



RICH NOLAN  
*President & CEO*

November 16, 2021

The Honorable Bobby Rush  
Chairman  
Subcommittee on Energy  
2123 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable Fred Upton  
Ranking Member  
Subcommittee on Energy  
2123 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable Paul Tonko  
Chairman  
Subcommittee on Environment and  
Climate Change  
2123 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable David McKinley  
Ranking Member  
Subcommittee on Environment and  
Climate Change  
2123 Rayburn House Office Building  
Washington, D.C. 20515

Dear Chairmen Rush and Tonko, Ranking Members Upton and McKinley,

The National Mining Association (NMA) is the national trade association representing the producers of most of the nation's hardrock metals, coal, industrial and agricultural minerals; and manufacturers of mining and mineral processing machinery, equipment and supplies.

On behalf of our hardrock members, the NMA appreciates the opportunity to submit this letter for this morning's hearing titled, "Securing America's Future: Supply Chain Solutions for a Clean Energy Economy." NMA members produce hardrock minerals and metals on private, state and federal lands throughout the United States. As the front end of the supply chain for manufacturing, energy and infrastructure, healthcare, national security, and many other sectors, mining is an essential industry that stands able to address the new and increasing demands for raw materials the nation needs while adhering to the highest safety and environmental standards in the world.

### **Ever-increasing Demand for Minerals**

In 2020, even as COVID-19 impacted the landscape of our nation and caused so much harm in our communities, the mining industry employed an estimated 1.2 million jobs in all 50 states. Annual salaries for these workers – often in rural areas – averaged more than \$81,000, well above the national average. Further, from 2019 – the most recent numbers available – domestic mining activity generated an estimated \$18 billion in federal, state and local taxes that supported direct, indirect and induced taxes of \$41 billion.

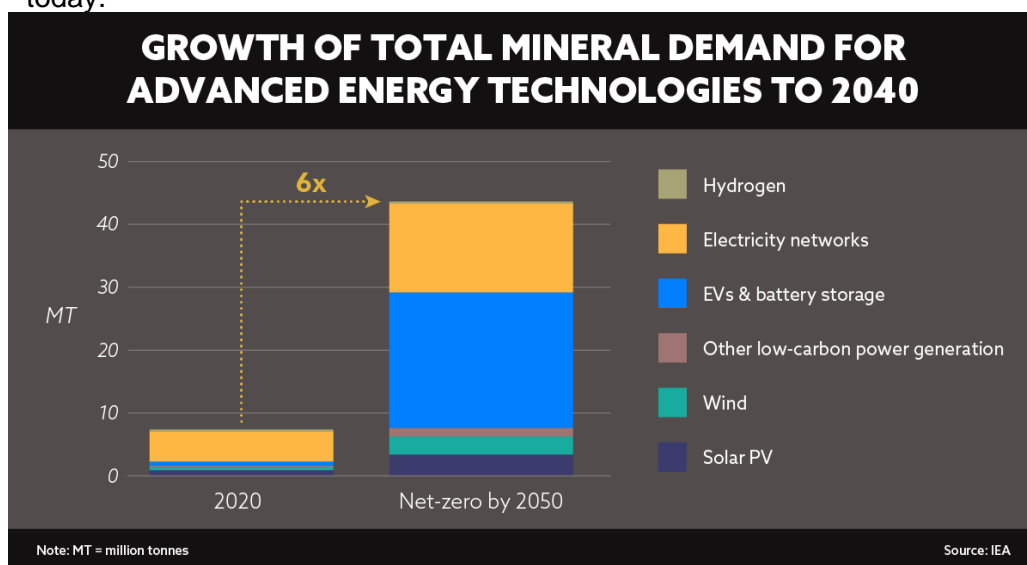
The mining industry provides the metals and minerals necessary for economic recovery and the growth, innovation and advancements required to meet the needs of tomorrow.

The Biden administration has acknowledged the importance of the domestic mining industry to the U.S. economy through the January “Made in America” Executive Order’s acknowledgment that Made in America means Mined in America, and the American Supply Chains Executive Order expressing the need to secure our mineral supply chains. This can only continue to be accomplished by making careful policy decisions today.

