

A stylized graphic of the American flag, with the stars in the upper left and the stripes curving downwards and to the right, creating a sense of movement and depth.

THE CRITICAL ISSUE #3

**SEPTEMBER 2023
NEWSLETTER**



**Critical Minerals Association
United States of America**

SEPTEMBER 2023

ISSUE OVERVIEW

CMA USA: What is a critical mineral? What is critical to the U.S.?

Political & Geopolitical Highlights

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- Biden sets new rules restricting U.S. investments in China
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- India to start critical mineral blocks auction process this year

Events Calendar

Would you like to feature in a future edition?

Submit an expression of interest to

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CRITICALITY AND U.S. CRITICAL MINERALS LISTS

The U.S. Department of Energy (DOE) released its critical minerals assessment highlighting 19 metals and minerals that are eligible for tax credits under the [Inflation Reduction Act 48C](#).

The assessment evaluated materials for their criticality to global clean energy technology supply chains.

The 2023 DOE Critical Minerals List includes: aluminum, cobalt, copper, dysprosium, electrical steel (grain-oriented steel, non-grain-oriented steel, and amorphous steel), fluorine, gallium, iridium, lithium, magnesium, natural graphite, neodymium, nickel, platinum, praseodymium, terbium, silicon, and silicon carbide.

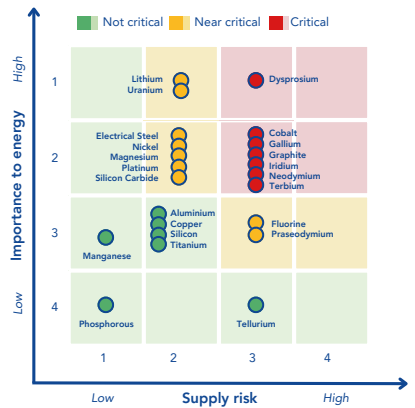
U.S. critical minerals lists:

- Department of Interior, [USGS](#)
 - 50 commodities
- [Department of Energy](#)
 - 19 critical minerals, metals and materials
- [Defense Logistics Agency](#)
 - Strategic materials and compounds including critical minerals

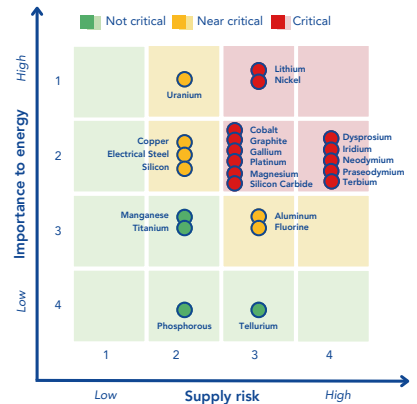
Biden-Harris Administration announces \$15.5 billion to support a strong and just transition to electric vehicles, retooling existing plants, and rehiring existing workers

Read on here...

SHORT TERM 2020-2025



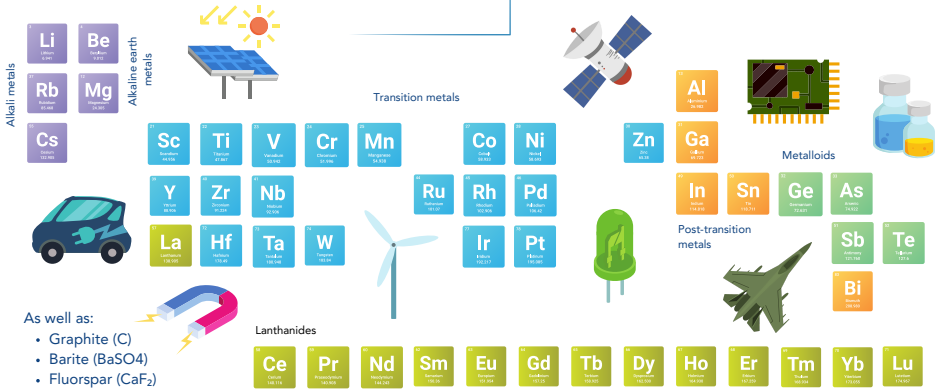
MEDIUM TERM 2023-2035



WHAT'S CRITICAL TO THE U.S.?



