

#### RYAN JACKSON

Senior Vice President, Government and Political Affairs

April 28, 2021

The Honorable Lloyd Austin Secretary U.S. Department of Defense 1000 Defense Pentagon Washington, D.C. 20301-1000

Re: Notice of Request for Comments on Executive Order "America's Supply Chains;" 86 FR 19230; Agency/Docket ID: DoD-2021-OS-0022; Document No. 2021-07539

# Dear Secretary Austin:

The National Mining Association (NMA) welcomes the opportunity to respond to the U.S. Department of Defense's (DOD) request for comments regarding implementation of Executive Order 14017, "America's Supply Chains" (E.O.). NMA appreciates the administration's efforts to engage closely with the private sector as it identifies policy recommendations and priorities.

The NMA is U.S. mining's advocate in Washington, D.C. and beyond. Our mission is to build support for public policies that will help this nation fully and responsibly utilize its mineral resources. Headquartered in Washington, D.C., NMA has a membership of more than 300 corporations and organizations involved in various aspects of mining. We provide a forum for these diverse industry segments to be informed, heard, and represented.

The NMA strongly supports the President's E.O. and the DOD's evaluation of supply chains for strategic materials and critical minerals. NMA is especially supportive that the E.O. calls on the DOD to update the work and build on Executive Order 13953 – Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries and Supporting the Domestic Mining and Processing Industries.<sup>1</sup>

The DOD's efforts to implement the E.O. dovetail seamlessly with its duties pursuant to the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (NDAA for FY21), which contained key sections to strengthen supply chains for strategic and critical minerals and metals required for national security. Specifically, section 848 of the law requires the DOD to first attempt to acquire strategic and critical materials from U.S. sources before seeking foreign sources. It also establishes a series

<sup>&</sup>lt;sup>1</sup> 85 FR 62539, found at <a href="https://www.federalregister.gov/documents/2020/10/05/2020-22064/addressing-the-threat-to-the-domestic-supply-chain-from-reliance-on-critical-minerals-from-foreign">https://www.federalregister.gov/documents/2020/10/05/2020-22064/addressing-the-threat-to-the-domestic-supply-chain-from-reliance-on-critical-minerals-from-foreign</a>

of policies designed to eliminate U.S. dependence on potentially vulnerable sources of strategic and critical materials. Section 849 directs DOD to review high priority goods and services, including strategic and critical materials, to develop actions that strengthen sourcing. Section 850 builds upon the recommendations of a 2018 DOD report, titled "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States" requiring the Under Secretary of Defense for Acquisition and Sustainment to submit to the Secretary of Defense additional recommendations regarding executive actions, programmatic changes, regulatory changes, and legislative proposals related to U.S. industrial policies. Finally, Section 851 requires the DOD to report by the end of June 2021 updated information regarding amounts and types of strategic and critical materials needed for national security, vulnerabilities in their supply chains, and further directs the DOD to consider the development of alternative domestic supply chains to provide for a secure supply of strategic and critical minerals and metals.<sup>3</sup>

The NMA is pleased to see DOD taking actions on both the E.O. and the NDAA for FY21 provisions along with continued bipartisan attention on Capitol Hill to protect mineral supply chains. NMA strongly supports the recent bipartisan letter to you concerning implementation of the provisions in the NDAA for FY 21<sup>4</sup> and the new bipartisan House Armed Services Task Force established to examine supply chain vulnerabilities chaired by Reps. Slotkin (D-Mich.) and Gallagher (R-Wisc.).<sup>5</sup>

In these comments, the NMA provides a unique perspective on policies to allow the U.S. to guard against supply chain disruptions. NMA's comments principally focus on element xiii of DOD's request: "policy recommendations or suggested executive, legislative, regulatory action to foster more resilient supply chains for strategic and critical materials while promoting stewardship of affected communities and the environment."

## Minerals are Essential to National Security and Defense

As an initial matter, the importance of metal and minerals provided by the domestic mining industry clearly are essential to DOD since these materials serve as the front end of the supply chain for all defense applications. Without the raw materials necessary to equip our servicemen-and-women to do their jobs, the U.S. cannot hope to maintain the commitment made to these dedicated individuals. The serious question remains, however, about where those materials will be sourced if we fail to pursue proactive policies that promote domestic mining of metals and minerals.

