



HOUSE COMMITTEE ON  
**NATURAL RESOURCES**  
CHAIRMAN BRUCE WESTERMAN

**To:** House Committee on Natural Resources Republican Members  
**From:** Energy and Mineral Resources Subcommittee Staff, Rob MacGregor –  
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**Date:** Tuesday, June 4, 2024  
**Subject:** Legislative Hearing on H.R. 8446, H.R. 6395, and H.R. 8450

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The Subcommittee on Energy and Mineral Resources will hold a legislative hearing on H.R. 8446 (Rep. Ciscomani), To amend the Energy Act of 2020 to include critical materials in the definition of critical mineral, and for other purposes; H.R. 6395 (Rep. Curtis), “*Recognizing the Importance of Critical Minerals in Healthcare Act of 2023*”; and H.R. 8450 (Rep. Cammack), “*Phosphate and Potash Protection Act of 2024*,” on **Tuesday, June 4, 2024, at 10:30 a.m. in 1334 Longworth House Office Building.**

Member offices are requested to notify Jacob Greenberg ([Jacob.Greenberg@mail.house.gov](mailto:Jacob.Greenberg@mail.house.gov)) by 4:30 p.m. on Monday, June 3, 2024, if their Member intends to participate in the hearing.

## I. KEY MESSAGES

- While the United States Geological Survey (USGS) and the Department of Energy (DOE) each develop their own critical minerals and materials lists, homogenizing both lists—as DOE already does with the USGS Critical Mineral List (CML)—could simplify and streamline interagency coordination in efforts to determine which elements and minerals are most necessary for U.S. national and economic security. H.R. 8446 would require USGS to add any materials listed on the DOE critical materials list to the USGS CML.
- The healthcare sector depends on an array of minerals to provide patients with preventative care and administer lifesaving treatments. H.R. 6395 would add the Department of Health and Human Services (HHS) as a consulting agency for the development of the CML, which would provide USGS with additional data when considering mineral eligibility for the CML.
- Volatility in the global supply chain for commodities like potash and phosphate—two essential components of fertilizer—can lead to increased costs for farmers and consumers, decreased crop production, and greater global food insecurity. H.R. 8450 would require USGS to work closely with the Department of Agriculture to determine if any fertilizer components are eligible for designation on the CML.

## II. WITNESSES

### Panel I (Members of Congress):

- To Be Announced

### Panel II:

- **Dr. Colin Williams**, U.S. Geological Survey, Mineral Resources Program, Program Coordinator, Moffett Field, California [*All bills*]
- **Mr. Misael Cabrera**, Director, School of Mining & Mineral Resources, The University of Arizona, Tucson, Arizona [*H.R. 8446*]
- **Ms. Sally Macaluso**, Chief Procurement Officer, GE HealthCare, Waukesha, Wisconsin [*H.R. 6395*]
- **Mr. Corey Rosenbusch**, President & CEO, The Fertilizer Institute, Arlington, Virginia [*H.R. 8450*]
- **Dr. Roopali Phadke**, Professor of Environmental Studies, Macalester College, Saint Paul, Minnesota [*Minority Witness*] [*H.R. 8446*]

## III. BACKGROUND

USGS publishes and updates the CML every three years.<sup>1</sup> The most recent list was published in 2022 and consists of 50 hardrock minerals.<sup>2</sup> To be classified as “critical”, a mineral commodity must be (1) a nonfuel mineral or mineral material essential to the economic and national security of the United States; (2) produced from a supply chain that is vulnerable to disruption; and (3) serving an essential function in the manufacturing of a product, the absence of which would have substantial consequences for the U.S. economy or national security.<sup>3</sup> The 2022 CML released by the Biden administration made notable changes, including the removal of uranium, potash, and helium.<sup>4</sup> These omissions suggest that political pressure, rather than pure scientific analysis, influenced USGS’s methodology. Uranium, for example, has vital fuel and nonfuel uses—including for medical applications—and the recent bipartisan passage of a ban on Russian enriched uranium imports demonstrates the pressing need to build domestic production capabilities.<sup>5</sup> Helium, which is also susceptible to supply shocks and price volatility, is similarly

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<sup>1</sup> CRS Reports, Critical Mineral Resources: National Policy and Critical Minerals List, [https://crsreports.congress.gov/product/pdf/R/R47982/1#:~:text=Section%207002\(c\)%20of%20the,it%20places%20on%20the%20CML](https://crsreports.congress.gov/product/pdf/R/R47982/1#:~:text=Section%207002(c)%20of%20the,it%20places%20on%20the%20CML).