UNITED STATES GEOLOGICAL SURVEY CRITICAL MINERALS LIST



CRITICAL MINERALS
Critical minerals are necessary for the manufacture of high-technology devices, national defense applications, and green growth-related industries.

The Energy Act of 2020 defines a 'critical mineral' as a non-fuel mineral or material **essential to the economic or national security** of the U.S. and which has a supply chain **vulnerable to disruption**.

Critical minerals are also characterized as serving an essential function in the manufacturing of a product, the absence of which would have **significant consequences** for the economy or national security.

CMA USA splits these into three categories:

Critical Minerals
Minerals and metals that are necessary for the industrial objectives of a country or company. Most of these have supply chain vulnerabilities.

Technology Metals
Metals that are necessary to make new technology work. These have limited supply chain vulnerabilities.

Strategic Minerals
Minerals and metals of diplomatic or defense importance.

U.S. DEPARTMENT OF ENERGY CRITICAL MINERALS LIST



As well as minerals and materials:

- Electrical steel
- Natural graphite (C)
- Silicon carbide (SiC)



POLITICAL & GEOPOLITICAL HIGHLIGHTS

U.S. looks to Mongolia, wedged between China and Russia, for critical minerals

[...] Mongolia — once nicknamed “Minegolia” because of its abundant reserves of copper, gold, coal and rare earths — was visited last month by senior American officials who are trying to unlock new sources of minerals to ease the United States’ dependence on China, the global hub for clean energy technologies.

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New funds of nearly \$13 million have since been announced by the U.S. Agency for International Development (USAID) to further expand U.S. development activities in Mongolia.

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Biden sets new rules restricting U.S. investments in China

[...] The executive order, which will be implemented by the Treasury Department, will prohibit some investments in Chinese firms engaged in developing quantum computing sensors and networks, as well as advanced semiconductor firms, and certain artificial intelligence firms.

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U.S. Department of Energy renews Critical Materials Institute to secure America’s clean energy technology supply chains

The U.S. Department of Energy (DOE)’s Advanced Materials and Manufacturing Technologies Office (AMMTO) announced renewed funding for the Critical Materials Institute (CMI), an Energy Innovation Hub. With a potential \$30 million per year over five years for this third phase of the Hub, CMI will further its mission to accelerate innovative scientific and technological solutions to develop resilient and secure supply chains for materials critical to the manufacturing of clean energy technologies.

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California's Governor Newsom announces new climate partnership with Australia

California and Australia signed a Memorandum of Understanding (MOU), forging a new climate partnership between two of the largest economies in the world.

The [MOU](#) outlines five years of cooperation between California and Australia on clean energy, clean transportation, clean technologies [including critical minerals], nature-based solutions, climate adaptation, green finance and investment and circular economy [including recycling of lithium-ion batteries].

[Read on here...](#)

Australia, Canada and U.S. unify critical minerals data

The U.S. Geological Survey (USGS) has released a compilation of national-scale geological, geophysical and mineral resource datasets from Australia, Canada and the U.S. through a collaboration between the three countries' federal geological surveys.

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Department of Defense (DOD) entered an agreement to strengthen the U.S. supply chain for essential turbine engine

The Office of the Assistant Secretary for Industrial Base Policy, through its Manufacturing Capability Expansion and Investment Prioritization (MCEIP) office, entered into an agreement with Selmet, Inc., a Consolidated Precision Products company, to support the production of specialty titanium castings used for key components for turbine engines for the F-15, F-16, F-22, and F-35 aircraft.

The \$1.31 million agreement, entered into under the Defense Production Act (DPA) Title III authorities and utilizing funds appropriated by the Additional Ukraine Supplemental Appropriations Act, will enable Selmet to procure and install specialty equipment required to produce complex titanium castings.

The project reduces the risk of supply chain disruptions for the turbine engines supporting some of our military's most essential fighter aircraft.

