NATIONAL ASSOCIATION OF
Manufacturers

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April 24, 2026

The Honorable Pete Stauber
Chairman
Subcommittee on Energy and
Mineral Resources
Committee on Natural Resources
1324 Longworth House Office Building
U.S. House of Representatives
Washington, DC 20515

The Honorable Yassamin Ansari
Ranking Member
Subcommittee on Energy and
Mineral Resources
Committee on Natural Resources
1332 Longworth House Office Building
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Stauber and Ranking Member Ansari:

On behalf of the National Association of Manufacturers—the largest manufacturing trade association in the U.S., representing companies of all sizes, in every industrial sector, and in all 50 states—we write to submit information for the record ahead of the Subcommittee on Energy and Mineral Resources hearing entitled "Powering the 21st Century with American Copper."

Manufacturing in the United States requires access to natural resources, including critical minerals, critical materials, and rare earth elements, to produce products that are vital to the U.S. economy and to ensuring energy security. Capitalizing on natural resource potential is critical to both competitiveness and improved performance, contributing to increased productivity, lower costs, added value, and new products.

Copper is a critical material for manufacturing—both as a raw material input to products and industrial machinery and to the energy manufacturing, generation, and delivery that manufacturers help build and rely upon for their operations. Copper is especially vital as the U.S. continues to work to outcompete China to achieve energy dominance.

According to S&P Global, in a typical electric transformer, for instance, approximately 30% of its total mass is made from copper.[1] Additionally, copper is a critical input in many forms of energy production and distribution, including copper pipes for home gas distribution and potable water distribution, as well as copper-nickel alloys in gas and nuclear power generation and additional applications in advanced batteries.

A strong, affordable, and reliable energy generation mix is key to manufacturing success, especially as policymakers work to expand manufacturing in the U.S., including advanced manufacturing in semiconductors and AI data centers. A study of one data center facility in Chicago showed that the facility used the equivalent of 27 tons of copper for every megawatt of applied power, requiring a total of 2,177 tons of copper for construction of a single facility.[2] One global mining company estimates that copper used in data centers globally will grow sixfold by 2050, from half a million tons in 2025 to approximately 2 million tons in 2050.

[1] S&P Global, "Copper in the Age of AI: Challenges of Electrification," Jan. 8, 2026.
[2] Bruno Venditti, "Why Copper Is Critical for Data Centers," Elements, Oct. 17, 2023.

Without a robust copper supply chain in the short- and medium-terms, manufacturing in America will not be able to reach its potential. Manufacturers support the goal of expanding domestic copper production and capacity, as well as ensuring a reliable, secure, and resilient domestic supply chain—but we also recognize that this will take time, access to capital, and investment in the industry.

To support manufacturers' efforts to expand domestic copper production, the NAM recommends both domestic and international policies that will ensure domestic industry has access to this critical manufacturing input.

Domestic Reforms and Key Incentives

Reforming our nation's outdated and burdensome permitting laws and procedures is vital to any domestic efforts to secure critical minerals supply chains. America's permitting systems are holding back progress and restricting our country's ability to mine and process resources, modernize our infrastructure, support research and development, and shore up supply chains to increase American competitiveness. Specifically, to unlock expanded mine development and production in the U.S., manufacturers respectfully encourage policymakers to:

- Address unreasonably long timeframes for the consideration of land and water use permits under the Federal Land Policy and Management Act and the Clean Water Act;
- Ensure that permitting deadlines, designating a lead federal agency, page counts, and the use of categorical exclusions as required by the Fiscal Responsibility Act of 2023 are followed across agencies; and
- Work to address and enact critically needed reforms to judicial review under the National Environmental Policy Act.

Along with unlocking more access to raw materials and mining through permitting reform, the U.S. is in dire need of easing unreasonable restrictions that have caused a massive drop in domestic smelting and refining capacity over the past few decades. As China has developed low-cost smelters, the U.S. has missed opportunities to bolster domestic refining capacity.[3] The smelting and refining processes involve the removal of impurity elements from copper ore in order to prepare it for use in manufactured products. Currently, there are only two operational copper smelters in the United States. One is located in Arizona, and another is located in Utah.

