American Critical Minerals Association

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Sarah J. Ryker
Acting Director
United States Geological Survey
United States Department of Interior

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Re: Comments in Response to the United States Geological Survey 2025 Draft List of Critical Minerals [Docket Number USGS-2025-0039; GX25GB00PAMR000]

Dear Ms. Ryker,

The American Critical Minerals Association (ACMA) respectfully submits the following comment letter in response to the 2025 Draft List of Critical Minerals.

About ACMA

The mission of ACMA and its members is to support the growth of the domestic critical mineral supply chain. ACMA is an industry association that welcomes members from across the critical minerals supply chain, including raw material producers, processors, recyclers, suppliers, manufacturers, and end users, as well as academic institutions and other stakeholders. Our organization serves as a unified voice to advance U.S.-based critical mineral processing and recycling capacity for the benefit of multiple sectors, including but not limited to, the defense, transportation, aerospace, energy, and manufacturing sectors.

Coordinated Reviews & Updates

ACMA and its members recognize that the criticality of minerals and metals continues to transform quickly, as the U.S. government reacts to changes in supply, demand, and other market dynamics impacting the ability to source, process and use certain minerals. The USGS List of Critical Minerals, updated triennially, as well as the Department of Energy's Critical Materials List are well-established drivers of policy, funding and regulatory conversations at the federal level. And, because each critical mineral's supply chain varies, sometimes widely, policymakers and regulators seeking to advance an independent and domestic supply chain via policy must be able to rely on dynamic and timely criticality assessments.

Therefore, consistency amongst lists is increasingly imperative. The Critical Mineral Consistency Act of 2025 reflects a growing chorus of voices seeking alignment between the two agencies' lists. Overlap and differences in the lists, as well as varied timelines for

updates, add to the confusion associated with these complex supply chains. The bill simply amends Section 7002 of the Energy Act of 2020 to require the Secretary of Interior to update its own list upon a determination by the Secretary of Energy that a non-fuel mineral, element, substance, or material is critical.

We also recognize that additional agencies, including the Department of War, maintain and update critical materials lists tailored to their specific missions and related needs, many of which also include materials essential to other key U.S.-based supply chains. Ensuring agencies' critical materials assessments are as consistent and coordinated as possible across the U.S. government is essential. These efforts will allow for greater information sharing, market understanding and, ideally, create opportunities for multiple agencies to combine efforts aimed at derisking investments in these essential supply chains. Therefore, we also support the USGS conducting annual assessments and encourage further alignment with the Department of Energy's critical materials assessment where possible.

Inclusions & Recommended Additions

The American Critical Minerals Association appreciates the USGS inclusion of raw minerals as well as refined products, chemicals and alloys. The additions of copper, lead, potash, rhenium, silicon, and silver are welcome developments.

ACMA also supports the inclusion of boron and uranium.

- Boron: The Department of Energy previously assessed boron for criticality based on its importance to wind turbine blades, certain photovoltaics and battery coatings but determined that the available data did not correlate to a potential for "significant increase in demand for boron".[1] We would ask the USGS to consider a different position – deem boron critical. Boron is versatile and the U.S economy needs boron for a wide number of applications, including glass and electronic manufacturing, as well as nuclear reactors and fertilizer. As demand for power in the United States grows at accelerated rates, interest in expanding our nuclear power capacity is keeping pace. The nation's existing nuclear fleet is aging, and planned retirements are expected to reduce the amount of available nuclear power. Yet, data centers, manufacturing, and electrification are driving demand growth projections,[2] creating a renewed interest in the development of new nuclear generation facilities. Numerous critical minerals (including hafnium, zirconium, and nickel – as well as copper) are required for the operation of a nuclear facility but it is important to note that boron offers unique benefits because the boron-10 isotope is capable of absorbing neutrons. Used in control rods, as well as for

[1] https://www.energy.gov/sites/default/files/2023-07/preprint-frn-2023-critical-materials-list.pdf

[2] U.S. electricity consumption grew by 2% in 2024 after nearly two decades of relatively steady demand. EIA forecasts electricity demand to continue growing at that rate in 2025 and 2026, which would be the first three years of consecutive growth in electricity demand since 2005–07. EIA expects electricity demand to grow fastest in the industrial sector—by 2% in 2025 and 3% in 2026—as new semiconductor and battery manufacturing operations come online. In the commercial sector, demand increases by 2% in both 2025 and 2026 as data-center power consumption increases. https://www.eia.gov/pressroom/releases/press564.php

shielding and coolant purposes, the importance of diverse and resilient supplies of boron will only grow as new nuclear capacity is brought online.