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Perpetua Resources wins up to US\$15.5 million to advance antimony trisulfide supply chain at Stibnite

Perpetua Resources announced that its subsidiary, Perpetua Resources Idaho was awarded an Ordnance Technology Initiative Agreement (OTIA) of up to US\$15.5 million by the U.S. Department of Defense (DoD).

The objective is to demonstrate a fully domestic antimony trisulfide supply chain using ore from the Stibnite gold project site for use in munitions.

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The race to mine the moon: how India, Russia, Europe, the US and China are battling it out to mine precious water, helium and metals beneath the lunar surface

From rare Earth metals used in smartphones to helium that could perhaps provide an invaluable source of energy, the lunar surface is a multi-quadrillion-pound hotbed of unearthed riches.

[...] One of the concerns expressed by NASA chief Bill Nelson is that Beijing could begin staking claims to territory on the moon under the guise of scientific research.

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U.S. to impose tariffs on tin mill steel from Canada, China, Germany

The U.S. Commerce Department said it will impose preliminary anti-dumping duties on tin-plated steel imports from Canada, Germany and China, sparing five other countries in a decision that drew some relief from food can manufacturers that had feared higher tariffs.

The department said the highest preliminary anti-dumping duties of 122.5% will be imposed on tin mill steel imported from China, including the country's largest producer, Baoshan Iron and Steel.

The department will impose preliminary duties of 7.02% on tin mill imports from German producers, including Thyssenkrupp and 5.29% on imports from Canadian producers, including ArcelorMittal DOFASCO.

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INDUSTRY HIGHLIGHTS

Redwood Materials raises \$1 billion to expand US battery supply chain

Redwood Materials, the battery recycling startup founded by former Tesla co-founder and CTO JB Straubel, has raised over \$1 billion in a Series D round at a post-money valuation of over \$5 billion, according to a source familiar with the matter.

The raise brings Redwood's total equity capital to \$2 billion.

[...] To help address this gap and create a closed-loop supply chain in the U.S., Redwood is building out a couple of factories in the U.S. More near-term is Redwood's 175-acre Sparks, Nevada recycling facility, which will produce anode copper foil.

Coming up the pipeline is the company's 600-acre facility in Charleston, South Carolina that will see Redwood go beyond recycling batteries and refining materials into remanufacturing of both the cathode and anode copper foil.

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Stellantis invests in Controlled Thermal Resources to strengthen low emissions U.S. lithium production

Stellantis N.V. and Controlled Thermal Resources Holdings Inc. (CTR) announced a major investment of over \$100 million from Stellantis to advance the development of CTR's Hell's Kitchen project, the world's largest geothermal lithium project with a total resource capacity to produce up to 300,000 metric tons of lithium carbonate equivalent each year.

Lithium produced at Hell's Kitchen will support Stellantis vehicles' BEV eligibility for consumer incentives under the U.S. Inflation Reduction Act (IRA).

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Rare earths miner Lynas has signed an updated contract with the US Department of Defence (DoD) for the construction of its heavy rare earth processing facility in Texas

The updated contract is an expenditure-based contract under which all of Lynas' properly allocable construction costs will be reimbursed, with the DoD increasing its support from \$120-million to approximately \$258-million.

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Ramaco Resources announced board approval for first new U.S. rare earths mine in 70 years

Initial mine development work on the Brook rare earths mine, in Wyoming, will start in the fourth quarter.

This will be the first new rare earths mine in the US since the Mountain Pass mine in California in 1952. Currently, Mountain Pass is the US's only operating mine for these critical elements and minerals.

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Tennessee refinery could break Chinese chokehold on two critical minerals

A solution to potential shortages of two critical minerals used in making semiconductors and advanced military equipment — exports of which were restricted by China this month — may be lying in some waste storage ponds in central Tennessee.

Owners of a zinc processing facility in the southern U.S. state say they are developing a plan to extract the two minerals — gallium and germanium — from the ponds where for years the company has deposited the residue from its refining of zinc from five mines located in central and eastern Tennessee.

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Lithium players race for breakthrough to meet electric car demand

On the outskirts of El Dorado — the heart of Arkansas' 1920s oil boom — a company backed by Koch Industries is looking to dramatically speed up the extraction of a battery metal essential to weaning the world off fossil fuels, while proving naysayers wrong in the process.

