graphjet Technology's innovative approach to producing greener graphite and the push to recognize phosphate and potash as critical minerals in the US underscore the ongoing efforts to secure and diversify supply chains. Lastly, Kazakhstan's emerging potential to rival China in the production of rare-earth metals points to the shifting dynamics of global supply and the continuous search for strategic alternatives to current market dominators.

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US pledges \$1.28b for ASX rare earths stocks (March 21, 2024, Source) — The US aims to allocate \$1.28 billion to ASX-listed rare earths firms, Meteoric Resources NL (ASX: MEI) and Australian Strategic Materials Limited (ASX: ASM) (ASM), to diminish China's dominance in critical minerals necessary for decarbonization and defense. The US Export Import Bank's (US EXIM) potential loans aim to support projects in Brazil and New South Wales, contingent upon US companies obtaining project contracts. This funding is part of wider US and Australian efforts to establish non-Chinese critical mineral supply chains, with additional support from the US Department of Defence and other agencies for various projects. This initiative underscores the strategic importance of diversifying global supply chains and bolsters the credibility and development prospects of companies like Meteoric and ASM in the critical minerals sector.

Anxiety Rises on the Future of Flow-Through Financings as METC Deadline Looms, Canadian Government Keeps Quiet (March 20, 2024, Source) - Facing the potential expiration of the Mineral Exploration Tax Credit (METC) at the end of March, the Canadian mining industry is gripped by uncertainty. This credit, crucial for supporting exploration companies through Flow-Through Share pricing, might not be renewed, threatening to raise capital costs by 15-20%. The federal government's silence on the issue heightens anxiety, affecting planning and investments, especially for junior miners. Provincial credits in Ontario and Saskatchewan face similar fates, though Manitoba and British Columbia have permanent solutions. The industry is anxiously awaiting the federal budget announcement on April 16, hoping for a resolution. The potential loss of METC, combined with recent tax changes, could significantly impact exploration investment in Canada, underscoring the importance of government policy in the sector's financial health.

Albemarle Lithium Auction offers a bold move forward in pricing transparency in the critical minerals market (March 20, 2024, Source) - Albemarle Corporation (NYSE: ALB), the largest lithium producer, is initiating a landmark auction on March 26 to enhance transparency and address price discovery issues in the lithium market. This move, highlighted by Jack Lifton of the Critical Minerals Institute (CMI), aims to mitigate the opacity and volatility that have long plagued the sector, exacerbated by the electric vehicle (EV) boom. Traditionally, lithium prices have been privately negotiated, lacking a clear global benchmark. Albemarle's auction represents an innovative step towards establishing more transparent pricing, inviting competitive bidding for a significant lithium quantity. Although this initiative marks progress towards addressing market challenges, Lifton cautions it may not fully resolve the industry's volatility and unpredictability, signaling a critical

evolution in lithium pricing strategies amidst growing global demand.

Biden Administration Announces Rule Aimed at Expanding Electric Vehicles (March 20, 2024, Source) - The Biden administration unveiled a pivotal climate regulation, aiming to revolutionize the U.S. auto industry by ensuring a majority of new passenger vehicles sold by 2032 are electric or hybrid. This marks a major step in tackling climate change, given transportation's status as the top carbon emitter in the country. Despite electric vehicles (EVs) constituting only 7.6% of car sales last year, this rule mandates a significant increase to meet a 56% EV sales target, with hybrids contributing an additional 16%. President Biden highlighted the initiative's potential for economic growth, job creation, and significant environmental benefits, including a projected reduction of over seven billion tons of carbon dioxide emissions over three decades. However, the transition faces challenges, including manufacturing and infrastructure overhaul, political opposition, and consumer acceptance. The regulation, which introduces stringent emissions caps, has garnered both support for its environmental impact and criticism for its feasibility and potential economic implications. Critics argue it may impose undue pressure on the auto industry and consumers, while supporters see it as a crucial step toward a more sustainable future.

The cars, the chargers or the customers? A look at what's behind cooling EV sales growth (March 20, 2024, Source) — Facing cooling growth in electric vehicle (EV) sales, automakers are adjusting their production strategies amidst increasing model availability. The sector balances optimism with skepticism regarding the shift away from fossil fuels, underlined by challenges like inadequate charging infrastructure impacting consumer choices. Events like CERAWeek by S&P Global highlight EVs' potential to reduce oil demand, emphasizing the

transition's significance. Despite slower sales growth, companies like Ford report significant increases, pointing to the essential role of EVs in future automotive competitiveness. Addressing consumer concerns, particularly around charging reliability and infrastructure, alongside educating an evolving customer base, is pivotal for sustaining the industry's growth momentum.

US energy secretary encourages Congress to ban uranium supplies from Russia (March 20, 2024, Source) — U.S. Energy Secretary Jennifer Granholm has urged Congress to ban uranium imports from Russia to support domestic nuclear fuel development. This call comes in light of legislation passed by the U.S. House last December, aimed at halting these imports as part of the response to Russia's invasion of Ukraine. However, the Senate has faced delays due to a hold by Senator Ted Cruz on unrelated issues. Granholm emphasized that passing this ban would release funds for expanding domestic uranium enrichment and producing high assay low enriched uranium (HALEU) for advanced nuclear reactors. She expressed optimism during a House hearing on her department's budget, highlighting the urgency of this action to advance domestic nuclear energy capabilities.

China's exports of graphite for batteries rise from December low (March 20, 2024, Source) — China's natural graphite exports, essential for electric vehicle batteries, rebounded after Beijing's December controls aimed at tightening its grip on vital minerals for advanced manufacturing. From a December low of 3,973 tonnes, exports rose to 6,275 tonnes in January and 10,722 tonnes in February, despite previously averaging about 17,000 tonnes monthly. The restrictions, viewed as a response to Western trade barriers, notably impact trade flows. Rising tensions are evident as the U.S. considers blacklisting Chinese semiconductor firms linked to Huawei Technologies, signaling an escalation in the technological rivalry. These developments

underscore the strategic importance of graphite in the global tech industry and the geopolitical tensions surrounding access to critical manufacturing resources.

US Looks to Draw Central Asia Into Critical Minerals Supply Chains (March 18, 2024, Source) - The United States is actively seeking to integrate Central Asia into its critical minerals supply chains, a move underscored by the February 2024 inauguration of the Critical Minerals Dialogue (CMD) in the C5+1 format. This initiative, bolstered by the collective will of the U.S. and Central Asian nations-Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—aims to bolster Central Asia's role in global supply chains, thereby enhancing economic cooperation, facilitating clean energy transitions, and protecting regional ecosystems. Central Asia, rich in critical minerals like nickel, cobalt, palladium, rare earth elements (REEs), and others vital for high-tech, defense, and green technologies, represents a strategic alternative to China's dominance in these supply chains. The U.S. is particularly keen to mitigate risks associated with China's control over a significant portion of the world's critical minerals processing and production. Through the CMD and other partnerships, the U.S. seeks to foster investment in Central Asia's vast mineral resources, promising a potential shift in global economic and technological power dynamics while confronting strategic vulnerabilities and enhancing national security.

