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March 16, 2023

The Honorable Steve Scalise
Majority Leader
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Bruce Westerman
Chairman
Natural Resources Committee
1324 Longworth House Office Building
Washington, D.C. 20515

The Honorable Cathy McMorris Rodgers
Chairwoman
Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Sam Graves
Chairman
Transportation and Infrastructure Committee
2165 Rayburn House Office Building
Washington, D.C. 20515

Re: AEMA Support for H.R. 1, the Lower Energy Costs Act

Dear Leader Scalise, Chairwoman McMorris Rodgers, Chairman Westerman, and Chairman Graves:

The American Exploration & Mining Association (AEMA) wishes to express our strong support for H.R. 1, the Lower Energy Costs Act of 2023. H.R. 1 is the compilation of thoughtful work by the House Committees on Energy and Commerce, Natural Resources, and Transportation and Infrastructure to develop common-sense, comprehensive reforms to help secure our mineral supply chains, improve the competitiveness of U.S. industries across our economy, and meet our nation's challenges in an environmentally responsible and just manner.

As noted in President Biden's Executive Order 14017 (America's Supply Chains), "the United States needs resilient, diverse, and secure supply chains to ensure our economic prosperity and national security," and mineral production is the first link to reaching these goals. The recent global pandemic and geopolitical events have led to an increased recognition of the importance of a strong *domestic* mineral supply chain. We believe H.R. 1 will strengthen our ability to responsibly produce the minerals needed for our national and economic security.

Who We Are and the Importance of the U.S. Minerals Mining Industry

AEMA is a 128-year-old, 1,400-member national trade association representing the mineral development and mining industry, with members residing across 46 states, 7 Canadian provinces or territories and 10 other countries. AEMA is the recognized national representative for the exploration sector, the junior mining sector, as well as mineral developers interested in maintaining access to public lands. Thus, AEMA represents the entire mining life cycle, from

exploration to mineral extraction and then to reclamation and closure. More than 80 percent of our members are small businesses or work directly for small businesses.

American miners continue to play an indispensable role in building and defending our Nation. From foundations to roofs, power plants to wind farms, roads and bridges to communications grids and data storage centers, America's infrastructure begins and ends with minerals and mining. As just one example, steel resulting from mining operations directly supplies the construction and development of roads, railways, appliances, buildings, stadiums, bridges, airports, conventional and renewable energy facilities, and other structures. Steel is used to reinforce concrete and other construction materials and 6 billion tons of steel are used across the U.S. National Highway System. Steel requires iron ore for its production, and sixty-five percent of the global zinc consumption is used to coat steel, for purposes of making it resistant to corrosion. Other metals important to steel alloys, including manganese, chromium, nickel, aluminum, vanadium, tungsten, titanium, cobalt, and niobium, are specifically identified on the U.S. Geological Survey's (USGS') final 2022 list of critical minerals.¹

Another example is copper, with its flexibility, conformity, conductivity, and resistance to corrosion, that make it an ideal and essential clean energy metal.² Forty-three percent of U.S. copper demand comes from the construction industry, as the average American home contains 439 pounds of copper. An electric vehicle (EV) uses approximately four times as much copper as a conventional car.

Infrastructure improvement and development at all levels depends on metals and mining. Beyond hard-rock mining, AEMA also represents the industrial minerals industry. Industrial minerals include any rock or mineral with economic value that is not used as a source for metals, gemstones, or energy production. Industrial minerals are classified as non-fuel minerals and differ from construction aggregates like sand, gravel, and crushed stone. Many different types of industrial minerals serve multiple uses, some of which are considered critical minerals and many of which are essential to our nation's economic and national security. The most widely used industrial minerals include limestone, clays, diatomite, kaolin, bentonite, silica, barite, gypsum, potash, pumice, and talc.

Similarly, there is no substitute for phosphorus in agriculture and in the development of our Nation's food supply. Phosphorus is essential for plant nutrition and plays a vital role in photosynthesis, energy transfer, root formation, seed formation, plant growth and improvement of the quality of fruits and vegetables. China has been the leading producer of phosphates, followed by the United States. The Society for Mining, Metallurgy & Exploration's (SME) website³ provides a deeper introduction to industrial minerals and explains why securing domestic production is essential to America's future.