History has shown that innovation and adaptability is essential for sustaining a strong national defense, but the importance of a secure supply of metals and minerals should

<sup>&</sup>lt;sup>2</sup> See, <a href="https://media.defense.gov/2018/Oct/05/2002048904/-1/-1/1/ASSESSING-AND-STRENGTHENING-THE-MANUFACTURING-AND%20DEFENSE-INDUSTRIAL-BASE-AND-SUPPLY-CHAIN-RESILIENCY.PDF">https://media.defense.gov/2018/Oct/05/2002048904/-1/-1/1/ASSESSING-AND-STRENGTHENING-THE-MANUFACTURING-AND%20DEFENSE-INDUSTRIAL-BASE-AND-SUPPLY-CHAIN-RESILIENCY.PDF</a>

<sup>&</sup>lt;sup>3</sup> H.R. 6395, the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Public Law No.116-283, found at https://www.congress.gov/bill/116th-congress/house-bill/6395

<sup>&</sup>lt;sup>4</sup> U.S. Senate bipartisan letter dated April 20, 2021 enclosed with these comments.

<sup>&</sup>lt;sup>5</sup> See, https://armedservices.house.gov/2021/3/house-armed-services-committee-stands-up-acquisition-task-force

not be overlooked. These building blocks are essential components of our increasingly high-tech defense systems such as the M1A1/2 Abrams battle tank or the Stryker family of vehicles, the radar and guidance systems that enhance the capabilities of the F-35 JSF or the infrared surveillance of missile defense early warning systems. We must ensure that our military has secure and reliable access to the domestic raw materials needed for these systems.

The need for metals and minerals for national security span beyond the oft-discussed rare earth elements. Metals such as copper, lead and nickel, platinum and silver, titanium and molybdenum – all are used in military equipment, weapon systems and other defense technologies. In fact, in a report prepared for Congress over a decade ago, DOD reported it uses on the order of three quarters of a million short tons of standard materials outlined in that report per year.<sup>6</sup>

# **Permitting and Supply Chain Security**

In recent decades, the U.S. has been slow to develop and adopt policies that ensure secure access to the minerals and metals required to support manufacturing as a whole, and the defense industrial base is no exception. At the same time, countries around the world have increasingly recognized the connection between minerals, economic growth, and national security and have developed strategies to ensure timely access to the minerals that allow them to compete globally. Balanced policy incentivizes and increased permitting efficiencies would drastically help remove obstacles to new mining activities to support the availability of the metals and minerals needed for the defense industrial base.

With one of the longest permitting processes in the world for mining projects – taking on average seven to 10 years or more – the outdated and inefficient U.S. permitting process is one of the principal barriers to the domestic mining sector's ability to perform to its full potential and creates a competitive disadvantage in attracting investment for mineral development. Two decades ago, the U.S. attracted 20% of the world's mining investment. However, according to an S&P report, today that investment has been cut more than in half attracting only seven percent of the world's investment. U.S. exploration investments have gradually increased in the last few years but remain low compared to historic trends. These lengthy permitting delays also compromise the commercial viability of mining projects by increasing costs, reducing the net present value of investments, and jeopardizing financing. On average, a domestic mining project can lose a third of its value as it waits for numerous permits needed to begin

<sup>&</sup>lt;sup>6</sup> Reconfiguration of the National Defense Stockpile Report to Congress, April 2009, prepared pursuant to H.R. 1815, the National Defense Authorization Act for Fiscal Year 2006, H.R. Rep. No. 109-89, page 476, the House report to accompany H.R. 5122, the National Defense Authorization Act for Fiscal Year 2007, H.R. Rep. No. 109-452, page 444, and the Senate Report to accompany the Department of Defense Appropriations Bill, 2008, S. Rep. No. 110-155, page 189, concerning the National Defense Stockpile recommending a Strategic Materials Security Program.