Indonesia says nickel miner Vale to build another \$2 bln HPAL plant (March 18, 2024, Source) — Nickel miner PT Vale Indonesia is considering a \$1.91 billion investment in a new high-pressure acid leaching (HPAL) plant on Sulawesi island, announced Indonesia's Investment Ministry. This plant, named "SOA HPAL," aims to produce mixed hydroxide precipitate (MHP), essential for electric vehicle batteries, with an expected annual output of 60,000 metric tons of nickel in MHP. Vale Indonesia, which is in

the final stage of exploration, plans to collaborate with automakers for this venture. The company already has two HPAL projects underway in Sulawesi, partnering with Zhejiang Huayou Cobalt, and has Ford's involvement in the \$4.5 billion Pomalaa project. Additionally, Indonesia's state mining company MIND ID recently acquired a 14% stake in Vale Indonesia, bolstering its position as a top shareholder.

CATL earnings slip masks charged-up ambitions (March 18, 2024, **Source)** - Contemporary Amperex Technology (CATL), the world's largest electric car battery manufacturer, experienced a slight 1.2% decline in quarterly earnings, marking its first downturn since early 2022. Despite reduced factory utilization and the broader industry's cooling sales growth, CATL is ambitiously expanding, planning new facilities to increase its production potential significantly. The company dominates the global market, boasting a 36.8% share and leading innovation with a large R&D team focused on advanced battery chemistries. Although facing challenges in the United States, CATL is making strategic moves abroad, including constructing a factory in the European Union. Investors remain optimistic, reflected in a stock price increase, as CATL's scale, innovation, and strategic expansion position it to potentially outpace competition and maintain market leadership, despite potential overcapacity risks.

Startup Offers EV Firms Greener Graphite in Alternative to China (March 18, 2024, Source) — Graphjet Technology, an alternative energy startup in Malaysia, is offering electric-vehicle (EV) manufacturers a sustainable source of graphite by converting agricultural waste into this critical battery component. Utilizing palm kernels, the company can produce graphite with an 83% lower carbon footprint and at 80% less cost than traditional methods. Starting in the second quarter, Graphjet aims for an annual production capacity of 3,000 tons from its facility in Malaysia, a leading palm oil producer. This move provides a

significant alternative to China's dominance in the synthetic graphite market, responsible for 90% of the global supply. The U.S. is keen on diversifying its EV battery supply chain away from Chinese control, especially in light of China's recent export restrictions on graphite. Graphjet's initiative is timely, as it plans expansions in Nevada, Korea, Japan, and Europe, aiming to address the growing global demand and the U.S.'s need for a reliable graphite source outside China.

TFI: Phosphate and Potash are Critical Minerals, Senate Bill to Solidify (March 14, 2024, Source) - The Fertilizer Institute (TFI) has commended the U.S. Senate's bipartisan effort to classify phosphate and potash as critical minerals, highlighting the move as crucial for securing the nation's agricultural future and food supply. The legislation, backed by Senators from both parties, aims to ensure a resilient and sustainable domestic fertilizer supply for American agriculture by addressing the vulnerabilities in the global supply chain and geopolitical instability. With the majority of the world's phosphate and potash concentrated in a few countries, and the U.S. heavily reliant on imports for its potash needs, this initiative seeks to mitigate supply chain risks. Recognizing these minerals as critical could streamline the permitting process for expanding and opening new mines in the U.S., a necessary step given the extensive time and financial investment required.

Kazakhstan's Potential to Overtake China in Production of Rare-Earth Metals (March 14, 2024, Source) — Kazakhstan is on the verge of becoming a significant contender in the global rare-earth elements (REEs) market, challenging China's dominance. With China controlling 70% of the market and facing strained relations with the West, North American and European investors are turning to Kazakhstan's rich reserves as a strategic alternative. This shift is driven by the need to diversify

supply chains away from China, given REEs' critical role in technology and manufacturing. The US and EU are prepared to invest in Kazakhstan, aiming to secure a stable, sustainable supply of these vital materials. However, Kazakhstan must modernize its mining practices and carefully select investors to fully leverage its potential as a global REE supplier.

Investor.News Critical Minerals Media Coverage:

- March 20, 2024 Anxiety Rises on the Future of Flow-Through Financings as METC Deadline Looms, Canadian Government Keeps Quiet https://bit.ly/3IKHmI7
- March 20, 2024 Albemarle Lithium Auction offers a bold move forward in pricing transparency in the critical minerals market https://bit.ly/3vkpBwf
- March 20, 2024 The Top 5 Reasons Why YouTube Will Transform Marketing for Public Companies https://bit.ly/3PvPnEC

Investor.News Critical Minerals Videos:

- March 20, 2024 CBLT'S Peter Clausi on de-risking exploration projects with M&A https://bit.ly/3vfU6Uf
- March 20, 2024 Chris Buncic on the "shocking" Chrysalis Copper timeline for production https://bit.ly/49ZGRGm
- March 19, 2024 World Renowned Critical Minerals Expert Constantine Karayannopoulos is Bullish on Lithium https://bit.ly/43m0vbk
- March 19, 2024 Peartree's Ron Bernbaum on how Charitable

- Flow-Through Financings Connects Donors, Investors, and Mining Companies for Canada's Exploration Capital https://bit.ly/4cj303V
- March 19, 2024 Xcite Resources' Jean-Francois Meilleur on the Athabasca Basin's untapped potential for significant uranium discoveries https://bit.ly/49Y09SK
- March 19, 2024 Scandium Canada's Guy Bourassa on One of the Largest Primary Scandium Projects in the World https://bit.ly/3TlHeUp
- March 18, 2024 Rowena Smith Highlights ASM's Operational Success at Korean Metals Plant in Rare Earth Metals Production https://bit.ly/3TH1jWS
- March 18, 2024 Jack Lifton Sits Down with 'Bobby' Stewart, the Driving Force Behind Geophysx Jamaica's Charge into the Global Arena with Critical Minerals https://bit.ly/3vhDtaG
- March 18, 2024 WEALTH's Peter Nicholson on the Added Benefits of Critical Mineral Flow Through Investment Deals in Quebec, Saskatchewan and Manitoba https://bit.ly/4a37xGk
- March 17, 2024 John Passalacqua on First Phosphate's groundbreaking achievements in the phosphate mining industry https://bit.ly/3VgRlwt
- March 17, 2024 America Rare Earths' Donald Swartz on the recent increase in in-situ resources at Halleck Creek by 64% to 2.34 billion tonnes https://bit.ly/3IGgvNv
- March 17, 2024 Rowena Smith sits down with Jack Lifton on ASM's 'Mines to Metal' Advantage in Supplying Rare Earths https://bit.ly/4cmIlMc

Critical Minerals IN8. Pro Member News

Releases:

- March 21, 2024 Hearty Bay Drilling Suggests Till Sampling May Lead to Source of Radioactive Boulders https://bit.ly/3ILHjvL
- March 21, 2024 ASM receives US\$600M (A\$923 million) Letter of Interest from US EXIM for Dubbo Project, as US partnerships begin to play a significant role https://bit.ly/4ahxWQR
- March 20, 2024 NEO Battery Materials Announces Change of Auditor to MNP LLP https://bit.ly/3VrGy0f
- March 20, 2024 Power Nickel Continues to Expand its Near Surface High-Grade Cu-Pt-Pd-Au-Ag Zone 5km Northeast of its Main Nisk Deposit https://bit.ly/3IM5Cd5
- March 19, 2024 First Phosphate Drills 9.44% P205 Over 89.10 m at Its Begin-Lamarche Project in Saguenay-Lac-St-Jean, Quebec, Canada https://bit.ly/43wi4qT
- March 19, 2024 Defense Metals Appoints HCF International Advisers for Strategic Funding Review of Wicheeda REE Project https://bit.ly/3IGNMIo
- March 18, 2024 American Rare Earths' Scoping Study confirms low-cost, scalable world-class REE project https://bit.ly/3IJID21