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INTERNATIONAL HIGHLIGHTS

Hyundai and Korea Zinc forge nickel partnership

Automotive group Hyundai Motor Group has announced a partnership with ferrous metals smelting firm Korea Zinc to establish a stable supply chain for nickel – a critical raw material for electric vehicle (EV) batteries.

Hyundai and Korea Zinc will jointly be sourcing and processing nickel raw material, and will be exploring new businesses, including battery recycling.

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Syrah Resources' latest graphite deals 'in line with supply diversification' trends

Australia-based graphite miner Syrah Resources has signed two binding offtake agreements with Graphex Technologies, a multinational purified spherical graphite producer, and Westwater Resources, a U.S.-based junior graphite anode producer.

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Vietnam continues charge to offer alternative to Chinese rare earth permanent magnets

South Korea's Star Group Industrial (SGI) announced their intention to construct a 5.0ktpy NdFeB permanent magnet production facility in Vietnam, with initial production from the facility scheduled for 2024, ramping up to capacity in 2025.

China's Baotou INST Magnetic (INST) has also announced that production at its Vietnamese magnet production facility will be commissioned by end-2023, in response to requests from clients to develop manufacturing capacity outside of China.

The announcement comes a month after the Vietnamese government reported plans to increase rare earth production in the country to 2.0Mt mined materials, producing between 20-60ktpy REO by 2030, and increasing further to 40-80ktpy REO by 2050.

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French miner Eramet suspends its operations in Gabon

French miner Eramet whose mines in Gabon make it the world's largest producer of high-grade manganese ore, has suspended all operations in the country because of an ongoing coup, it said on Wednesday, sending its shares sharply lower.

A group of senior Gabonese military officers appeared on television in the early hours of Wednesday and said they had taken power after the state election body announced President Ali Bongo had won a third term.

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Indonesian nickel smelters turn to Philippines for ore as local supply tightens

Nickel smelters in top producer Indonesia are making rare purchases of ore from the Philippines to ease tight supplies, people familiar with the matter said, upending trade flows of the raw material and pushing up costs across the supply chain.

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India to start critical mineral blocks auction process this year

India is preparing to start the auction process for some 100 critical mineral blocks in the next four months, as part of plans to secure domestic supplies of the raw materials needed to fuel the green energy transition.

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Value-add should be key to Australian prosperity - Minister

Australia's future prosperity will centre on its ability to value-add, rather than just relying on extraction, Industry and Science Minister Ed Husic said.

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Start-up develops alternative critical minerals production

A partnership between Canadian net-zero mining start-up Tera Earth and geological exploration and mining consulting company Trigteq is paving the way for a feasible solution to cost effectively, and more sustainably, provide critical minerals for a market that boasts significant demand.

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TOO CRITICAL TO MISS EVENTS 2023

SEPTEMBER

REPM 2023 | 27th International Workshop on Rare Earths and Future Permanent Magnets | Birmingham, UK
3-7 Sept

- [Register here](#)

International Molybdenum Association's 35th Annual General Meeting* | Santiago, Chile | 3-8 Sept

*Special collaboration with IMOA to expand on the future potential inclusion of molybdenum in the USA critical minerals list.

NOVEMBER

Benchmark Week 2023 | Enabling the Most Critical Decisions of the Energy Transition | Los Angeles, USA | 14-16 Nov 2023

- [Register here](#)

Critical Minerals Conference | AusIMMM | Perth, Australia | 21-23 Nov

- [Register here](#)

Mines & Money | Resourcing Tomorrow | London, UK | 28-30 Nov 2023

- [Register here](#)

OCTOBER

FT Live | Mining Summit 2023 | London, UK | 5-6 Oct

- [Register here](#)

LME Week | London Metals Exchange | London, UK | 9 Oct

- [Register here](#)

Global Trade Conference | SMMT | Virtual | 18 Oct

- [Register here](#)