There is no question that the minerals we produce are indispensable to modern society. They are also essential to fighting climate change, and for zero-emission technologies such as wind turbines, solar panels, storage batteries and EVs. As these technologies are deployed in ever-

¹ <https://www.federalregister.gov/documents/2022/02/24/2022-04027/2022-final-list-of-critical-minerals>

² According to the World Bank, copper is used in ten low-carbon energy technologies.
<https://pubdocs.worldbank.org/en/96171158887536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

³ <https://www.smenet.org>

greater numbers, the demand for minerals is skyrocketing, and our Nation must do more to keep up. The International Energy Agency (IEA) published a report at the end of July 2022 titled “Global Supply Chains of EV Batteries,” and noted that demand for EV batteries will increase from 340 GWh today to about 3500 GWh by the year 2030. To meet that demand, 50 new lithium mines, 60 more nickel mines and 17 more cobalt mines would need to come into production.⁴

Congress has taken note of this surge in demand, and through the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022, has decided – and we agree – that it is inappropriate, unwise and dangerous to rely on hostile, untrustworthy or unstable countries to supply our country’s minerals. Notably, the Inflation Reduction Act contains provisions requiring automakers to source significant portions of their EV batteries and components from domestic supply chains, or from countries with which the United States has free trade agreements. Congress has sent a clear message – **Now is the time to get serious about building a reliable mineral supply chain** (emphasis supplied). AEMA and its members stand ready to help build that supply chain right here in America.

Our members take great pride in producing the metals and other important minerals America needs for national and economic security, as well as the materials people use in their everyday lives. We are proud of our members’ contributions across the communities and regions where they operate, many of which are rural areas facing significant economic and social development challenges. Notably, the U.S. mining industry is the safest, most environmentally responsible mining industry in the world. Our members have repeatedly demonstrated that mining and protecting the environment are compatible, as mineral producers make possible the development of society’s basic needs and consistently minimize modern society’s impacts on the environment.

We Need a Reliable Domestic Mineral Supply Chain

Recent global events have exposed the United States’ supply chain vulnerabilities, highlighting the importance of an abundant and affordable supply of domestic minerals for America’s future.

The fact is, global mineral demand is skyrocketing. As noted in a report from the International Energy Agency, keeping global temperature rise to below 2 degrees Celsius above preindustrial levels will quadruple the demand by 2040 for the minerals needed to build wind turbines, solar panels, and electric vehicles. A faster energy transition — reaching net zero globally by 2050 as the Biden Administration has called for— would require critical mineral inputs to increase sixfold by 2040.

Solar panels require silver, tin, copper, and lead; wind turbines use rare earths, copper, aluminum, and zinc; electric vehicles are built with copper, aluminum, iron, molybdenum; and rechargeable storage batteries use lithium, vanadium, nickel, cobalt, and manganese. Approximately 40% of the gold now produced is used in electronics and computer chips that are needed for clean energy technologies to meet carbon emission reduction objectives to address climate change.

President Biden has promised to convert the entire U.S. government fleet – about 640,000 vehicles by 2030 – to EVs. That plan alone could require a 12-fold increase in U.S. lithium production-to

⁴ <https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChainsOfEV Batteries.pdf>

manufacture the lithium-ion batteries that power EVs, according to Benchmark Minerals Intelligence, as well as increases in output of domestic copper, nickel, and cobalt - and that's just for the U.S. government vehicle fleet. The magnitude of the minerals needed for a 100 percent EV market is even more staggering, and simply cannot be ignored.

Unfortunately, a lack of access to economically viable mineral deposits and a lengthy, inefficient federal permitting system has resulted in the U.S. being increasingly dependent on foreign sources of strategic and critical minerals. It's time that we, as a Nation, recognize this vulnerability and the vital importance of minerals to our national security, our economy, and our everyday lives. We have heard a lot over the years about the importance of energy independence, but it is equally as important, if not more so, that we are minerals independent.