Technology Metals Report

(03.08.2024): Chinese Investment in Asia rose 37% in 2023, and the BYD Push in Australia is Underway

written by Tracy Weslosky | March 22, 2024 Welcome to the latest Technology Metals Report (TMR) where we highlight the top news stories that members of the Critical Minerals Institute (CMI) have forwarded to us in the last week. Key highlights in this Technology Metals Report include the announcement of Australia and Vietnam upgrading their relations to begin talks on critical minerals, focusing on diversifying supply chains away from China. This significant move aims to enhance cooperation in several sectors, particularly in the energy and resources sector, emphasizing the critical minerals supply chain. Both countries, known for their substantial roles in the production and reserves of critical minerals, are looking to strengthen their global supply chain positions amid rising geopolitical tensions and efforts to reduce dependency on China. Additionally, this edition features updates on Chinese investments in Asia, notably in Indonesia, which have surged by 37% in 2023 despite global economic challenges. This growth, largely concentrated in Belt and Road Initiative countries, underscores China's strategic shift towards green energy and mining investments, especially in Southeast Asia.

Moreover, this edition of the TMR delves into several crucial developments in the critical minerals and technology metals landscape. The United States outlined its critical minerals strategy for the clean energy transition, emphasizing the need to secure and diversify supply chains for essential minerals

such as nickel, manganese, cobalt, and lithium. The EU's move to register Chinese electric vehicle (EV) imports for potential retroactive tariffs reflects growing concerns over fair trade practices. Kazakhstan's emergence as a potential major supplier of lithium, along with investments aimed at expanding lithium operations by companies like Albemarle, highlights the global race to secure essential components for green and digital technologies. Furthermore, the report covers strategic shifts in the supply chain, such as Posco's agreement with Syrah Resources for graphite supply from Mozambique and Toyota's multi-pathway approach to CO2 emissions reduction. These stories collectively point to a dynamic and rapidly evolving global landscape for critical minerals and technology metals, underlining the strategic importance of diversification, cooperation, and sustainable development in securing the materials essential for the future of technology and clean energy.

Australia and Vietnam upgrade relations, to begin talks on critical minerals (March 7, 2024, Source) - Australia and Vietnam have elevated their relations to a comprehensive strategic partnership, announced by Australian Prime Minister Anthony Albanese. This upgrade includes an annual dialogue on minerals, focusing on diversifying supply chains away from China. The partnership aims to enhance cooperation on climate, environment and energy, defense and security, and economic engagement and education. Additionally, it will foster collaboration in the energy and resources sectors, especially in critical minerals supply chains. Both countries, significant in the production and reserves of critical minerals, seek to strengthen their positions in global supply chains amid rising tensions and efforts to reduce dependency on China. This move also signifies Vietnam's success in "bamboo diplomacy," enhancing its relations with major global powers. The partnership reflects a deep mutual political trust and commits

to expanded cooperation across various sectors, marking a milestone in the bilateral relationship between Australia and Vietnam.

Chinese investment in Asia rose 37% in 2023, led by Indonesia (March 7, 2024, Source) - In 2023, Chinese investment in the Asia-Pacific region surged by 37% to nearly \$20 billion, outperforming global trends amid economic challenges. Construction contracts also grew by 14% to about \$17 billion, supported by Chinese loans. This contrasts with a 12% decrease in foreign direct investment into Asia's emerging economies. The investment was predominantly in Belt and Road Initiative (BRI) countries, focusing on infrastructure that connects Asia to Europe. Non-BRI country investment plummeted by 90% to a mere \$120 million. Notably, investment strategies shifted towards green energy and mining, with 50% of China's regional investment directed towards Southeast Asia, and Indonesia receiving the largest share at \$7.3 billion. However, certain countries like the Philippines and Pakistan saw significant drops in Chinese engagement due to political and economic risks. The report anticipates a further increase in Chinese investment and construction, especially in green transition initiatives and strategic infrastructure projects, despite China's own economic challenges.

Under Secretary Jose Fernandez Discusses U.S. Critical Minerals Strategy for Clean Energy Transition (March 6, 2024, Source) — Under Secretary Jose W. Fernandez discussed the U.S.'s strategy for securing and diversifying the supply chain of critical minerals crucial for the clean energy transition in a conversation with InvestorNews' Tracy Weslosky. Highlighting minerals like nickel, manganese, cobalt, and lithium, Fernandez underscored efforts to expand their supply and engage with countries possessing these resources through concrete projects, investment, and financing. He emphasized the challenge of

reducing dependency on China, which currently controls a significant share of these minerals, pointing out the strategic vulnerability this poses. Fernandez stressed the importance of adhering to values such as environmental respect, community collaboration, and transparency in these endeavors. Despite slow progress, the U.S. aims to not only secure but also ethically source these minerals to support the global shift towards clean energy.

EU set to allow possible retroactive tariffs for Chinese EVs (March 6, 2024, Source) — The European Commission will start registering Chinese electric vehicle (EV) imports for potential retroactive tariffs, in response to an anti-subsidy investigation. This investigation aims to determine if Chinese EVs benefit from unfair subsidies, potentially harming EU producers. If found guilty, tariffs could be imposed, with provisional duties possible by July and a final decision expected by November. The Commission has found preliminary evidence of subsidy and a significant 14% year-on-year increase in imports since the investigation began in October, suggesting potential harm to EU producers. The China Chamber of Commerce expressed disappointment, attributing the import surge to growing European demand for EVs.

Kazakhstan positions itself for lithium windfall (March 6, 2024, Source) — Kazakhstan is emerging as a significant potential supplier of lithium, crucial for power-storage technology, with reserves estimated at around 75,600 tons. Research by the Korea Institute of Geoscience and Mineral Resources highlighted substantial reserves in eastern Kazakhstan, potentially worth up to \$15.7 billion. This discovery, along with European interest in Kazakhstan's critical raw materials, underscores the country's growing importance in the global lithium market. The European Commission and European Bank for Reconstruction and Development have allocated funds for lithium exploration,

highlighting the strategic value of Kazakhstan's resources amidst increasing global demand. With investments from various countries, including China and potentially European entities, Kazakhstan is set to play a crucial role in the lithium supply chain, essential for green and digital technologies.

BYD spearheads Chinese electric car push in Australia, a friendlier market (March 5, 2024, Source) - BYD and other Chinese automakers are making significant inroads into the Australian electric vehicle (EV) market, leveraging the friendly trade environment and benefiting from the government's aggressive EV adoption policies under Prime Minister Anthony Albanese since 2022. With no trade barriers, EV subsidies, and tax benefits, EV sales in Australia have soared, with EVs making up 7.2% of new car sales in 2023. BYD, supported by Warren Buffett, has guickly captured 14% of Australia's EV market since its entry in 2022, trailing only behind Tesla. The company plans to expand its product lineup and dealership network in Australia, aiming for mainstream market penetration. Similarly, SAIC Motor under its MG brand is set to launch new models. Incumbent automakers like Ford and Toyota are also adapting, introducing electrified vehicles to compete. Despite being a relatively small market, Australia's lack of local car manufacturing and openness to international trade make it an attractive destination for Chinese EV manufacturers, especially given the geopolitical tensions in other key markets.