<sup>2</sup> The most recent list of critical minerals includes: aluminum, antimony, arsenic, barite, beryllium, bismuth, cerium, cesium, chromium, cobalt, dysprosium, erbium, europium, fluor spar, gadolinium, gallium, germanium, graphite, hafnium, holmium, indium, iridium, lanthanum, lithium, lutetium, magnesium, manganese, neodymium, nickel, niobium, palladium, platinum, praseodymium, rhodium, rubidium, ruthenium, samarium, scandium, tantalum, tellurium, terbium, thulium, tin, titanium, tungsten, vanadium, ytterbium, yttrium, zinc, and zirconium. Note that uranium, helium, and potash were removed from the original 2018 list. U.S. Dep’t of the Interior, U.S. Geological Survey, *2022 Final List of Critical Minerals*, 87 Fed. Reg. 10381 (Feb. 24, 2022), <https://www.federalregister.gov/documents/2022/02/24/2022-04027/2022-final-list-of-critical-minerals>.

<sup>3</sup> 30 U.S.C. §1606.

<sup>4</sup> *Id.*

<sup>5</sup> P.L. No. 118-62.

used in healthcare.<sup>6</sup> In February of 2022, Chairman Westerman sent a letter to DOI, requesting USGS reconsider its decision to de-list uranium and helium.<sup>7</sup>

Today, the CML is also limited by its reliance on *current* supply and consumption data to make supply risk determinations rather than being informed by projections of likely supply and consumption in the near future. The reliance on current supply and consumption data is particularly short-sighted when considering a mineral like copper, which is not on the 2022 CML. However, it is expected to see unprecedented demand increases in the coming decades. By comparison, other national evaluations, such as the DOE Critical Materials List and the National Defense Stockpile, utilize such projections. During a May 22, 2024, hearing, USGS Director Dr. David Applegate testified that USGS expects to finalize a forecasting tool for the 2025 CML.<sup>8</sup>

**H.R. 8446 (Rep. Ciscomani), To amend the Energy Act of 2020 to include critical materials in the definition of critical mineral, and for other purposes.**

H.R. 8446, sponsored by Rep. Ciscomani (R-AZ), would amend the Energy Act of 2020 to include critical materials in the definition of critical mineral.

The Energy Act of 2020,<sup>9</sup> which sets the definition of critical minerals, also directs the Secretary of Energy to develop a critical materials list that includes all minerals on the USGS CML but adds: “any non-fuel mineral, element, substance, or material that the Secretary of Energy determines: (i) has a high risk of supply chain disruption; and (ii) serves an essential function in one or more energy technologies, including technologies that produce, transmit, store, and conserve energy.”<sup>10</sup> DOE’s methodology for material determination is forward-looking, accounting for international demand scenarios and growth trajectories specifically for energy technologies. On the other hand, while USGS is working on incorporating forecasting metrics as stipulated by the Energy Act of 2020,<sup>11</sup> current criteria use historical data to determine supply risk to the U.S. economy and national security.

For example, the price of copper hit an all-time high of \$5.20 per pound on May 20, 2024;<sup>12</sup> demand is projected to increase further to fulfill the needs of the renewable and conventional energy sectors. A joint study by the University of Michigan and Cornell University found that the world must mine 115 percent more copper than has been mined in human history to fulfill

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<sup>6</sup> American Chemistry Society, Helium <https://www.acs.org/greenchemistry/research-innovation/endangered-elements/helium.html>.

<sup>7</sup> Letter from Ranking Member Bruce Westerman and Members of the Committee on Natural Resources to Secretary Debra Haaland, re: critical minerals list and Eastern European unrest, February 3, 2022.

<sup>8</sup> Hearing, Committee on Natural Resources, Subcommittee on Energy and Mineral Resources: “Examining the President’s FY 2025 Budget Request for the United States Geological Survey and the Office of Surface Mining Reclamation and Enforcement” (May 22, 2024) (testimony of Dr. David Applegate, Director, USGS).

<sup>9</sup> 30 U.S.C. §1606.

<sup>10</sup> Dep’t of Energy, Critical Minerals and Materials Program, *What Are Critical Materials and Critical Minerals?*, available at <https://www.energy.gov/cmm/what-are-critical-materials-and-critical-minerals> (last visited Nov. 20, 2023).

<sup>11</sup> 30 U.S.C. §1606.

<sup>12</sup> Trading Economics: Copper, <https://tradingeconomics.com/commodity/copper>.

global “base-need” demand by 2050—a scenario that excludes the copper-intensive needs of a renewable energy transition.<sup>13</sup>

DOE’s 2023 Critical Materials List, unlike the USGS CML, contains copper, electrical steel, fluorine, silicon, and silicon carbide.<sup>14</sup> H.R. 8446 would ensure that the materials on the DOE list would also appear on the USGS CML—just as all minerals on USGS’s list appear on DOE’s list.