While the United States and Turkey remain the leading producers of boron globally, the U.S. hosts only one operational boron mine. As with any strategic material, redundancy and resilience are essential to mitigate against supply disruptions and drastic market fluctuations.

- Uranium: Executive Order 14154 Unleashing American Energy[3] included a directive to the U.S. Geological Survey to consider updating the Department of Interior's critical minerals list, including for the potential of including uranium. As noted by the Energy Information Administration (EIA), most of the United States' uranium supply if foreign sourced.[4] In fact, "Owners and operators of U.S. civilian nuclear power reactors purchased 40.5 million pounds of U_3O_8e (equivalent) from U.S. and foreign suppliers during 2022."[5] Recognizing that the Department of Energy previously determined that uranium is a fuel used in commercial nuclear reactors and, therefore, not eligible for consideration under the Critical Materials Assessment, we would encourage reconsideration of this categorization in light of the Environmental Protection Agency (EPA)'s definition of fuel,[6] the substantial reliance on foreign sources of enriched uranium, and growing demand in the U.S. for reliable baseload generation including emissions-free nuclear generation.

In addition to the materials listed above, ACMA would like to highlight the continued listing of graphite (natural and synthetic), rubidium and silicon as the importance of each grows.

- Rubidium: A conductor of heat and electricity, rubidium is increasingly being considered in the development of certain energy technologies, including energy storage and solar cells. Currently at around 3,000 kilotons, the global market for rubidium is expected to reach 4,000 kilotons by 2033.[7] Furthermore, recent forecasting predicts the rubidium carbonate market will reach approximately $2.45 billion by 2035 from its current value of about $1.47 billion.[8] Yet, acquiring rubidium remains a major challenge, making its widespread utilization limited despite the potential benefit to the energy sector.
- Silicon: China's trade practices in the global polysilicon markets were clear drivers of a massive loss of the U.S. market share for silicon metals and polysilicon from $1 billion in 2011 to $107 million in 2018.[9] Production of silicon in the U.S. has reduced further since 2018 and, while the source materials (sand and quartz) are

[3] https://public-inspection.federalregister.gov/2025-01956.pdf
[4] https://www.eia.gov/energyexplained/nuclear/where-our-uranium-comes-from.php
[5] *Id.*
[6] https://www.epa.gov/rmp/definition-fuel
[7] https://www.imarcgroup.com/rubidium-market-statistics#:~:text=Global%20Rubidium%20Market%20Statistics%2C%20Outlook,quantum%20processing%20for%20innovative%20applications.
[8] http://factmr.com/report/rubidium-carbonate-market
[9] https://www.solarpowerworldonline.com/2025/07/us-launches-new-tariff-investigation-into-imported-polysilicon/#:~:text=The%20%E2%80%9Cbig%20three%E2%80%9D%20U.S.%20polysilicon,hold%20a%2093.5%25%20market%20share.

not necessarily scarce, China dominates production of silicon metal and polysilicon. In consideration of this and the Administration's pending Section 232 investigation into polysilicon and its derivatives, we encourage further analysis of this material by the Department as well.

- Graphite: ACMA membership supports the advancement of natural and synthetic graphite production in the United States. In 2022, the USGS dropped the qualifier "natural" from its listing of graphite, thereby including synthetic graphite. Synthetic graphite remains dominated by China, which holds over 65% of global production. While the United States and Japan are also producers, China's access to the production of pet coke – the precursor material for synthetic graphite production – is predominant. According to the World Bank, in 2023, China exported nearly 561 million kilograms of synthetic graphite while Japan exported 23.8 million kilograms and the US exported 33.6 million kilograms.[10] ACMA member, Phillips 66, is partnered with NOVONIX[11] – a synthetic graphite producer expanding its Chattanooga, Tennessee facility to ultimately produce up to 40,000 metric tons per year of synthetic graphite for battery materials. Phillips 66 also produces specialty coke, a precursor to synthetic graphite, at its refineries including its Lake Charles, Louisiana facility. Therefore, we appreciate that the USGS continues to include both synthetic and natural graphite as critical and urge the U.S. government to continue to do so.

ACMA supports a policy and regulatory approach that strategically advances national interests to mitigate our economy's reliance on foreign adversaries for materials key to our energy sector. ACMA thanks you for your consideration, and please do not hesitate to reach out with any questions.

Sincerely,

Sarah Venuto
Executive Director

[10] https://wits.worldbank.org/trade/comtrade/en/country/ALL/year/2023/tradeflow/Exports/partner/WLD/product/380110
[11] https://investor.phillips66.com/financial-information/news-releases/news-release-details/2021/Phillips-66-Announces-Strategic-Investment-in-NOVONIX/default.aspx