Canada and Australia boost collaboration on critical minerals (March 4, 2024, Source) — Canada and Australia have committed to enhancing their cooperation on critical minerals, vital for battery production and clean energy transition, according to a joint statement released on the margins of the PDAC conference in Toronto. Both countries, rich in these essential minerals, aim to bolster their partnership through R&D collaboration, trade, and investment in the mining sector based on a non-

legally binding agreement. This collaboration seeks to ensure supply chain transparency and promote high Environmental, Social, and Governance (ESG) standards globally. The initiative will be spearheaded by Canada's Natural Resources Ministry and Australia's Critical Minerals Office, focusing on policy and investment coordination to support the burgeoning demand for these minerals in the upcoming decades.

Albemarle (ALB) Accelerates Lithium Growth With \$1.75B Offering (March 4, 2024, Source) - Albemarle Corporation (NYSE: ALB) announced a \$1.75 billion offering in depositary shares, each representing a 1/20th interest in Series A Mandatory Convertible Preferred Stock, with a potential additional offering of \$262.5 million under certain conditions. The proceeds are intended for general corporate uses, notably to fund growth capital expenditures for expanding lithium operations in Australia and China, as well as repaying outstanding commercial paper. The depositary shares will carry rights and preferences similar to the Preferred Stock, including conversion into common stock on or around March 1, 2027. Despite a 52.1% decrease in Albemarle's share price over the past year, the company forecasts a 10-20% increase in Energy Storage volumes for 2024, with expected net sales in its Specialties and Ketjen segments ranging from \$1.3 to \$1.5 billion and \$1 to \$1.2 billion, respectively.

Posco to source 60,000 tons of graphite from Africa in pull away from China (March 3, 2024, Source) — Posco Future M, a subsidiary of Posco Group, is shifting its supply chain for natural graphite, a crucial battery material, away from China towards Africa. This move is highlighted by a new deal with Australian mining firm Syrah Resources Limited (ASX: SYR), which will provide Posco Future M with up to 60,000 tons of natural graphite annually for six years from its Mozambique Balama operation, starting no later than 2025. This supply is expected to cover 40% of Posco Future M's anode production, translating

to about 30,000 tons of anodes. The agreement comes amid concerns over China's control over graphite exports, potentially as leverage against international policies such as the U.S.'s Inflation Reduction Act. Posco's decision reflects a broader strategy to diversify supply sources and reduce dependency on China, amid rising geopolitical tensions and supply chain vulnerabilities.

Total EV Adoption Is Not The Way Forward, Says Toyota Chairman (March 3, 2024, Source) - Akio Toyoda, Toyota's Chairman, expresses skepticism towards full adoption of battery electric vehicles (BEVs), arguing they will not dominate the market beyond a 30% share despite other markets already exceeding this percentage. In a presentation in Tokyo, he emphasized a multipathway approach to combating CO2 emissions, suggesting that consumer choice should drive the future of automotive powertrains rather than regulations. Toyota plans to focus on a diverse range of technologies including internal combustion engines, hybrids, and hydrogen vehicles, alongside BEVs. Despite the global push towards electric vehicles, with countries like Norway showing an 80% market share for EVs, Toyoda's stance reflects a broader strategy to embrace multiple solutions for emission reduction. This perspective aligns with Toyota's goal to comply with future regulations and its commitment to sell 1.5 million EVs by 2026, while also investing in alternative technologies like e-fuels.

Kazakhstan plans to export aluminum, gallium and scandium to the US (March 1, 2024, Source) — Kazakhstan is aiming to strengthen its trade ties with the United States by proposing to export aluminum, gallium, and scandium. This initiative was unveiled during Minister of Industry and Construction Kanat Sharlapayev's official visit to the U.S., focusing on promoting Kazakhstani interests globally and expanding cooperation in critical materials. In addition to these exports, Kazakhstan is offering

tolling services and exploring the production of other precious minerals like wolfram, cobalt, lithium, and titan, aiming to discuss long-term contracts and investment support. The country, which processes 17 of the 50 minerals critical to the U.S. economy, already exports several strategic minerals to American companies. Sharlapayev's visit also involved meetings with leading American companies to discuss opportunities in industrial production and geological exploration. The talks highlighted the potential for joint projects in various sectors, including infrastructure development and technology, with the U.S. International Development Finance Corporation expressing interest in deepening cooperation with Kazakhstan.

Chinese money still chasing Canadian critical mining deals despite Ottawa's scrutiny (February 27, 2024, Source) - A year after Canada tightened its foreign investment rules for the critical minerals sector to enhance national security, Chinese investments continue to flow into Toronto-listed mining companies, as per research by the University of Alberta. Despite Canada forcing three Chinese investors to divest their stakes in 2022 and increasing scrutiny on foreign deals, especially in critical minerals, investments from China and Hong Kong surged to C\$2.2 billion in 2023, a significant leap from C\$62 million in 2022. This influx is buoyed by the perception that Canada remains open to Chinese investments, with junior miners finding it easier to secure funding. The critical minerals sector, vital for Canada's national security, has seen Chinese entities actively investing, notably in copper assets. For instance, MMG Africa Ventures acquired a copper mine for C\$1.7 billion, and Jiangxi Copper Co increased its stake in First Quantum Minerals Ltd. (TSX: FM). Some Canadian miners are lobbying for more Chinese investments due to difficulties in raising capital elsewhere, despite the government's stringent stance on safeguarding critical resources.

Investor.News Critical Minerals Videos:

- March 08, 2024 Mark Chalmers on Energy Fuels as a Profitable Uranium Producer in the U.S. https://bit.ly/3P9nl1J
- March 07, 2024 Critical Metals Russell Fryer on Copper and Cobalt Plans for Production in 2024 https://bit.ly/43bGYvJ
- March 06, 2024 Under Secretary Jose Fernandez Discusses
 U.S. Critical Minerals Strategy for Clean Energy
 Transition https://bit.ly/433yBSZ

Critical Minerals IN8.Pro Member News Releases:

- March 8, 2024 F3 and Traction Begin Drilling to Locate Source of Radioactive Boulders https://bit.ly/436k09t
- March 7, 2024 American Clean Resources Group Commits to Transfer Federal Tax Credits to Investors to Accelerate the Development of Its Renewable Energy Assets https://bit.ly/3wCIjzu
- March 6, 2024 Halleck Creek Project Update https://bit.ly/3InYYJV
- March 6, 2024 Karbon-X Announces Appointment of Brett Hull and Justin Bourque to its Board of Directors https://bit.ly/3TpdYxt
- March 5, 2024 Panther Metals PLC Australia: Coglia Nickel-Cobalt Mineral Resource Exceeds 100Mt https://bit.ly/3IptcMI
- March 5, 2024 Panther Metals PLC Obonga: Extension of

Purchase Agreement https://bit.ly/3TmYLge

- March 4, 2024 Ucore Progresses Through Heavy Rare Earth Processing as It Completes Second Milestone of Strategic US DoD Contract https://bit.ly/3uSunkx
- March 4, 2024 First Phosphate Corp. Receives Mining Research and Innovation Grant from Quebec Ministry of Natural Resources https://bit.ly/3Iny84z
- March 4, 2024 Voyageur Pharmaceuticals and API Forge Alliance for Carbon-Based Imaging Drug Advancement https://bit.ly/3wBuem6
- March 4, 2024 Defense Metals Ships Mixed Rare Earth Carbonate Samples to two major REE companies https://bit.ly/43iwmLT
- March 4, 2024 Power Nickel Defines Initial Volume on its High-Grade Cu-Pt-Pd-Au-Ag Zone 5km Northeast of its Main Nisk Deposit https://bit.ly/3TiZNde

The Up and Coming Uranium Boom

written by Tracy Weslosky | March 22, 2024

<u> Hallgarten + Company</u>

Critical Minerals Institute

<u>Uranium</u>

Tracy Weslosky:

Christopher let's start with the headlines please... will the US ban on Russian uranium boost western industry?