*Figure 1<sup>15</sup> – Price of Copper Year-To-Date (May 2023 – May 2024)*



**H.R. 6395 (Rep. Curtis), “Recognizing the Importance of Critical Minerals in Healthcare Act of 2023”**

H.R. 6482 would amend the Energy Act of 2020, requiring the Secretary of the Interior to include the Secretary of Health and Human Services (HHS) in consultations regarding designations of critical minerals, elements, substances, and materials.

In 2022, USGS removed uranium and helium from the CML, prompting criticism from House Republicans over supply chain security.<sup>16</sup> Section 7002 of the Energy Act of 2020 specifically states that fuel materials may not be considered for either the USGS CML or the DOE Critical Materials List<sup>17</sup> However, uranium has other, non-fuel uses in the healthcare sector. For example, low-enriched uranium (LEU) is used to produce molybdenum-99 and its decay product,

<sup>13</sup> Lawrence M. Cathles and Adam C. Simon, *Copper Mining and Vehicle Electrification*, International Energy Forum (April 2024), <https://www.ief.org/focus/ief-reports/copper-mining-and-vehicle-electrification#:~:text=To%20electrify%20the%20global%20vehicle.require%20negligible%20extra%20copper%20mining>.

<sup>14</sup> Dep’t of Energy, Notice, *Notice of Final Determination on 2023 DOE Critical Materials List*, 88 Fed. Reg. 51798 (Aug. 4, 2023), <https://www.federalregister.gov/documents/2023/08/04/2023-16611/notice-of-final-determination-on-2023-doe-critical-materials-list>.

<sup>15</sup> Trading Economics: Copper (as of May 28, 2024), <https://tradingeconomics.com/commodity/copper>.

<sup>16</sup> Letter from Ranking Member Bruce Westerman and Members of the Committee on Natural Resources to Secretary Debra Haaland, re: critical minerals list and Eastern European unrest, February 3, 2022.

<sup>17</sup> Codified at 30 U.S.C. §1606.

technetium-99m.<sup>18</sup> These radioisotopes are used in over 40,000 medical imaging procedures in the U.S. daily, enabling diagnoses of cancer and heart disease, as well as analyses of organ function.<sup>19</sup> Likewise, liquid helium is used frequently as a coolant for superconducting magnets in magnetic resonance imaging (MRI) machines.<sup>20</sup> Notably, there are no substitutes for helium in MRI applications due to the ultra-low temperatures required for operation.<sup>21</sup> Copper, gold, lithium, titanium, silver, and platinum are key components in various medical technologies, equipment, and treatments, including antimicrobial touch surfaces, heart stents, pacemakers, surgical tools, antibiotics, and chemotherapy.<sup>22</sup>

Minerals vital for the healthcare sector are not immune to supply shocks. For instance, much of the world's uranium is supplied by increasingly unstable Eastern European nations like Kazakhstan, Russia, and Uzbekistan.<sup>23</sup> Russia is also a major global helium producer. While the United States also possesses significant helium reserves, the sale of the Federal Helium Reserve earlier this year could further stress global markets.<sup>24</sup>

By requiring DOI to consult with HHS, this bill will ensure that medical uses of these minerals and the ramifications that any supply disruption could have on the healthcare economy are adequately considered when evaluating CML designations.

### **H.R. 8450 (Rep. Cammack), “Phosphate and Potash Protection Act of 2024”**

H.R. 8450 would direct the Secretary of the Interior, in consultation with the Secretary of Agriculture, to reevaluate potash, phosphate, and materials necessary for fertilizer for designation as critical minerals. This bill also requires DOI to publish a report to Congress explaining why these minerals do or do not meet the necessary CML requirements and to update the CML within 60 days should USGS find that any mineral meets the criteria.

The global mineral supply shocks of the last few years have created uncertainty in the agriculture supply chains. Potash, phosphate, and nitrogen are necessary components of fertilizer.<sup>25</sup> Potash refers to fertilizer potassium, and phosphate is the rock used to produce phosphorous. Neither potash nor phosphate have viable substitutes.<sup>26</sup> According to the Mineral Commodity Summaries 2024, phosphorous and potassium are the only minerals that can effectively be used in fertilizer due to their unique benefits to plants.<sup>27</sup>

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<sup>18</sup> National Nuclear Security Administration, *NNSA's Molybdenum-99 Program: Establishing a Reliable Domestic Supply of Mo-99 Without the Use of Highly Enriched Uranium*, <https://www.energy.gov/nnsa/nnsas-molybdenum-99-program-establishing-reliable-domestic-supply-mo-99-without-use-highly>.