For too long, permitting barriers and unworkable air regulations have made it commercially infeasible for manufacturers to invest in constructing and operating new smelters. While there have been positive developments in restarting operations at previously mothballed smelters, there remain significant regulatory and financial barriers to boosting capacity within a timely manner to avoid supply chain disruptions. Policymakers have the opportunity to take further steps to drive down costs associated with long, uncertain permitting timelines in the U.S. so that manufacturers in America can more efficiently compete with Chinese smelters.

Granting manufacturers access to critical financial tools will also help reduce the cost of mining and processing capital projects within the United States. U.S. copper mines currently in operation, which are seeing lower ore-grades and therefore lower margins given how long they have been in production, must compete with lower-cost, higher-margin mines abroad. The NAM supports the Trump administration's executive action entitled "Immediate Measure to Increase

[3] Wood McKenzie, "Securing Copper Supply, no China no Energy Transition."

American Mineral Production," which invoked the Defense Production Act to make available new loans, loan guarantees, offtake agreements, grants, investments, and other financial instruments to boost domestic mineral production. This is an important step to unlocking federal financial resources to help realize American resource dominance and make domestic mining and processing cost competitive.

Another tool that would be a game-changer for copper development in the United States is the Section 45X Advanced Manufacturing Production Tax Credit. This tax incentive is designed to incentivize the production and sale of eligible energy components and systems, including renewable energy components, inverters, qualifying battery components, and applicable critical minerals. The Section 45X credit is key to the United States' competition with China, which has dominated the manufacturing of key components like batteries and critical minerals.

Unfortunately, copper was not included as a qualifying mineral when 45X was first passed into law. The NAM would support Congress restoring permanency to critical minerals under the Section 45X incentive and would support expanding its eligibility to ensure manufacturers that produce and refine copper would be eligible to receive it.

International Policies to Bolster Copper Manufacturing in America

As previously noted, expanded domestic mineral capabilities will take time to reach fruition. To ensure the continuity and long-term resilience of mineral supply chains, manufacturers in the U.S. remain fully engaged in global supply networks, particularly with allied suppliers.

Recognizing this imperative, the Trump administration has ramped up critical mineral diplomacy, including through plurilateral negotiations on trade in critical minerals. A plurilateral agreement would both synthesize and complement domestic capability building by leveraging the collective advantages of U.S. international partners and allies at each stage of the critical mineral lifecycle—from research, development, and exploration to mining, processing, and recycling—to effectively rebalance the global critical minerals market.

Negotiations should seek to generate new pipelines for critical minerals projects overseas and secure diversified access to vital manufacturing inputs sourced globally. They also present an opportunity to address predatory marketplace distortions through the development of transparent and accurate global data on mineral production, supply, and trade flows via a mineral information clearing house.

There are a variety of critical minerals like copper, and other industrial inputs, that either cannot be sourced in the U.S. at all or cannot be sourced in sufficient quantities domestically to meet domestic demand. The U.S. copper industry's supply chain can only meet 53% of domestic demand for refined copper.[4] The remainder is met by imports of refined product copper from reliable U.S. partners, such as Chile, Canada, Peru, and Mexico. Canada and Mexico account for almost all U.S. imports of copper scrap, and Canada is the leading import source for copper ore and concentrate and copper matt, ash, and precipitate.[5]

Manufacturers in the U.S. need streamlined, low-cost access to refined copper and industrial inputs incorporating refined copper to accelerate more investment across the full manufacturing base, as well as domestic refining and smelting capacity. A plurilateral agreement would provide

[4] S&P Global, "The Future of Copper: Will the looming supply gap short-circuit the energy transition," July 2022.
[5] U.S. Geological Survey, "Mineral Commodity Summaries 2026," March 2026.

the optimal opportunity to secure preferential zero-for-zero tariff terms with allied trading partners on copper and copper derivative products. This would also provide opportunities for increased U.S. exports of a wide array of globally competitive U.S. derivative products.

At a minimum, manufacturers support ensuring that inputs critical to grow domestic capacity for extraction, processing, refining, recycling, and manufacturing can be imported from participants to the agreement without the added cost of tariffs; to that end, the NAM has proposed a "speed pass" via the U.S. Manufacturing Investment Accelerator Program. The NAM encourages policymakers to work with manufacturers to identify copper inputs, equipment, and machinery unavailable or in limited supply in the U.S. but critical for the acceleration of domestic mineral production.

