THE CRITICAL ISSUE #2

AUGUST 2023 NEWSLETTER

Critical Minerals Association
United States of America

AUGUST 2023 ISSUE OVERVIEW

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Events Calendar

Would you like to feature in a future edition?
Submit an expression of interest to
admin@criticalusa.org

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ASSOCIATION UPDATES

We are delighted to share very exciting news - the CMA USA is now part of the **Critical Minerals International Alliance** (CMIA)!

The CMIA is a mechanism that brings together domestically-focused associations, CMA USA, CMA Australia and CMA UK, and partner association C2M2A, at an international level to address challenges facing the critical minerals industry that are too complex for any one nation to tackle alone.

Collaboration is essential to ensure a sustainable and long-term supply of critical minerals for the United States and other like-minded countries. We strongly feel that the CMIA will enable stronger diversified supply chains, help share research and development and promote responsible mining practices, which ultimately will help to ensure a secure and robust supply of critical minerals for the future.

Wilfredo A. Reyes
Founder & Chief Executive Officer
Critical Minerals Association USA

UPCOMING EVENTS

The **International Molybdenum Association's 35th Annual General Meeting** is taking place between 3-8 September in Santiago, Chile. Is molybdenum a critical mineral? Let's discuss! Learn more about the IMOA here.

We hope to see you soon at the **Future of Mining Americas 2023** taking place on the 25th to 26th September in Denver, Colorado. Find out more about the event here. Don't miss Wilfredo's keynote!

Join the virtual Society of Motor Manufacturers and Traders **Global Trade Conference** conference on 18 October where Olimpia Pilch, Founder & Senior Advisor, CMA USA, will be speaking about trade policy and how it's impacting critical minerals supply chains. Register here.

POLITICAL & GEOPOLITICAL HIGHLIGHTS

Remarks by Secretary of the Treasury Janet L. Yellen at roundtable discussion with U.S. businesses operating in the People's Republic of China

"[...] the U.S. seeks healthy economic competition with China. But healthy economic competition – where both sides benefit – is only sustainable if that competition is fair.

[...] I am also concerned about new export controls recently announced by China on two critical minerals used in technologies like semiconductors. We are still evaluating the impact of these actions, but they remind us of the importance of building resilient and diversified supply chains.

[...] I have made clear that the United States does not seek a wholesale separation of our economies. We seek to diversify, not to decouple."

Read on here...

US bill aims to counter China's control of DRC's critical minerals

The Chairman of the House Africa subcommittee, Representative John James of Michigan, introduced a bill requiring the creation of a US national strategy to secure supply chains of critical minerals from the Democratic Republic of Congo.

Read on here...

The Council of the European Union authorises negotiations on EU-US Critical Minerals Agreement

The Council adopted a decision authorising the Commission to open negotiations, on behalf of the EU, with the U.S. on a Critical Minerals Agreement (CMA) and the related negotiating directives.

This agreement seeks to strengthen critical minerals supply chains and mitigate some of the negative repercussions of the US Inflation Reduction Act (IRA) on EU industry.

Read on here...

THE GREAT NEW GAME
GALLIUM & GERMANIUM

In early July China introduced export restrictions on gallium and germanium products

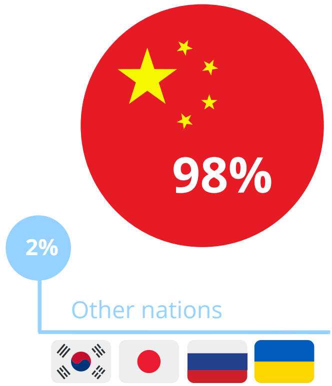
China's Ministry of Commerce (MOFCOM) and the General Administration of Customs (GAC) posted notices that eight items related to gallium, and six items related to germanium, **could not be exported without State approval** to "safeguard national security interests". The restrictions are due to kick in on August 1st, 2023.

The retaliatory tit-for-tat move comes after the Netherlands announced new rules restricting exports of certain semiconductor manufacturing equipment on "national security grounds". It has been reported that the country was under pressure from the U.S. to curb the sale of chips to China.

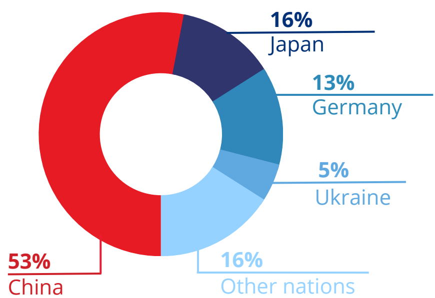
Why is this a big deal?