<sup>&</sup>lt;sup>7</sup> See, 2017 World Mining Exploration Trend, <a href="https://www.spglobal.com/marketintelligence/en/news-insights/research/report-worldwide-mining-exploration-trends-2017">https://www.spglobal.com/marketintelligence/en/news-insights/research/report-worldwide-mining-exploration-trends-2017</a>

production. The longer the wait, the greater the chance the mine will no longer be worth the investment.<sup>8</sup>

To attract investment dollars for mining projects, the U.S. needs to provide more certainty in permitting time frames similar to other major mining countries such as Canada and Australia where required permits can generally be obtained in two to three years. Importantly, Canada and Australia are known for their rigorous environmental safeguards, including environmental reviews similar to those required by the U.S. National Environmental Policy Act. These countries illustrate that permitting efficiencies can be achieved without sacrificing environmental protection.

Delays are not a new problem, but they are getting worse. Authorities ranging from the National Academy of Sciences to the Department of Energy to DOD to international mining firms have identified permitting delays as among the most significant risks and impediments to mining projects in the U.S.<sup>9</sup> More recently, the U.S. Government Accountability Office linked the need to streamline the mine permitting process to mitigating supply risks.<sup>10</sup>

#### Solutions:

- Promote balanced policy incentivizes and increased permitting efficiencies to support supply chain resiliency and remove obstacles to new domestic mining activities; and
- Provide certainty in permitting time frames similar to other major mining countries by setting and adhering to timelines for completion of the permitting process and working under a lead agency to ensure progress tracking and increased accountability.

### **Land Access**

Access to federal lands is another significant barrier to new production or increases in current production of the metals and minerals. Twelve western states are the source of much of our nation's mineral endowment. Federal lands comprise almost 40 percent of the land area in those states, which is predominantly managed by the Department of the Interior's (DOI) Bureau of Land Management (BLM) and the U.S. Department of Agriculture's (USDA) Forest Service. Mining is not appropriate everywhere, however, half of that land is either off-limits or under restrictions for mineral development.

<sup>&</sup>lt;sup>8</sup> Permitting, Economic Value, and Mining in the United States, SNL Metals and Mining, 2015, found at <a href="https://nma.org/wp-content/uploads/2016/09/SNL">https://nma.org/wp-content/uploads/2016/09/SNL</a> Permitting Delay Report-Online.pdf

<sup>&</sup>lt;sup>9</sup> See, National Resources Council, Hardrock Mining on Federal Lands, National Academy Press (1999); U.S. Department of Energy, Critical Materials Strategy (Dec. 2010); U.S. Geological Survey USGS, the Principal Rare Earth Elements Deposits of the United States—A Summary of Domestic Deposits and a Global Perspective, 2010; Behre Dolbear, Where Not to Invest (2015).

<sup>&</sup>lt;sup>10</sup> GAO Report 16-699, Advanced Technologies: Strengthened Federal Approach Need to Help Identify and Mitigate Supply Risks for Critical Raw Materials, Dec. 2016, found at <a href="https://www.gao.gov/assets/gao-16-699.pdf">https://www.gao.gov/assets/gao-16-699.pdf</a>

Unknown amounts of resources on adjacent state and private lands are also off-limits because of federal land restrictions.

With that in mind, NMA has some concerns regarding the ambiguous goals set in the Biden administration's Executive Order 13990<sup>11</sup> to protect at least 30 percent of our lands and waters by 2030 (30x30 initiative). In particular, NMA has questions regarding the implementation of the 30x30 initiative given the fact that BLM and Forest Service are guided by a statutory-based multiple use mandate, and as such, the lands they manage must remain open to activities that support our nation's economic recovery and national security.

Specifically, the Federal Land Policy and Management Act (FLPMA) directs BLM to manage the federal lands under the principles of multiple use and sustained yield. Similarly, Congress has consistently and clearly specified in the National Forest Management Act and other statutes that the Forest Service's stewardship over the national forests must also be guided by the principles of multiple use and sustained yield. Addressing our supply chain insecurity and reliance on foreign sources of minerals will require access to federal lands. Given the vast amount of federal lands already closed to mining operations, caution should be exercised in placing additional lands off limits. NMA urges DOD to keep the importance of access to federal lands in mind as it formulates recommendations to address risks to the supply chain needs of the defense industrial base.