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Manufacturers strongly support the Natural Resources Committee's efforts to champion reliable and secure copper supply chains to ensure manufacturers in the United States can remain competitive in global markets.

Sincerely,

Mike Davin
Senior Director, Energy and Resources Policy

Christopher Phalen
Vice President, Domestic Policy

Enclosure

A Critical Minerals Strategy for Manufacturers in America

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Manufacturers depend on reliable supply chains to make things in America. Critical minerals and the inputs made using them are necessary to produce technologically advanced industrial and consumer products made in America — including aircraft and defense systems, automotive parts and vehicles, electric grid components, robotics and industrial automation, personal electronics, and more.

While endowed with a wide array of natural resources, the U.S. has finite domestic supply of critical minerals and growing, but limited, midstream processing capabilities. Today, the U.S. is at least 50% import reliant for 33 out of 58 critical minerals—including 13 for which the U.S. is 100% dependent on imports.

88% of manufacturers report that their business would be affected if other countries limited or decreased the supply of critical minerals to manufacturers in the U.S.

NAM Manufacturers' Outlook Survey Q4 2023

China is the world's leading supplier of critical minerals. With processing capacity concentrated in just one nonmarket economy, manufacturers in the U.S. cannot risk exploitation of these supply chain vulnerabilities. The NAM strongly supports the administration's efforts to reshape and rebalance global critical minerals supply chains through comprehensive actions domestically and with international partners.

A two-pronged approach designed to address the needs of the manufacturing sector across the full critical minerals life cycle will enhance capacity at home, leverage resources abroad, and safeguard access to a diverse range of critical minerals necessary for U.S. economic strength and national security.

The U.S. relies entirely on foreign suppliers for **13 out of 58 minerals** critical to American manufacturing.

For another 20 minerals, **foreign imports make up over 50%** of U.S. supply.

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Domestic Policy Solutions

Manufacturing of advanced technologies is poised to surge globally. For manufacturers in the U.S. to maintain competitive advantage, policymakers must deploy legislative, regulatory, and administrative solutions that enhance the sector's access to critical inputs here at home.

- **Enact comprehensive permitting reform legislation to sustain project certainty** through the modernization of the National Environmental Policy Act, the Clean Air Act, and the Clean Water Act, putting an end to the cycle of litigation, unclear timelines, and overhang of uncertainty that threatens billions of dollars in investments in extraction, processing, and refining projects.

- **Restore permanency to strategic incentives like the 45X Advanced Manufacturing Production Credit for critical minerals and facilitate federal support through the Defense Production Act and the Energy Dominance Finance Office** to make it more attractive and less risky to launch extraction and processing projects in the U.S.

- **Invest in critical mineral recycling, recovery, and substitution technologies and critical mineral processing capabilities** through federal tax incentives, grants, and loans for R&D, as well as public-private partnerships. Coordinate efforts with strategically aligned countries to develop and scale mineral technologies and viable substitutes while leveraging advancements in AI and machine learning.

- **Strengthen workforce development programs to close the skills gap**, including building a modern mining workforce through grants and funding to recruit and train students in mining schools in the U.S.

Percentage of Global Production Controlled by China

Source: U.S. Geological Survey, "2026 USGS Mineral Commodity Summaries," February 2026. World Critical Mineral Stats visualization

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International Policy Solutions

Negotiate a plurilateral agreement that positions U.S. investors for success and leverages the collective advantages of international partners and allies at each stage of the critical minerals life cycle, effectively rebalancing the global minerals market.

To generate new pipelines for critical minerals projects and secure diversified access to vital manufacturing inputs sourced globally:

- **Unlock and accelerate catalytic project financing** to help mineral-rich countries convert untapped resources through expanded co-financing with partners, targeted to fill gaps in the risky discovery and development phases of critical minerals projects.
- **Obtain "first rights" commitments, extended operating licenses, and preferential offtake agreements** for U.S. investors.
- **Promote dedicated "Single Windows" to streamline and expedite investment approvals** for overseas mineral projects.
- **Secure strong investor protections and eliminate unfair advantages** by state-owned enterprises from non-market economies.
- **Negotiate zero-for-zero tariff terms** to ensure access to critical minerals and industrial inputs like machinery.
- **Create a mechanism for pooled industry demand** for minerals acutely needed by manufacturers in small quantities.
- **Accelerate innovative R&D for mineral recovery, recycling, and substitutability** through cross-government public-private collaboration.