Christopher Ecclestone:

You know the uranium industry in Russia, you can't put a cigarette paper between it and the industry in Kazakhstan. So really, I would see Russian product going out through Kazakhstan disguised as Kazakh output, not surprised whatsoever. And I don't know who the West is trying to punish here — because we are getting back to that same issue again, which is the source of our uranium supply. It would be rather hard for some of the western users in the EU to replace the Russian uranium source. The source is the challenge.

Tracy Weslosky:

You said to me earlier this week about how hot the uranium market and how it's really "the only game in town". Can you explain to our audience what you mean by that?

Christopher Ecclestone:

It is. Well, I'm purely from the primordial point of view. The wheels have fallen off the battery metal complex at the moment — and whether they can be put back on again is another matter…but at the moment — that car ain't going anywhere. It's just sort of like on blocks, like the neighborhood thugs have stolen the wheels. So, battery metals are dead in the water for a while. And so, the only game in town is uranium. The other metals are all in holding patterns. You know, gold's just hanging in there. Uranium's the only sexy thing around. And as per usual, you know, uranium has its day in the sun every 20-years and that day is now.

Tracy Weslosky:

Would you give investors some advice on how to select uranium companies because they're popping up everywhere? We can barely keep track of them.

Christopher Ecclestone:

Yeah, I think you've got to go back to the assets that they have. There are a lot of good assets were found during the last uranium boom. They're not necessarily in the same companies that they were in there because many of those companies went bust. So got to look at the assets, you got to look at their durability. So, they're in really, really isolated locations, you know. Like off Broadway, being off Athabasca is not as good as being on Broadway on Athabasca — just being in the general vicinity, but only 500 kilometres away is not good enough. You know, they have to be accessible. They have to be doable. You know, the boom is now. We're not talking in 10 years. I think that we're in a good position for a long run boom, but we really want to see assets that have been proven up before. Or not. Now anyone who's doing Greenfield never been drilled before uranium. Why bother? There were so many assets that were discovered pre-Fukushima. They're just sort of sat in the cupboard, you know, sitting there waiting for something to happen that we don't need to find new things. We do not need to reinvent the wheel if it's got an old resource — let's go with that, not try and find something new.

Tracy Weslosky:

Is there a question about uranium you wish people would ask you that no one does? And what would that question be?

Christopher Ecclestone:

Oh, that's a tough one. I think it's got to do with the people involved in it. You know, just being uranium is not good enough. I think that there are a lot of old uranium hands out there, and have been in hiding. People who've done it for decades and who've really been sitting — sitting on their behinds for the last 15 years that are now coming out of the woodwork, they're the people to follow. I mean, there was nothing that they could

do about the situation. Now they can any just purely move forward, not the promotorial types where you look at them and say 'oh, where was he before he was doing graphite? And then before that, he was doing lithium and before that he was doing Rare Earths' — carpetbaggers — not good enough. We know who they are. Avoid them. We do not need promotorial types in the uranium space. We need serious people.

Tracy Weslosky:

What is your position on modular nuclear reactors we are all hearing about, are they the future of uranium as we are being told?

Christopher Ecclestone:

Oh, absolutely. I am absolutely convinced that big uranium, big nuclear formats, they're like brontosauruses. We can see this particularly in the UK where they've got a number of projects underway that were, you know, supposed to be two billion pounds And, then you know, 5 billion. And even now the Chinese who are building them, saying we can't finish this without loads more billions just goes to show that the bigger the plant the harder they fall and small modular reactors are the way to go. It's just makes sense and the CapEx is lower. they're easier to build, they're faster to build. I mean bigger is not better.

Tracy Weslosky:

What about thorium? There's a lot of confusion out there.

Christopher Ecclestone:

Yeah, well, there's a lot of confusion. This is there's some craziness in the US running around thorium, not good. I'm in. I'm a believer in thorium. Thorium is really good with Pebble bed reactors and small format reactors. It's, you know, it's got

potentially its day in the sun. There are lots of thorium stockpiles lying around too, so you don't even need to mine this. And it's just sitting there, being waiting for its for its moment. And you know, there's something to the nuclear establishment that they don't want to see thorium having any, any progress...plays into the hands of the conspiracy theorists and the nuts, but Thorium should be getting more attention, particularly with these really small format reactors.

Tracy Weslosky:

So, what your saying is that the nuclear and the uranium industry should not feel compromised by the competitor of thorium, correct?

Christopher Ecclestone:

Yeah, not exactly. Exactly. We've seen many uranium positive story as well. I mean you could pick and choose what you what you. What you extract and you don't get more value, frankly.

Tracy Weslosky:

Is there a uranium producer that you love or that you follow? And can you comment on who this is?

Christopher Ecclestone:

Probably and no. The mere fact that they're a producer is good, whoever they might be. If they're producing, yes, please.

Tracy Weslosky:

Is there a small cap or a new uranium company that's your watching? Or is there a company that you know about that you find unique or interesting?

Christopher Ecclestone:

Well, I'm down in Argentina at the moment and Argentina is going to be one of the big playing fields in the up-and-coming uranium boom. I won't drop the names now, but it's place to watch.

Tracy Weslosky:

And that was going to be my next question, is there an area of the world that investors should be more excited about hearing about when looking for uranium companies to invest in? Where should an investor find more comfort when they hear the word uranium?

Christopher Ecclestone:

Well, Athabasca (Alberta, Canada), obviously SW Africa...whether it's Namibia or countries around there. Argentina, I've mentioned. Australia, it's easy. This said, they've got uranium, but with the states there flipping from being pro uranium to anti uranium they have done itself a lot of damage over recent years. I mean and it's been really like two bald men fighting over a comb. Because there's been no need for uranium from Australia — state governments there banning it and then unbanning it. I think Canada is, for once, the most virtuous regime for uranium in the world.

Ur-Energy's John Cash on rising interest in NA sourced

uranium

written by InvestorNews | March 22, 2024 In this InvestorIntel interview, Tracy Weslosky interviews Ur-Energy Inc.'s (NYSE American: URG | TSX: URE) CEO, Chairman, and President John Cash about the current uranium market. Speaking about the geopolitical risks in the uranium market, John explains why North American sources are being prioritized.

With Russia and Kazakhstan being the biggest uranium suppliers, John talks about the vulnerability of the US uranium supply chain. He goes on to provide an update on the recently passed legislation on the US Uranium Reserve and the US government's increasing support for nuclear energy. Speaking on the uranium supply and demand gap, John explains how Ur-Energy is well positioned to quickly ramp up uranium production.

To access the full InvestorIntel interview, click here

Don't miss other InvestorIntel interviews. Subscribe to the InvestorIntel YouTube channel by <u>clicking here</u>.

About Ur-Energy Inc.