19th International Rare Earths Conference | San Antonio, USA | 18-20 Oct 2023

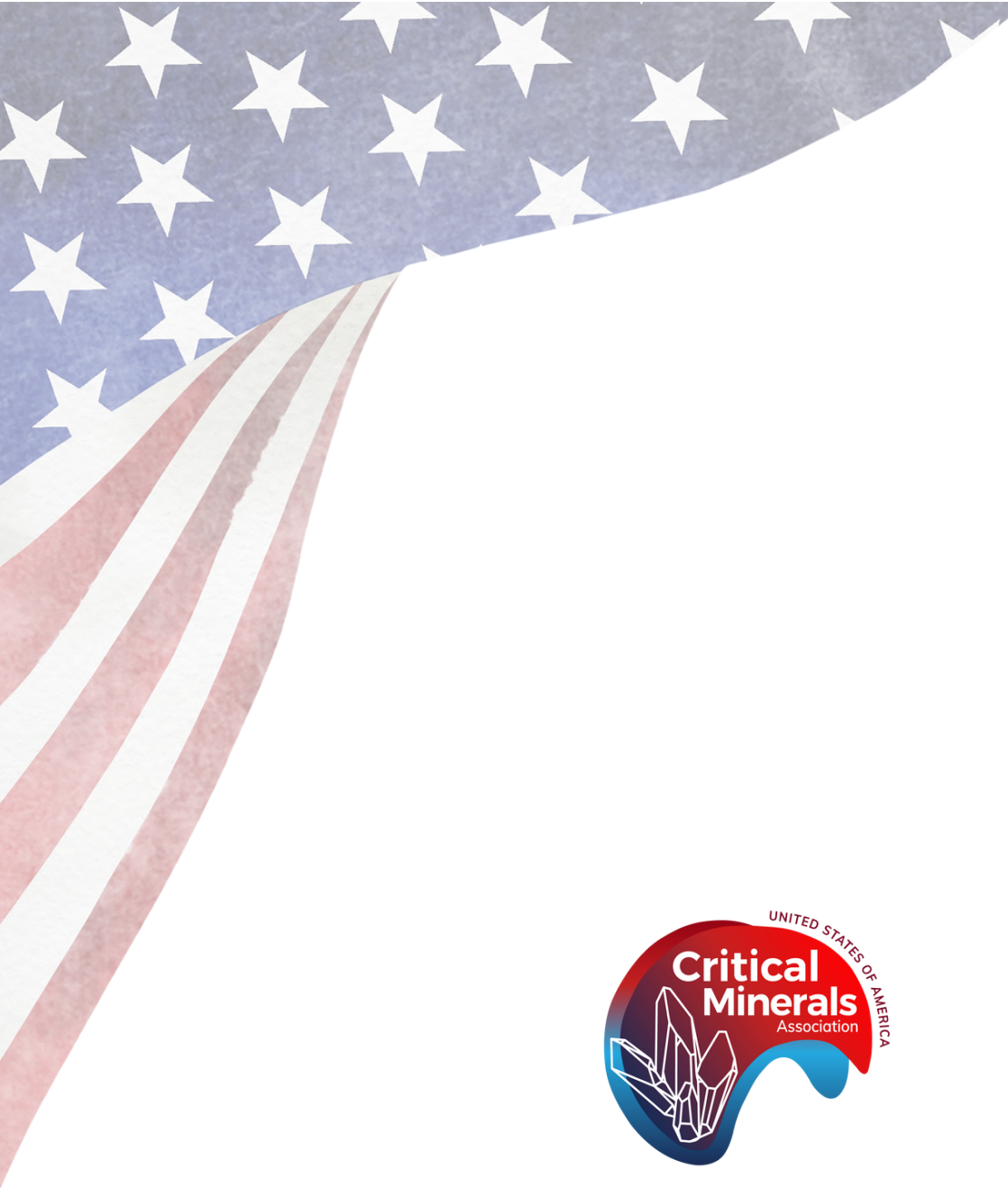
- [Register here](#)

121 Mining Investment | 23-24 Oct 2023 | New York, USA

- [Register here](#)

IMARC | Sydney, Australia | 31 Oct - 2 Nov

- [Register here](#)



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