To address predatory marketplace distortions and supercharge expansion of domestic extracting and processing capacity and the U.S. manufacturing base:

- **Create a minerals information clearinghouse** to counter non-market pricing practices through transparent global data on minerals production, supply, and trade flows.
- **Combat regulatory arbitrage** through alignment of industry-led high standards for transparency, traceability, and sustainability.
- **Address the weaponization of export restrictions** to prevent their use to distort supply and prevent market-based pricing for critical minerals.

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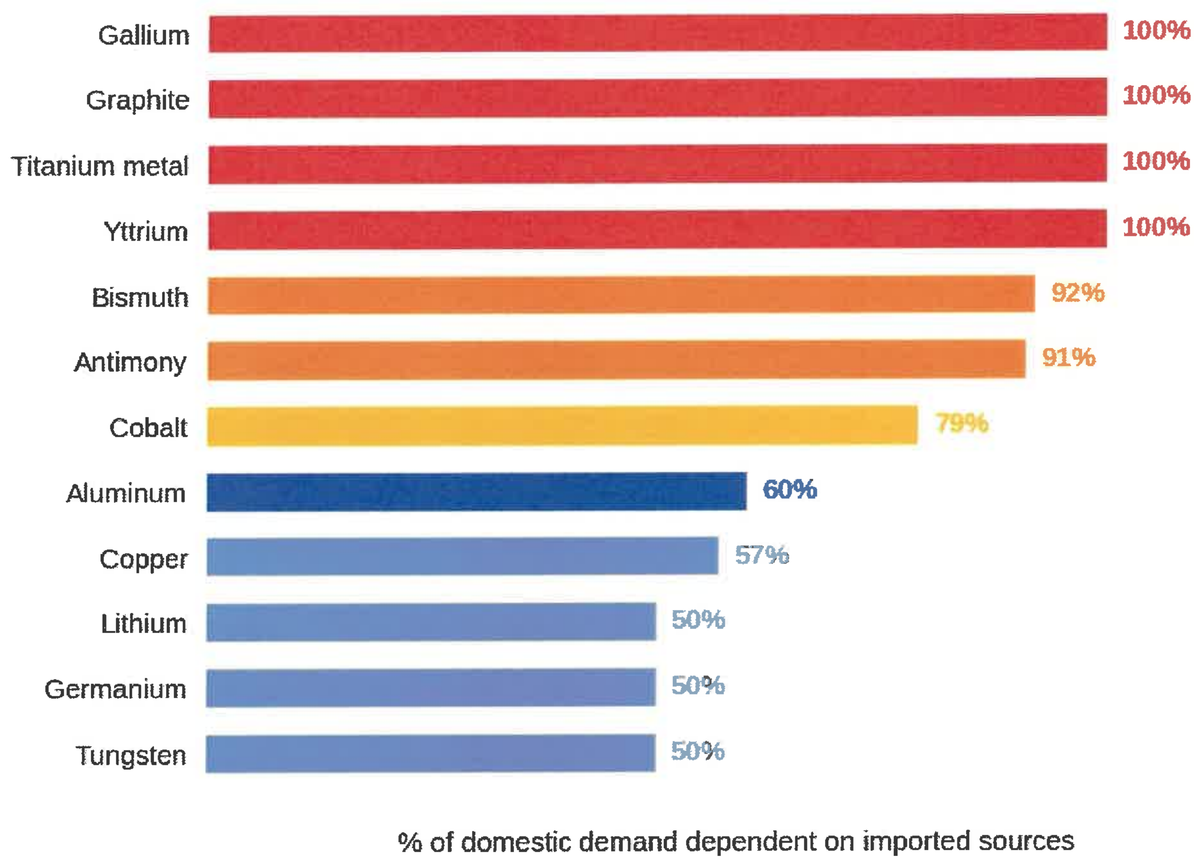
U.S. Import Reliance by Mineral



U.S. Geological Survey, "Mineral Commodity Summaries 2026," March 2026. Figure 2 - 2025 U.S. net import reliance