#### Solutions:

- Recognize that addressing our supply chain insecurity and reliance on foreign sources of minerals will require access to federal lands and that caution should be exercised when legislative and administrative efforts to block access to mining occur;
- Support U.S. Geological Survey mapping initiatives and geologically surveying of regions of the country that have high quality mineral and energy resources that remain unmapped at a useable scale; and
- Support existing multiple-use and sustained yield principles that govern Federal Land Management Agency's land management policies to support our nation's economic recovery and national security while also protecting federal lands of environmental and historic value.

### Mining Law

U.S. mining is one of the most heavily regulated industries in the world. For decades, the industry has been forced to defend itself against legislative proposals to drastically alter the Mining Law. The legislation generally has been punitive, containing gross

<sup>&</sup>lt;sup>11</sup> 86 FR 7037, found at <a href="https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis">https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis</a>

retrospective royalties, taxes on the movement of materials, duplicative environmental standards, and greater restrictions on land access. Essentially, these bills would have the result of making hardrock mining uneconomic in the U.S. These efforts embrace false assumptions regarding how modern mining is regulated and the economic benefits it provides. As examples, last Congress' H.R. 2579 and S. 1386 contain duplicative environmental provisions that ignore the more than three dozen comprehensive federal and state environmental, ecological, and reclamation laws and regulations applicable to the industry that have been continually amended to keep pace with modern mining practices.

Among the most punitive measures that would significantly impair the viability of domestic mining include:

- Conversion of the Mining Law's locatable claim system to a leasing system similar to the system for oil, gas, and coal under the Mineral Leasing Act (MLA); and
- Excessive gross royalties on new and existing mining operations.

Making currently locatable minerals leasable under the MLA will negatively impact the domestic mining industry and ignores the fact that minerals have a geology and geochemistry that are totally different from that of fossil fuels. The discovery potential for locatable minerals and metals remains vast. More exploration is required to find commercial developable deposits than for oil, gas, and coal.

Furthermore, minerals and metals require significant processing prior to having a marketable product. Oil and gas are much more readily marketable after being produced. For example, crude oil is sold in local and international markets, and the price of the product that comes out of the ground is generally readily ascertainable at the well. Gas is also often sold at the well head, in some cases without any processing. Upon initial extraction, many locatable metals and minerals have no real economic value – considerable upfront investment and ongoing operating expense must be incurred to turn them into marketable products. By introducing great uncertainty regarding the lands ultimately available for exploration and development, a leasing system will only serve to increase the U.S.' reliance on foreign sources of metals and minerals.

The oft-proposed royalty assessed on gross income also increases the economic risk of a given mining investment and acts as a disincentive to investment. As commodity prices decrease, the rate of return required to justify a mining investment increases more dramatically under a gross royalty than under a net royalty. Because the other costs of the mining operation are relatively fixed, the gross royalty takes a bigger bite out of the shrinking income pie as prices decrease. This can have a dramatic impact on whether existing mines stay open or new mines are built. A gross royalty can exacerbate industry downturns by causing a greater reduction in the cash flows of mining companies when profits are already low.

Additionally, a gross royalty raises the "cutoff point" between recoverable ore and waste and may shorten the life of a mine by causing what otherwise would be valuable minerals below the cutoff point to be lost. These lost reserves generally can never be recovered. Once a mine is closed and reclaimed, the stranded reserves are usually uneconomic to recover on their own in the future. When mines shut down prematurely, in addition to lost mineral reserves, jobs are lost, federal state and local tax revenues are lost, and business is lost by suppliers of other goods and services that support the mines. DOD should encourage the administration to oppose these types of punitive Mining Law measures that would adversely impact all domestic mining.

### Solutions:

- Oppose punitive Mining Law measures that adversely impact all domestic mining and increase U.S. reliance on foreign sources of metals and minerals;
- Support policies to increase permitting efficiencies and access to mineralized public lands; and
- Promote renewed investment in the domestic mining industry to support strong supply chains, job creation, as well as economic and national security priorities.

# Mining, Refining, Processing, and Smelting

Finally, another, equally important part of the minerals supply chain conversation is the processing, refining, and smelting of metals and minerals into functioning components for early and mid-stream manufactured goods. NMA supports a series of DOD's new technology investment agreements with rare earth element producers <u>and</u> processors.<sup>12</sup>

Unfortunately, not only does China control mineral production within its own borders along with controlling interests in mineral development across the globe, it also has significant control the refining and processing sectors. The U.S. and other countries send mined material to China for refinement and processing. This is an untenable supply chain security risk for U.S. economic and national security interests.