Ur-Energy is a uranium mining company operating the Lost Creek in-situ recovery uranium facility in south-central Wyoming. We have produced, packaged, and shipped approximately 2.6 million pounds U_3O_8 from Lost Creek since the commencement of operations. Ur-Energy has all major permits and authorizations to begin construction at Shirley Basin, the Company's second in situ recovery uranium facility in Wyoming and is in the process of obtaining remaining amendments to Lost Creek authorizations for expansion of Lost Creek. Ur-Energy is engaged in uranium recovery and processing activities, including the acquisition, exploration, development, and operation of uranium mineral

properties in the United States. The primary trading market for Ur-Energy's common shares is on the NYSE American under the symbol "URG." Ur-Energy's common shares also trade on the Toronto Stock Exchange under the symbol "URE." Ur-Energy's corporate office is in Littleton, Colorado and its registered office is in Ottawa, Ontario.

To know more about Ur-Energy Inc., click here

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results of operations may negatively impact the value of its securities. Prospective investors are urged to review the Company's profile on Sedar.com and to carry out independent investigations in order to determine their interest in investing in the Company.

If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at info@investorintel.com.

Christopher Ecclestone on the "leaky door" for Russian Uranium

written by InvestorNews | March 22, 2024

In a recent InvestorIntel interview, Tracy Weslosky interviews Hallgarten & Company's Principal and Mining Strategist Christopher Ecclestone about the impact of the Ukrainian invasion on the resource sector. In a follow-up to a previous interview, Christopher starts with: "Everyone thought it would be over shortly, and in fact, it's dragged on — and so that means that the implications have very much changed now."

With commentary on sanctions, Russia being paid in rubles for oil and gas, Christopher takes on the impact to the global nickel, platinum, and palladium markets. Further discussions on Russia and Kazakhstan being our dominant suppliers of uranium, he provides a compelling argument on how other companies and countries may be a 'leaky door' for Russians sidestepping the

intended impact of economic sanctions.

The full interview, which may also be viewed on the InvestorIntel YouTube channel (<u>click here to subscribe</u>), may be accessed if you <u>click here.</u>

About Hallgarten & Company

Hallgarten & Company was founded in 2003 by the former partners of a well-known economic think-tank. Their output encompasses top-down and bottom-up research from a Classical Economic (Austrian School) perspective. Over the years, the team has successfully picked trends using macroeconomic underpinnings to guide investors through the treacherous waters of the markets. It was only natural, in light of the focus of Classical Economics upon the "real value" of monetary assets that the firm's strengths should ultimately have become evident in resources sectors and projections of commodity trends.

Hallgarten & Company has advised and managed portfolios of offshore and onshore hedge funds.

Hallgarten also provides consultancy services on Latin American economic, politics and corporate matters including the production of bespoke research.

Hallgarten research is now available on Bloomberg and FactSet.

To learn more about Hallgarten & Company, click here

Ur-Energy, Hedging the uranium supply against the chaos of war

written by InvestorNews | March 22, 2024

The big question right now is what will Putin do next? Last week U.S President <u>Biden banned Russian oil and gas imports</u>. Will Russia respond by banning uranium exports to the USA? That would certainly cause a huge drama given that Russia largely controls the uranium market (<u>41%</u> of supply from Kazakhstan, 6% from Russia) and the USA's dependence on uranium to power <u>19%</u> of the electricity grid and a significant part of its navy which is nuclear powered.

In anticipation of a possible Russian uranium export ban or supply shock, the uranium price has been moving higher since the war began. At the current uranium price of US\$60/lb the outlook for uranium producers is looking dramatically improved.

Uranium prices have spiked higher since the Russia-Ukraine war began on February 24, 2022

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Source: <u>Trading Economics</u>

<u>Ur-Energy Inc.</u> (NYSE American: URG | TSX: URE) is among the top two U.S uranium producers (when operational). Ur-Energy operates their flagship Lost Creek 'in-situ recovery' uranium mine and facility in south-central Wyoming, USA. The Lost Creek Mine and facility has been on <u>care and maintenance</u> awaiting higher uranium prices. Ur-Energy also owns <u>several other projects</u> including the Shirley Basin Project (construction ready), Lucky

Mc Mine, and Last Soldier uranium projects in the USA as well as the Excel Gold Project in Nevada, USA.

A summary of U-Energy's uranium projects in the USA

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Source: <u>Ur-Energy website</u>

The recent good news for Ur-Energy investors can be summed up from the following two key announcements:

- 1. November 1, 2021 Ur-Energy announces Lost Creek development program to advance readiness to ramp up uranium production. Ur-Energy stated: "We are pleased to announce the commencement of a development program at Lost Creek that will advance us from reduced operations to full production-ready status..... As of October 27, 2021, we had more than \$40 million in cash and 285,000 pounds of U.S. produced U₃O₈ in inventory worth approximately \$13.4 million, stored at the conversion facility."
- 2. March 9, 2022 "The economic analyses within the Lost Creek report continue to support the potential viability of the property. Total future life of mine (LoM) production (without additional exploration) is modeled to be 12.3 million pounds from 2022 to 2036 with LoM operating costs estimated to be \$16.34 per pound. All in, the estimated total costs per pound, including royalties and extraction taxes, is estimated at \$33.61 per pound before income tax of \$8.72 per pound. Pricing used in the analysis ranged from \$50.80 to \$66.04 per pound.....The Property has a calculated before tax internal rate of return (IRR) of 72.2 percent and a before tax net present value (NPV) of \$210.9 million applying an 8% discount rate. When income taxes are included in the calculation, the after-tax IRR is 66.8 percent and the after tax NPV is

\$156.8 million."

Note: Bold emphasis by the author.

Lost Creek update

Minimal controlled production continued at Lost Creek throughout 2021 in recognition of market conditions. Ur-Energy has all required permits for operations within the first three mine units at Lost Creek and expects to have the final permit to allow operations within the HJ and KM Horizon at LC East and additional mine units at Lost Creek this year. Ur-Energy is in the process of obtaining remaining additional amendments to Lost Creek authorizations for expansion of the Lost Creek Mine.

Lost Creek recently received an amendment to its license allowing expansion of mining activities within the existing Lost Creek Project and the adjacent LC East Project. The license now allows annual plant production of up to 2.2 million pounds U_3O_8 , which includes wellfield of up to 1.2 million pounds U_3O_8 and toll processing of up to 1 million pounds U_3O_8 . Additional approvals (as referenced above) for this expansion are expected in H2 2021.

At the current uranium price of <u>US\$60/lb</u> it looks highly likely we will very soon hear an announcement of Lost Creek production restarting.

Shirley Basin update

In addition to Lost Creek, Ur-Energy can bring on their Shirley Basin Project. It has a **before tax IRR of 105.6% and NPV8% of \$129.7 million**. Ur-Energy has all major permits and authorizations to begin construction at Shirley Basin, the Company's second in situ recovery uranium facility in Wyoming, USA.

2021 year end results

Ur-Energy's 2021 results are not important given that there was virtually zero (251 pounds of U_3O_8) uranium production and no sales. Ur-Energy <u>reported</u>: "As of December 31, 2021, we had cash resources consisting of cash and cash equivalents of \$46.2 million. No sales of U_3O_8 were necessary in 2021. The Company had a net loss of \$22.9 million or \$0.12 per common share."