Both gallium and germanium are essential for **U.S. defence capabilities** and **high-tech applications** including integrated circuits and cutting-edge chips, laser diodes, solar cells, telecommunications and many more. The U.S. is heavily reliant on imports of gallium and germanium products with no existing primary domestic production and limited secondary sources.

World Primary Low-purity Gallium Production



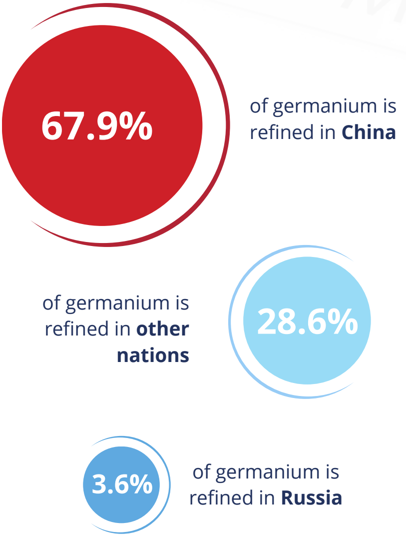
Gallium Import Sources to the U.S. (2018-2021)



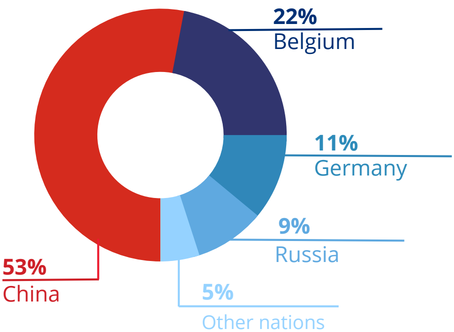
- Primary gallium is recovered as a **byproduct** of processing bauxite and zinc residues.
- No domestic primary (low-purity, unrefined) gallium has been recovered in the U.S. **since 1987.**

Learn more about gallium...

Germanium World Refinery Production



Germanium Import Sources to the U.S. (2017-2020)



Learn more about germanium...

What can the U.S. do?

Smart policy can maximise primary and secondary production of germanium and gallium. Existing zinc operations could be incentivised to produce germanium concentrate. Greater investment into R&D is also needed to extract germanium from fly ash and improve the recycling efficiency of both metals.

There is a strong case for joint efforts between industry and the Department of Defence to break up the monopoly, revitalise domestic production and lessen U.S. reliance on China.

Top Reads

- Bloomberg| **The little known metals giant that rules a global market |** Including insights from Olimpia Pilch
- Reuters| **Pentagon has strategic germanium stockpile but no gallium reserves**
- Project Blue | **Chip wars: China restricts exports of gallium and germanium**

U.S. says it must work with Latin America more on key minerals

The US needs to bolster its cooperation with Latin American countries in obtaining reliable supplies of critical minerals, a senior State Department official told lawmakers.

Asked about growing links between Brazil and other countries in the region with China in the development of mineral supplies and electric vehicle batteries, State Department Undersecretary Jose Fernandez said, “This is a perfect example of why we need to get more involved, and why we’ve created the Minerals Security Partnership,” an effort among 14 countries and the European Union to collaborate on critical minerals production and processing.

“Brazil could be a very valuable partner in finding critical minerals,” Fernandez added. “It’s not only Brazil. Argentina, Chile, Peru — we’ve got to do more in this hemisphere.”

Read on here...

Department of Energy announces $10.9 million to expand domestic supplies of lithium through geothermal brine extraction

DOE announced $10.9 million for 10 projects across nine states that will advance innovative technologies to extract and convert battery-grade lithium from geothermal brine sources in the United States.

This work will increase America’s access to cost-effective, domestic sources of this critical material needed for batteries for stationary storage and electric vehicles to meet the Biden-Harris Administration’s goals of 50% electric vehicle adoption by 2030 and a net-zero emissions economy by 2050.

Read on here...

Department of Defense commit $32 million to extracting rare earth elements and other critical minerals from domestic coal-based resources

Coal and coal production waste contain a wide variety of valuable rare earth elements that can be converted into clean energy technology components.

Read on here...

INDUSTRY HIGHLIGHTS

Graphite One receives Department of Defense (DoD) funding for US project

The DoD has awarded Graphite One a $37.5-million grant under the Defense Production Act (DPA) to speed up the feasibility study for the supply of graphite battery anodes necessary for electric vehicles and alternative energy batteries.

[...] At present, the US is 100% import-dependent for graphite, with China being the world's leading producer.

Read on here...

Piedmont Lithium awarded the last permit for Tennessee

Lithium miner Piedmont Lithium has received the final permit to advance the construction of its Tennessee lithium project.