Feb. 1, 2021 - <a href="https://www.defense.gov/Newsroom/Releases/Release/Article/2488672/dod-announces-rare-earth-element-award-to-strengthen-domestic-industrial-base/">https://www.defense.gov/Newsroom/Releases/Release/Article/2488672/dod-announces-rare-earth-element-award-to-strengthen-domestic-industrial-base/</a>,

Dec. 9, 2020 - <a href="https://www.moderncasting.com/column/2020/12/09/dod-awards-13-million-rare-earths-funding-us-projects">https://www.moderncasting.com/column/2020/12/09/dod-awards-13-million-rare-earths-funding-us-projects</a>,

Nov. 17, 2020 - <a href="https://www.defense.gov/Newsroom/Releases/Release/Article/2418542/dod-announces-rare-earth-element-awards-to-strengthen-domestic-industrial-base/">https://www.defense.gov/Newsroom/Releases/Release/Article/2418542/dod-announces-rare-earth-element-awards-to-strengthen-domestic-industrial-base/</a>,

July 21, 2020 - <a href="https://www.reuters.com/article/us-usa-rareearths/pentagon-resumes-rare-earths-funding-program-after-review-idUSKCN24M2Z4">https://www.reuters.com/article/us-usa-rareearths/pentagon-resumes-rare-earths-funding-program-after-review-idUSKCN24M2Z4</a>,

 $\label{lem:com/news-releases/mp-materials-north-americas-only-rare-earths-producer-awarded-contract-from-dod-to-accelerate-us-production-of-critical-materials-to-support-national-defense-301045761.html.$ 

<sup>&</sup>lt;sup>12</sup> See most recent announcements:

Further, as China refines and processes host minerals from all over the globe, they are able to capture additional value from other metals and minerals extracted through these processes, many of which are critical minerals and rare earth elements, giving China additional leverage over commodity markets and a geopolitical advantage.

In a recent analysis conducted for NMA, researchers at the Thomas J. O'Keefe Institute at the Missouri University of Science and Technology compiled updated production and processing information for three principally used materials.

For example, aluminum is the first material on the DOI's list of thirty-five critical minerals. Since 1995, U.S. alumina production has fallen by 75%, U.S. smelters have closed from 22 to now seven, and the U.S. produces 1 million tons of aluminum. By contrast, China now produces 74 million tons of alumina and 37 million tons of aluminum.

When the U.S., and other countries, send domestically mined minerals to China for refinement and processing, that does not simply apply to critical minerals and rare earth elements. For example, in 1995, the U.S. produced nearly 2 million tons of copper and refined 2.3 million tons in 18 smelters and refineries. Those smelters and refineries are now down to 6. In, 2020, the U.S. produced 1.2 million tons of copper and refined less than 1 million. In 1995, China produced less than half a million tons of copper and refined 0.7 million tons. Today, China produces 2 million tons of copper and refines nearly 10 million tons. Today, U.S. zinc smelters have been cut by two thirds from 10 primary and secondary smelters to three. The U.S. produces half a million tons of zinc and refines 100,000 tons. China produces 4.2 million tons of zinc and refines 6.2 million tons.

The numbers show that the U.S. has most ceded control of mineral production and processing capacity largely because of regulatory policies that did not account for long-term supply chain vulnerabilities that have become pervasive in our economy.

### Solutions:

 Focus on reshoring, nearshoring, and developing domestic supply chains by supporting domestic mining and the production of raw minerals and materials, core competencies, and industrial processes – including refining, processing, and smelting;

Through and all of government approach promote renewed investment not only
in production but refining, processing, and smelting in the U.S. as a first priority to
finding new production and processing for strategic and critical materials
elsewhere in the world.

<sup>&</sup>lt;sup>13</sup> See, 83 FR 23295, found at <a href="https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018">https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018</a>

# A Note on Criticality

E.O. 14017 defines "critical minerals" by reference to E.O. 13953, which in turn refers to the definition contained in E.O. 13817, A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals. E.O. 13817 relies on the U.S. Geological Survey (USGS) to create and maintain a list of minerals that are "critical." The list was finalized in 2018 and designed to be updated periodically.