Ur-Energy, <u>new CEO</u>, John Cash <u>stated</u>:

"We are encouraged by the dramatic increase in domestic and global support for nuclear power, as it is increasingly recognized as the only plausible solution to climate change. Ur-Energy is in the enviable position of being able to quickly ramp up and participate in an improving uranium market and, in addition, we could immediately deliver up to 284,000 pounds $\rm U_3O_8$ into the Uranium Reserve Program, currently being established by the U.S. Department of Energy. On March 3, 2022, we had \$44.7 million in cash, plus our ready to sell U.S. produced inventory, worth approximately \$14.4 million at recent spot prices. Additionally, we continue to advance the construction of header house 2-4 to expedite production when market signals allow us to ramp up at Lost Creek."

Closing remarks

Uncertainty of uranium supply from Russia and Russian controlled sources such as Kazakhstan is leading to a surge in uranium prices, up almost 50% in the past 3 weeks since the Russia-Ukraine war commenced.

At current prices, Ur-Energy's two key projects Lost Creek and Shirley Basin would be highly profitable as per recent economic studies done at uranium prices similar to today's price. All of this means it is highly likely we will soon see the resumption

of uranium production by Ur-Energy at Lost Creek Mine in the near term. It also times well with the U.S.'s intentions to build up a reserve of uranium and the recent White House Fact Sheet aiming to build USA supply chains for key materials.

For investors looking at a hedge against the war, then look no further than uranium. And if Putin bans exports of Russian controlled uranium to the USA and others, then expect to see uranium prices closer to US\$100/lb, than to today's price of US\$60/lb.

Ur-Energy trades on a market cap of <u>US\$380 million</u>. Looks appealing.

Mark Chalmers says that Energy Fuels will be soon ready to resume processing of yellowcake, the ore concentrate of uranium

written by InvestorNews | March 22, 2024

In a recent InvestorIntel interview, Tracy Weslosky spoke with Mark Chalmers, President and CEO of <u>Energy Fuels Inc.</u> (NYSE American: UUUU | TSX: EFR) about how Energy Fuels is positioned for filling the uranium supply gap arising from the interruption of the supply from Russia and Kazakhstan.

In this InvestorIntel interview, which may also be viewed on

YouTube (click here to subscribe to the InvestorIntel Channel), Mark Chalmers highlighted the uncertainties that the US nuclear electric utilities are facing because of their dependency on uranium supply from Russia and Kazakhstan. He also stressed the urgency for the transition to alternate uranium sources. Highlighting the current surge in uranium prices, Mark went on to provide an update on the uranium production capability at Energy Fuels' White Mesa Mill, which he said is "closer to market than anything else in the United States." He pointed out that within a few months of an order Energy Fuels White Mesa mill could be producing yellowcake, the uranium concentrate that is refined into nuclear reactor fuel. No other American uranium ore processor can be operational in that time frame.

To watch the full interview, click here.

About Energy Fuels Inc.

Energy Fuels is a leading U.S.-based uranium mining company, supplying U₃O₈ to major nuclear utilities. Energy Fuels also produces vanadium from certain of its projects, as market conditions warrant, and is ramping up to commercial-scale production of REE carbonate. Its corporate offices are in Lakewood, Colorado, near Denver, and all of its assets and employees are in the United States. Energy Fuels holds three of America's key uranium production centers: the White Mesa Mill in Utah, the Nichols Ranch in-situ recovery ("ISR") Project in Wyoming, and the Alta Mesa ISR Project in Texas. The White Mesa Mill is the only conventional uranium mill operating in the U.S. today, has a licensed capacity of over 8 million pounds of U_3O_8 per year, and has the ability to produce vanadium when market conditions warrant, as well as REE carbonate from various uranium-bearing ores. The Nichols Ranch ISR Project is on standby and has a licensed capacity of 2 million pounds of U₃O₈ per year. The Alta Mesa ISR Project is also on standby and has a licensed capacity of 1.5 million pounds of $\rm U_3O_8$ per year. In addition to the above production facilities, Energy Fuels also has one of the largest NI 43-101 compliant uranium resource portfolios in the U.S. and several uranium and uranium/vanadium mining projects on standby and in various stages of permitting and development. The primary trading market for Energy Fuels' common shares is the NYSE American under the trading symbol "UUUU," and the Company's common shares are also listed on the Toronto Stock Exchange under the trading symbol "EFR."

To learn more about Energy Fuels Inc., click here.

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Dependence on Russian Uranium has Investors Eyeing Ur-Energy for Domestic Production

written by InvestorNews | March 22, 2024

As I noted <u>earlier in the week</u>, in light of certain global political issues the United States may want to be looking for some better places to source commodities. As the largest consumer of uranium in the world, it behooves American consumers to secure supplies of this commodity from slightly more friendly allies. Especially given, <u>according to the EIA</u>, in 2020, the U.S. purchased 22% of its uranium from Kazakhstan and 16% from Russia. Not exactly the kind of leverage you want to be giving Mr. Putin when going into negotiations regarding Ukraine or anything else that may come up.

In fact, the estimated 2021 uranium requirement in the United States to power nuclear reactors was 17,600 tonnes (38.7 million pounds). Meanwhile, the EIA reported domestic production of uranium concentrate (U_3O_8) in the fourth quarter of 2021 totaled 9,978 pounds. And this minuscule amount of fourth quarter 2021 production is 88% higher than the third quarter total but is 98% lower than the 2015-2019 five-year range for the fourth quarter. Needless to say, the U.S. is not even close to being self-sufficient when it comes to supplying its domestic uranium requirements. Put into perspective, 20% of U.S. electricity is generated by nuclear power. It's enough to make a person wonder if anyone in Washington, D.C. has put all this information together in a clear, concise summary for the President or any of his advisors.

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Source: <u>U.S. Energy Information Administration</u>

To me, it seems pretty obvious that someone might want to suggest that this becomes a bit more of a priority for this and future administrations. Granted in December 2020, Congress passed the Consolidated Appropriations Act, 2021 (Pub. L. 116-260) that makes \$75 million available to the Department of Energy for the establishment of the Uranium Reserve Program. However, without being an expert at navigating the status of congressional acts, it appears this has only just concluded the request for information period and that not much has been done (but please correct me if this is inaccurate). In the meantime, I would suggest that there needs to be more domestic uranium production to prevent 20% of the electrical grid from potentially being at risk.

Enter <u>Ur-Energy Inc.</u> (NYSE American: URG | TSX: URE), and its uranium mining, recovery and processing operations, as well as

the exploration and development of uranium mineral properties all within the friendly confines of the United States of America. The Company boasts a cash position as of October 27, 2021, of \$40.9 million plus nearly 285,000 pounds of finished, U.S. produced $\rm U_3O_8$ inventory, worth just over \$12 million at recent spot prices. At its flagship Lost Creek in-situ recovery (ISR) uranium facility in south-central Wyoming, the Company announced at the beginning of November the commencement of a development program that will advance the facility from reduced operations to full production-ready status.

Initiated in October, the development program will see the next header house in Mine Unit 2 completed in Q1/22 and ready for immediate production when warranted. After completing the new header house, Ur-Energy will proceed with a delineation drill program in H1/22, which will enable the development and construction of the next four header houses in Mine Unit 2. The estimated cost of these development programs is \$2.2 million. In 2021, the Wyoming Uranium Recovery Program approved the amendment to the Lost Creek source material license which grants the Company access to six planned mine units in addition to the already licensed three mine units at Lost Creek. The Lost Creek facility has the constructed and licensed capacity to process up to 2.2 million pounds of $\rm U_3O_8$ per year and sufficient mineral resources to feed the processing plant for several years.