“Tennessee Lithium is uniquely positioned in America’s emerging Battery Belt to supply the domestic market with crucial, made-in-America lithium resources,” Piedmont Lithium president and CEO Keith Phillips.

Read on here...

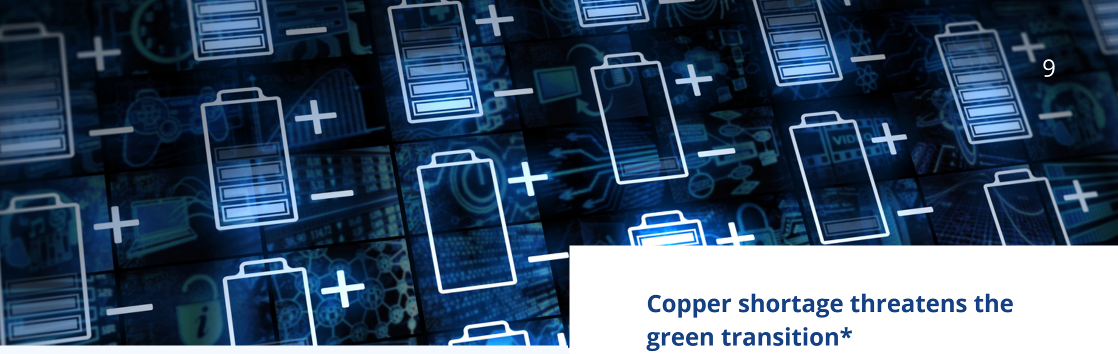
Rio Tinto signs $700m aluminium recycling deal

Major Rio Tinto and North American fully-integrated metal management business Giampaolo Group have entered into an agreement to form a joint venture (JV) to manufacture and market recycled aluminium products.

Under the terms of the agreement, Rio will acquire a 50% equity stake in Giampaolo Group’s wholly-owned recycled aluminium business Matalco for $700-million subject to usual closing adjustments.

Matalco is a leading producer of high-quality recycled aluminium billet and slab products. It operates six facilities in the US and one in Canada, with the capacity to produce approximately 900 000 t/y of recycled aluminium.

Read on here...



US Battery Belt grows with $1 billion Kentucky cathode deal

For years, the US electric vehicle industry has grappled with two supply-chain issues: how to source critical materials for battery production, and what to do with old batteries once they're spent. A deal announced today by Ascend Elements aims to address both challenges.

The Massachusetts-based maker of battery materials said it has reached a billion-dollar deal with an unnamed automaker to reprocess old batteries into cathode material, a substance that's responsible for more than one third of the expense of a finished EV battery pack. Ascend is building a cathode plant in Hopkinsville, Kentucky, and plans to begin deliveries next year.

The contract covers cathode for at least 40 gigawatt hours of batteries a year, Ascend Chief Executive Officer Mike O'Kronley said in an interview, enough for 750,000 electric cars. In 2021, that would have satisfied the entire US EV industry, but five times as much cathode will be needed by 2025, according to BloombergNEF data.

Read on here...

Copper shortage threatens the green transition*

Metal markets seem to think copper is the new lithium. A lack of new mining activity has added to worries that there won't be enough of the red metal for the energy transition, a popular topic at this week's World Copper Conference in Santiago, Chile.

South America currently dominates copper production and Chile is the largest mined producer. Increasing mine output has proved a challenge, prompting a wave of deal-making in the industry and warnings of a serious supply shortfall over the next decade.

Copper is used in wiring and construction as well as electric vehicles, solar panels and other green technologies. Electrification is expected to increase annual copper demand to 36.6 million metric tons by 2031, with supply forecast to be around 30.1 million tons, creating a 6.5 million ton shortfall at the start of the next decade, according to consulting firm McKinsey & Co.

Read on here...

*CMA USA acknowledges that copper is not on the USGS critical minerals list but would like to highlight its increasing importance

INTERNATIONAL HIGHLIGHTS

Zimbabwe eyes world no. 5 lithium spot as Chinese investors boost capacity

Chinese investors racing to secure lithium supplies could help Zimbabwe rise to become the world's fifth biggest primary producer of the material that's vital to battery electric vehicles and the green revolution, mining consultancy CRU said.

The lithium industry in Africa's top producer has rapidly expanded, buoyed by about $1 billion of investments during the past two years by Chinese companies including Zhejiang Huayou Cobalt, Sinomine Resource Group, Chengxin Lithium Group and Yahua Group.

Read on here...

Australia to add to priority critical minerals by year-end

Australia will update its critical minerals list by the end of the year, its resources minister said on Thursday, potentially opening the way for copper and nickel miners to tap government incentives and speed up new project development.