These comments are not intended to diminish the importance of the minerals that are included on the USGS list. However, there are many minerals that are of vital importance to our economic and national security that are absent from the list. For example, copper, silver, gold, lead, zinc, phosphate and other minerals are indispensable to our infrastructure and are essential components of consumer products, military and defense equipment, numerous manufacturing sectors, medical applications and other uses. The availability of minerals – especially minerals with widespread uses in infrastructure, manufacturing, and consumer products – is an issue of national importance because shortages of these minerals would create serious economic disruptions that would have a ripple effect throughout our economy.

If we do not treat these minerals on par with the minerals included on the USGS list, we create bifurcated minerals policies that will harm our economy, deprive Americans of the jobs that would result from domestic mining and mineral processing, and make us even more vulnerable to supply disruptions and price manipulations. Without a doubt, some of the minerals excluded from the list are major economic drivers. According to USGS, the principal contributors to the total value of metal mine production in 2020 were gold (38%), copper (27%), iron ore (15%), and zinc (6%).<sup>14</sup>

In addition, the list to some degree overlooks the reality that many metals and minerals are not only critical to manufacturing, in their own right, but they serve as hosts or gateways to other metals critical to innovation. Many high-tech metals are not the targets of primary mining projects, but rather by-products recovered from the mining of other metals and minerals. Copper, for example, serves as the gateway to molybdenum, rhenium, selenium, and tellurium. Zinc is a gateway metal to indium and geranium. These specialty metals and minerals are often byproducts of refining other metals and minerals and are essential for super-alloys, electrical components, advanced weapon systems, to mention just a few applications important to national defense.

Importantly, even USGS acknowledges the drawbacks of criticality methodologies in forecasting future supply and demand. Mineral criticality is not static, but changes over time and the "analysis represents a snapshot in time that should be reviewed and updated periodically using the most recently available data in order to accurately capture rapidly evolving technological developments and the consequent material demands." Similarly, the National Academy of Sciences (NAS), "Minerals, Critical

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<sup>&</sup>lt;sup>14</sup> USGS, Mineral Commodity Summaries 2021

<sup>&</sup>lt;sup>15</sup> 83 FR 7065, found at <a href="https://www.federalregister.gov/documents/2018/02/16/2018-03219/draft-list-of-critical-minerals">https://www.federalregister.gov/documents/2018/02/16/2018-03219/draft-list-of-critical-minerals</a>

Minerals, and the U.S. Economy," highlighted the difficulty of determining which materials are actually critical for U.S. economic and national security reporting, "the 'dynamism' of mineral importance through time means that mineral criticality at a given moment is a snapshot, rather than an enduring constant." <sup>16</sup>

Creating and utilizing a complex methodology to determine "criticality" does not provide the needed flexibility for the U.S. to respond quickly to supply constraints. A complicating factor in predicting the criticality of minerals in the future is unanticipated geopolitical developments. World events can redefine criticality in an amazingly short period of time. The growing number of minerals required for emerging technologies also highlights the difficulty of evaluating which minerals may be critical in the future. Many of these technologies rely on combinations of a variety of different minerals—not simply single commodities. As new applications are discovered, markets for mineral commodities will expand considerably along with demand. Finding a methodology nimble enough to accommodate rapidly changing technologies and world events is nearly impossible.

Electric vehicle batteries provide a useful example of how changing technologies can drive demands for different minerals. According to the International Energy Agency, for the next decade, the Li-ion battery is likely to dominate the electric vehicle market. Subsequently, however, a number of potential technologies might be able to push the boundaries beyond the performance limits imposed by Li-ion battery technology. These include the lithium-metal solid state battery, lithium-sulphur, sodium-ion or even lithium-air.<sup>17</sup> As these technologies advance, minerals not previously defined as critical may now be critical. However, given the delays in permitting new U.S. mining projects, we may again be reliant on foreign sources.

### Conclusion

During a U.S. Senate hearing on U.S. mineral production last year, Joe Bryan, (at the time with the Atlantic Council) and now Special Assistant to the Secretary of Defense and Senior Advisor for Climate testified.