<sup>19</sup> *Id.*

<sup>20</sup> National Academies Press, *The Impacts of Selling the Federal Helium Reserve*, <https://nap.nationalacademies.org/read/9860/chapter/6#28>.

<sup>21</sup> USGS, *Mineral Commodity Summaries 2024*, <https://pubs.usgs.gov/periodicals/mcs2024/mcs2024.pdf>.

<sup>22</sup> National Mining Association, *Our Medical Supply Chain Needs a Strong Domestic Mining Industry* <https://nma.org/wp-content/uploads/2020/04/Minerals-and-Medical-Applications-Fact-Sheet.pdf>.

<sup>23</sup> *Id.*

<sup>24</sup> Henry Epp, *The federal government wants to sell off its helium reserve. Some industries are pushing back*, Marketplace (Feb. 21, 2024) <https://www.marketplace.org/2024/02/21/federal-government-helium-reserve/>

<sup>25</sup> OCP, *What is Phosphate*, <https://www.ocpgroup.ma/what-is-phosphate#:~:text=Phosphate%20rock%20is%20processed%20to,to%20animal%20feed%20and%20electronics>.

<sup>26</sup> USGS, *Mineral Commodity Summaries 2024*, Page 135, and 139.

<sup>27</sup> USGS, *Mineral Commodity Summaries 2024*, Page 138-139.

Although the U.S. is 91 percent import reliant on other nations for potash, Canada supplies 77 percent of U.S. imports.<sup>28</sup> Russia and Belarus together contribute 40 percent of global potash production;<sup>29</sup> and economic sanctions on Belarus and Russia in 2022 destabilized the international supply chain and increased prices.<sup>30</sup> The U.S. is only 14 percent import-reliant on phosphate rock, with domestic production concentrated in Florida, Idaho, North Carolina, and Utah.<sup>31</sup> From 1986 to 2022, the price of fertilizers and agricultural pesticides rose 250 percent, partly due to global supply variations.<sup>32</sup> In March 2023, some fertilizer prices spiked to 3.5 times higher than they were just two years before.<sup>33</sup> Price volatility in the fertilizer market can lead to decreased crop production, increased food prices, and greater food insecurity.<sup>34</sup>

#### IV. MAJOR PROVISIONS & ANALYSIS

##### **H.R. 8446 (Rep. Ciscomani), To amend the Energy Act of 2020 to include critical materials in the definition of critical mineral, and for other purposes.**

- Amends the Energy Act of 2020 to include DOE’s Critical Materials List on the USGS CML.

##### **H.R. 6395 (Rep. Curtis), “*Recognizing the Importance of Critical Minerals in Healthcare Act of 2023*”**

- Adds HHS as a consulting agency regarding the development of the CML.

##### **H.R. 8450 (Rep. Cammack), “*Phosphate and Potash Protection Act of 2024*”**

- Directs the Secretary of the Interior, in consultation with the Secretary of Agriculture, to reevaluate potash and phosphate for designation as critical minerals.
- Requires the Secretaries of Interior and Agriculture to submit a report to Congress on their methodology in determining why each mineral does or does not meet the requirements for criticality.
- Instructs the Secretaries to update the CML accordingly within 60 days of the report being submitted to Congress if potash and phosphate are deemed critical.

#### V. COST

The Congressional Budget Office has not scored any of these bills.

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<sup>28</sup> *Id.*

<sup>29</sup> Argus, US bill would make phosphate, potash critical minerals, <https://www.argusmedia.com/en/news-and-insights/latest-market-news/2549566-us-bill-would-make-phosphate-potash-critical-minerals>

<sup>30</sup> USGS, Mineral Commodity Summaries 2024, Page 138-139.

<sup>31</sup> USGS, Mineral Commodity Summaries 2024, Page 134.

<sup>32</sup> Investigate Midwest, *GRAPHIC: Fertilizer prices reach a record high* (Jan. 18, 2024) <https://investigatemitwest.org/2024/01/18/graphic-fertilizer-prices-reach-a-record-high/>

<sup>33</sup> *Id.*

<sup>34</sup> Brendan Rice and Rob Vos, *Who’s afraid of high fertilizer prices?* International Food Policy Research Institute (March 21, 2024) <https://www.ifpri.org/blog/whos-afraid-high-fertilizer-prices#:~:text=Spiking%20fertilizer%20prices%20raised%20fears,have%20not%20come%20to%20pass.>

**VI. ADMINISTRATIVE POSITION**

Unknown.

**VII. EFFECT ON CURRENT LAW (RAMSEYER)**

[H.R. 8446](#)

[H.R. 6395](#)