Read on here...

Indonesia raises export tax rates for copper, zinc and iron

Indonesia has raised export tax rates for copper concentrate in a range from 5% to 10% based on the progress of smelter construction, according to its finance ministry.

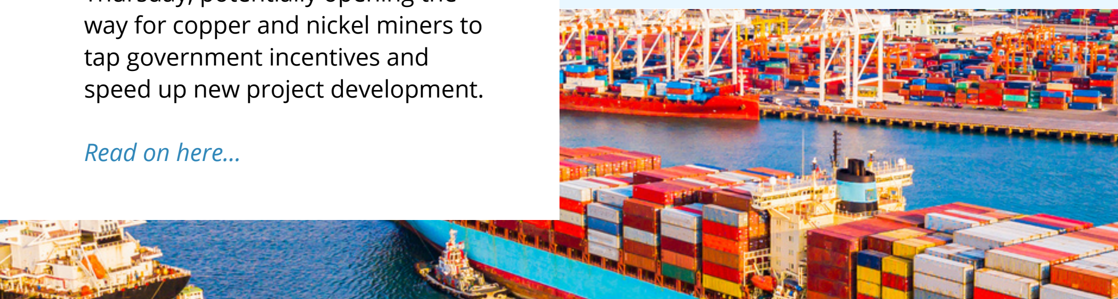
The ministry in a regulation also raised the rates for iron, zinc and lead, in range of 2.5% to 7.5%. The new rates are effective from July 17 to December 2023.

Read on here...

At international deep sea mining meeting, debate moves behind closed doors

Delegates to the UN-affiliated organization that regulates seabed mining cut a livestream of their negotiations and retreated behind closed doors in an attempt to resolve a dilemma the could determine the fate of the deep ocean.

Read on here...

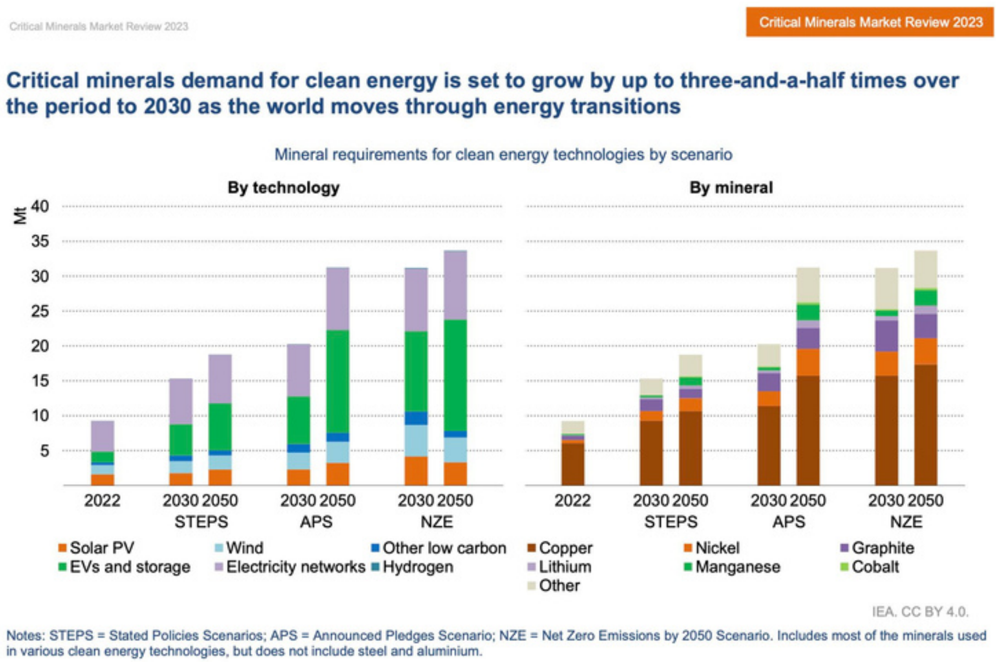


Agencies emphasise the challenges facing critical minerals supply chains and the impacts on the energy transition

The International Renewable Energy Agency (IRENA), Energy Transitions Commission and the International Energy Agency (IEA) have released reports exploring critical minerals trends, energy transition requirements and geopolitical challenges.

Critical minerals underpin the delivery of the energy transition. However, challenges such as long lead times for extraction, monopolisation, and inefficiencies risk delaying the transition.

Yet, the energy transition offers an opportunity to build alternative supply chains profitably through greater collaboration between governments and industry.



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

Future of Mining Americas | Denver, USA | 24-25 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 | 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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