In 2017, the World Bank projected demand for targeted minerals would grow more than 1,000 percent due to the global focus on new energy technologies.<sup>1</sup> The World Bank’s 2020 report predicted an astounding 500 percent increase in broad categories of mineral demand to feed the needs of emerging technologies.<sup>2</sup>

More recent estimates from the International Energy Agency (IEA) and others show those estimates may have been far too conservative and that demand for some minerals could grow by more than 40 times by 2040. According to IEA:

- Lithium demand is anticipated to grow by more than 40 times by 2040, followed by graphite, cobalt and nickel at around 20-25 times;
- Copper demand for grid infrastructure and electrification more than doubles by 2040;
- Demand for cobalt is expected to be anywhere from 6 to 30 times higher than today’s levels; and
- Rare earth elements may see three to seven times higher demand in 2040 than today.<sup>3</sup>



<sup>1</sup> <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/207371500386458722/the-growing-role-of-minerals-and-metals-for-a-low-carbon-future>

<sup>2</sup> <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

<sup>3</sup> <https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>

The U.S. can lead the world in electric vehicle (EV) production and technology but to do so we must reshore critical industries and develop of a world-class mineral supply chain. By supporting American mining of metals like copper, silver, lithium and nickel, and investing in the domestic plants that make batteries for EVs, the U.S. can meet global demands for EV manufacturing and infrastructure. Our made-in-America EV future can also be a mined-in-America future with U.S. mining ready to meet much of this need while continuing to provide high-paying jobs and maintaining strong environmental protections.

- An EV made today typically uses on average 183 pounds of copper and a mile of copper wiring. By 2030 the EV sector will require 250% more copper compared to current demands.<sup>4</sup>
- EVs can use nearly twice the amount of silver compared to gasoline powered cars.<sup>5</sup>
- Global demand for nickel for EVs and other uses is expected to increase 10 times in only the next five years;<sup>6</sup>

Just as the world began to awaken to the impending exponential growth in demand, the pandemic unleashed a massive disruption of supply chains putting a renewed focus on mineral supply chain risks. With over \$6 trillion worth of mineral resources here in the United States, a highly trained and highly compensated workforce, and world-class environmental and safety standards, the U.S. mining industry can help the nation meet ever-increasing demand for minerals for electrification, infrastructure and manufacturing needs. And there is significant public support for using our own resources rather than increasing reliance on foreign sources. According to recent polling conducted by Morning Consult, 84 percent of Americans believe any “Made in America” agenda, such as the administration’s effort to win the electric vehicle revolution, should use domestically sourced minerals.

However, there is real room for improvement. To improve supply chain security, we must also have a robust domestic mineral supply chain. That includes more smelting, processing and refining capabilities in the U.S. necessary to claw back these essential processes from geopolitical adversaries like China, which controls more than 80 percent of global rare earth element production and significant mineral processing capabilities.

Nearly two decades ago, the U.S. attracted almost 20 percent of the world’s total mining investment. Unfortunately, in the time since, there has been a sharp decline in U.S. exploration investment. This is not due to lack of resources, but rather a lack of confidence in the U.S. as a viable mining jurisdiction in which to invest hundreds of millions of dollars in upfront costs due to duplicative, inefficient and costly permitting timeframes, making the

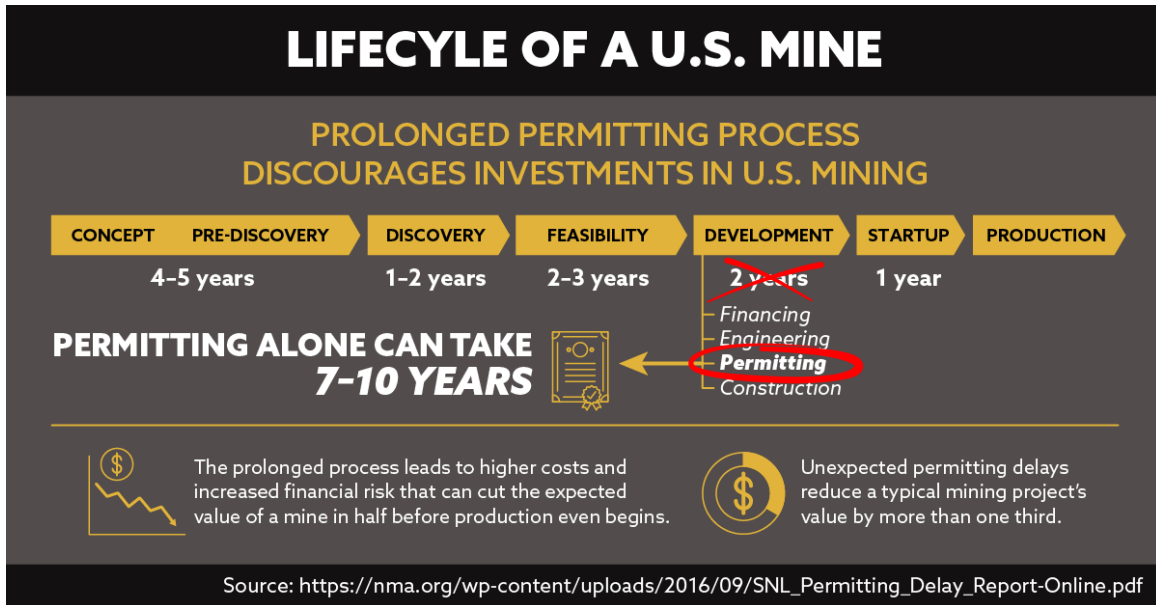
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<sup>4</sup> <http://www.visualcapitalist.com/the-looming-copper-supply-crunch>