The Company's second uranium ISR project, Shirley Basin, stands ready for development and construction. Having received all remaining major approvals in 2021, Ur-Energy has effectively doubled it's licensed and permitted production capacity. Estimates for Mine Development (\$12.3 million) and CapEx (\$18.3 million) are \$30.6 million which should enable the Company to reach approximately a 1 million pound run rate in 15-18 months. By comparison, Lost Creek operations can increase to full production rates in as little as nine months with development

expenses during the full period of ramp-up estimated to be approximately \$14 million.

Very well positioned to be a major supplier of much-needed domestic uranium, Ur-Energy is well funded and can ramp up production quickly.

Until we have fusion, there is Fission 3.0 for new uranium supply opportunities

written by InvestorNews | March 22, 2024
Geopolitics are currently front and center in the news stream. I
won't even pretend to know what the true end game would be for
Russia. It could be to annex more of Ukraine or perhaps even
fully occupy the country. Putin is a very savvy and aggressive
statesman, and I suspect there may well be a game within a game
within a game. We may never be made aware of what the final
strategic outcome is, we will only ever hear what we are either
allowed to or intended to hear from the various spin doctors on
all sides. Whatever the outcome of this, and many other
simmering political events, security of resource supply has to
be a front and center part of your decision making as an

This week we are going to talk about the uranium supply. Granted Russia only mines approximately 6% of global supply and Ukraine only produces a little over 1% of global supply, the implications for the uranium market could be a little more

investor.

dynamic than the simple supply picture. If you recall a few weeks back there was plenty of political unrest in Kazakhstan, the largest global supplier of uranium at roughly 40%, and who was there to send in troops to help quell the protests and support the government — Russia. It's not a huge leap (at least in my opinion) to envision a scenario where Russia puts it's 100,000+ troops and the supplies it's been building up for over a year on the Ukraine border to use in some way. In turn that would likely lead to sanctions of various shapes and sizes that could very easily cause another level of back-and-forth brinksmanship, whereby Russia calls on its ally Kazakhstan to return a favor and make life difficult for the world's largest consumer of uranium — the United States.

Perhaps I have too much time on my hands to think about these kinds of things, or maybe I read too many novels with sensational plots. Nevertheless, one has to think that the largest consumer of uranium might be working on things in the background to secure supplies of this commodity from slightly more friendly allies. Especially given, according to the EIA, that in 2020 the U.S. purchased 22% of its uranium from Kazakhstan and 16% from Russia. So where better to support development and supply than your friendly neighbor to the North that just happens to host the world's richest uranium play — the Athabasca Basin. I guess your own backyard would be another logical place but I'll save that for later in the week.

As an investor, it's likely the first place you'd look is the existing Athabasca producers like Cameco Corp. (TSX: CCO | NYSE: CCJ) and Denison Mines Corp. (TSX: DML | AMEX: DNN). But if you want real leverage to my potential escalation scenario, it's the junior names that could give you the big moves. At the top of my list for junior explorers in the Athabasca Basin is Fission 3.0 Corp. (TSXV: FUU | OTCQB: FISOF) a uranium project generator and exploration company that currently has 16 projects in the

Athabasca Basin. This is the third generation Fission run by one of Canada's leading uranium exploration teams, which has already had success in the region including an asset sale to a major producer. The Company's management, headed up by Dev Randhawa as CEO & Chairman, is part of the team that founded Fission Energy Corp., which made the J-Zone high-grade discovery in the Athabasca Basin and built Fission into a TSX Venture 50 Company, which sold the majority of its assets to Denison Mines in April 2013. Fission Uranium Corp. (TSXV: FCU | OTCQX: FCUUF) was founded by the same team, including uranium expert Ross McElroy, which made the Patterson Lake South high-grade discovery. Mr. McElroy elected to stay with FCU to focus on the development of the Triple R deposit at Patterson Lake South but remains on Fission 3.0's Board of Directors and remains as the Company's OP.

Several of Fission 3.0's projects are near large uranium discoveries, including the Arrow, Triple R and Hurricane deposits. At the end of December Fission 3.0 completed an C\$8.6 million financing with an additional C\$690,500 raised from the exercise of warrants to go along with the C\$9.3 million the Company finished Q3/21 with. This leaves the Company well-funded at year end to continue its aggressive winter exploration/drill program on its Patterson Lake North project, which mobilized January 10th. Plans include a 4,000m seven-hole winter drill program focused on the previously untested Broach Lake and N Conductor targets.

Fission 3.0 has lots of cash in the bank and plenty of targets to drill, which should make for an exciting few months regardless of what happens in the rest of the world. With a market cap of approximately C\$41 million, there is still plenty of upside to be had if this successful team can find yet another world class uranium resource.

Uranium Finance gets ahead of Climate Politics

written by Jack Lifton | March 22, 2024
A new (state owned) company, ANU Energy OEIC Ltd, in the Republic of Kazakhstan made the following announcement today, October 18, 2021 — KAP announces investment in physical uranium fund

This announcement has boosted the share prices of uranium miners, refiners, and juniors dramatically, continuing the rally started earlier this Fall by the debut announcement of the Sprott Physical Uranium Trust, which is a Canadian, well financed (with a target of C\$2 billion), well connected and well managed, trading platform holding physical uranium as an asset. The new Kazakh fund, ANU Energy OEIC Ltd., although initially capitalized at US\$50 million will seek to raise an additional US\$500 million to be used for the sole purpose of buying and stockpiling physical uranium. The Kazak fund has the advantage that it can buy from its 48.5% owner, Kazatomprom, also a state owned company, and with domestic Kazak mines that produce 23% of the world's uranium, annually, making Kazatomprom the worlds largest uranium marketer.

Climate politics followers know that initially "nuclear," although carbon free was condemned due to the perception of danger from radiation, but the national governments of more and more of the richest nations-the largest users per capita of electrical energy-are today openly moving to enlarge their domestic nuclear industries. China has never wavered and has continued to build nuclear plants, Great Britain has reversed

decisions to close existing plants and has reaffirmed orders for new ones. The nation with the largest numbers of nuclear plants, the USA with more than 100 operating plants, has quietly extended operating licenses and federally begun to modernize the existing governmental support structure for nuclear plant regulation. Utilities are being encouraged to continue new construction whereas very recently they were not. France, of course, gets 80% of its electricity from French owned, operated, and built nuclear plants.

What do all of the nations listed above, the USA, the United Kingdom, France, and China have in common? They all get a significant portion of their baseload energy from nuclear plants; they all build and operate nuclear submarines and operate or are building nuclear powered aircraft carriers; and none of them has domestic production of uranium of any significance.

Also, the United States, China, and France combined operate the overwhelming majority of all global nuclear plants.

In each of these rich nations, uranium is and will remain a critical fuel metal indefinitely no matter what happens with climate change and fossil fuels.

Sprott has had a very good idea and the Kazakh's are in the game. Watch the uranium producers and processors in the USA, Canada, Australia, and Kazakhstan. Miners sell uranium to utilities or to Defense industries. Sales are by contract or spot. Is Physical metal held by traders as large as Sprott or the new Kazakh entity really an accessible supply? Or are these pounds of uranium open value poker chips being used by high rollers. The game has begun. Don't get shut-out.