"Other witnesses will detail the U.S. competitive position in the race for supply chain investment. Suffice it for me to say, the United States is getting lapped. And while China is the dominant player, we are quickly losing ground to our European allies as well. This is a problem. Our supply chain weakness has obvious economic implications. But it also creates risk for our military and, more broadly, U.S. national security." <sup>18</sup>

<sup>&</sup>lt;sup>16</sup> NAS report, p.68.

<sup>&</sup>lt;sup>17</sup> International Energy Agency, "Global EV Outlook 2020: Technology Report." June 2020, found at https://www.iea.org/reports/global-ev-outlook-2020

<sup>&</sup>lt;sup>18</sup> Testimony of Joe Bryan, Senior Fellow at Atlantic Council Global Energy Center before the U.S. Senate Energy and Natural Resources Committee, June 24, 2020, found at <a href="https://www.energy.senate.gov/hearings/2020/6/full-committee-hearing-on-the-impact-of-covid-19-on-mineral-supply-chains">https://www.energy.senate.gov/hearings/2020/6/full-committee-hearing-on-the-impact-of-covid-19-on-mineral-supply-chains</a>

However, the U.S. can change these self-imposed dynamics. We must take action to credibly address the pitfalls, duplication and inefficiencies of our existing permitting and processing systems. There is no question from multiple sources that the production of minerals will need to increase by orders of magnitude to meet the growing demand in new technologies. This applies to the defense industrial base. It is not a question of if minerals will be mined and processed to meet the ever-increasing demand. It is simply a question of where they will be mined and processed.

NMA stands ready to assist DOD's efforts on strategic and critical material supply chain security as we continue to provide the front end of the supply chain for America's economic recovery.

Should you have any questions, please reach out to me at <a href="right:

Sincerely,

Ryan Jackson

Enclosure



April 20, 2021

The Honorable Lloyd J. Austin III U.S. Secretary of Defense Department of Defense 1000 Defense Pentagon Washington, D.C. 20301-1000

Dear Secretary Austin,

The William M. (Mac) Thornberry National Defense Authorization Act (NDAA) for Fiscal Year 2021 contained many provisions addressing the importance of sourcing and supply chains for strategic and critical minerals and materials necessary to Departmental programs and national security.

Section 848 notably directs the Department of Defense (DOD) to acquire strategic and critical materials from sources within the U.S. first and to eliminate our nation's reliance on rare earth materials from China by the year 2035. Section 849 requires the DOD to review high priority goods for the purpose of developing plans to address reliable sourcing. Section 850 builds on the DOD's work to strengthen the manufacturing and defense industrial base's supply chain resiliency. Finally, Section 851 requires the DOD to update critical material information, required by the NDAA for Fiscal Year 2006, for the U.S. Geological Survey and the DOD to coordinate with relevant grant-receiving academic institutions to evaluate domestic processing, manufacturing capacity, and supply chain vulnerabilities.

President Biden's Executive Order (EO) issued February 24, 2021, concerning America's Supply Chains, directs an all-of-government approach consistent with the sourcing and supply chain directives in the NDAA for Fiscal Year 2021. We appreciate President Biden's concerns about threats to the availability of critical and essential goods, products, and services.

We believe that it is also important that the EO specifically calls on the DOD to update the work conducted pursuant to Executive Order 13953. This broad focus is also consistent with Congressional directives in the Consolidated Appropriations Act for FY21. The year-long supply chain risk assessments required in the President Biden's EO are essential to identifying risks and to ensure resilient supply chains. We look forward to new policy recommendations from the work of the EO which may include new investments and development, among other key recommendations.

We are writing to request that the DOD include an evaluation of the advantages to real-time delivery within the domestic supply chain of critical and strategic minerals and metals in addition to the requirements of the National Defense Stockpile (NDS) to best serve our nation's strategic readiness posture. We are also writing to inquire how the new year-long evaluation directed in the EO can be supported and complemented by the supply chain evaluation required under Section 851 of the NDAA for FY 2021.

We thank you for your attention to our nation's supply chains and their importance to national security. We look forward to your response and continuing to work with you on these important matters.

Sincerely,

Jim Inhofe

**United States Senator** 

Rick Scott

**United States Senator** 

Dan Sullivan

**United States Senator** 

Kevin Cramer

**United States Senator** 

Marsha Blackburn

United States Senator

Harsha Mackburn

Jacky Rosen

United States Senator