<sup>5</sup> [www.silverinstitute.org/silver-consumption-global-automotive-sector-approach-90-million-ounces-2025/](http://www.silverinstitute.org/silver-consumption-global-automotive-sector-approach-90-million-ounces-2025/)

<sup>6</sup> [https://www.ey.com/en\\_us/mining-metals/why-mineral-supply-may-be-an-e-mobility-roadblock](https://www.ey.com/en_us/mining-metals/why-mineral-supply-may-be-an-e-mobility-roadblock)

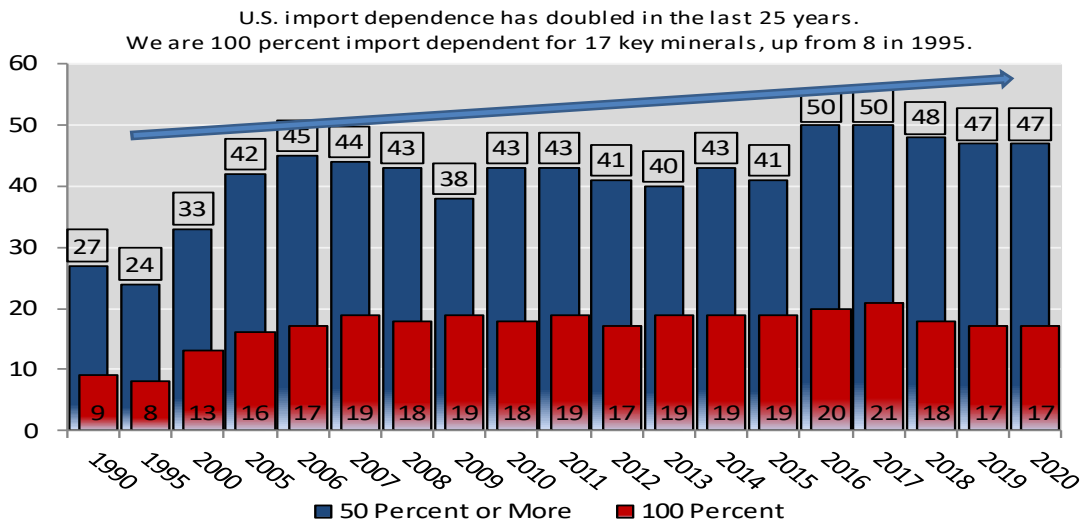
U.S. more dependent on other countries for metals. It currently takes seven to 10 years – or longer – to permit a mine in the U.S. In Canada and Australia, which have environmental standards comparable to those in the U.S., it takes two to three years to complete the same process.



The U.S. is increasingly vulnerable to supply chain disruptions and retaliation from geopolitical adversaries due to our ever-increasing reliance on imports for these essential resources. Less than half of the mineral needs of U.S. manufacturing are met by domestically produced minerals, which leaves our economy and national security at a strategic disadvantage. The U.S. Geological Survey’s annual commodity summary reports that we now find ourselves entirely import dependent for 17 key mineral resources and more than 50 percent import dependent for an additional 29. Of the 35 mineral commodities listed as essential for U.S. economic and national security, China is the top producer or top supplier for 23 of them.<sup>7</sup>

<sup>7</sup> <https://www.usgs.gov/centers/nmic/mineral-commodity-summaries>

### U.S. Rising Import Dependence



Source: USGS Mineral Commodity Summaries 1991 -2021 editions

A secure supply chain of minerals and rare earth elements is vital to key sectors of the U.S. economy. The demand for these resources will only continue to grow and it is not a question of if minerals will be mined to meet every increasing demand, but rather where they will be mined. To further support new domestic production, we need a robust domestic supply chain that includes minerals and metals sourced, refined, processed and smelted within our borders. These types of actions will attract investment, reshore essential supply chains and build the materials industrial base needed to underpin new technologies and innovation. The U.S. must remain competitive with a strong, skilled and adaptive workforce to continue to attract necessary investment to meet the future needs of the modern mining industry.

I believe there is an opportunity to work in a bipartisan manner to prioritize minerals-related policies that will enable the development of the metals and minerals that will allow our nation to achieve greater innovation, supply chain security and economic growth, while protecting the environment. Thank you for holding this hearing and allowing the NMA to submit these comments.

Sincerely,

Rich Nolan