In September 2016, the Government Accountability Office ("GAO") published a report titled "Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials." This report evaluated "certain metals, minerals, and other "critical" raw materials [that] play an important role in the production of advanced technologies across a range of industrial sectors and defense applications." The GAO report found several limitations in the scope of federal critical mineral programs that are inconsistent with the directives in the National Materials and Minerals Policy, Research and Development Act of 1980. (30 U.S.C. §§ 1602 – 1605), hereinafter referred to as the 1980 Act.

In the 1980 Act, Congress found:

"the United States lacks a coherent national materials policy and a coordinated program to assure the availability of materials critical for national economic well-being, national defense, and industrial production, including interstate commerce and foreign trade." (30 U.S.C. § 1601(7)).

In response to this finding, Congress declared:

"...it is the continuing policy of the United States to promote an adequate and stable supply of materials necessary to maintain national security, economic well-being and industrial production with appropriate attention to a long-term balance between resource production, energy use, a healthy environment, natural resource conservation, and social needs." (30 U.S.C. § 1602)

As important as recycling is, it cannot meet the world's burgeoning mineral demand. The IEA's report estimates that by 2040, recycling metals from spent batteries could only supply about ten percent of the minerals that will be needed.

Made in America must include "mined in America" and sourcing minerals from U.S. mines that use state-of-the-art environmental protection measures, put a premium on worker health and safety, and have financial assurances that guarantee reclamation when mining is complete.

Permitting Mines in the United States

Effective implementation of the Infrastructure Investment and Jobs Act of 2021 (also known as the Bipartisan Infrastructure Law) is dependent on the critical and strategic minerals and materials that our members mine. However, according to a 2021 report by the Wilson Center:

The United States faces a troubling scenario when it comes to the supply chain for critical minerals. Rapidly increasing demand, under-developed national resources, intense international competition, and years of neglect in this issue area place the U.S. at a distinct disadvantage vis-à-vis China in securing access to the metals and Rare Earth Elements that are vital for the energy transition and for geopolitical ambitions. [emphasis in original]

Most notably, we are failing to develop infrastructure or critical minerals projects in a timeframe that would allow the United States to achieve its ambitious clean energy objectives, reduce our reliance on China and other adversaries for critical minerals, and strengthen our critical minerals supply chains. This is largely due to lengthy permitting delays and uncertainties which place the United States at a competitive disadvantage for purposes of attracting investments in mineral development.

Notably, the permitting of comparable mining projects in Australia and Canada, which have similar environmental standards and practices to the United States, takes between two and three years, compared to the seven to ten years or more required to permit a mine in the United States. Given the comprehensive scope and effectiveness of U.S. environmental protection laws and the federal land management agencies' regulations governing mineral projects, these delays do not yield any substantive environmental benefits. However, they contribute significantly to the additional costs and risks that project proponents are required to bear. The adverse impacts stemming from permitting delays extend far beyond corporate boardrooms – as they hurt local communities that must wait for the jobs, tax revenues, and other investments and socioeconomic benefits associated with exploration and mining.

There are real world consequences caused by permitting delays. The unpredictable nature of delays, alone, can reduce a typical mining project's value by more than one-third, or as much as one-half before production even begins. The challenges of our federal environmental review and permitting processes, and how they adversely affect our supply chain of critical minerals, were recently detailed as part of the aforementioned Wilson Center report.⁵

Domestic permitting delays chill investment in U.S. mining projects. Yet, our Nation needs these investments to remain competitive and to improve our supply chain independence. According to the USGS' Mineral Commodity Summaries 2023, our country's import dependence for key mineral commodities has doubled over the past two decades, with the United States now 100 percent import-reliant for 15 of its key minerals and more than 50 percent import-reliant for an additional 36 key mineral commodities. This foreign reliance continues despite the existence of significant mineral deposits of many of these commodities within our borders. Moreover, U.S. mineral import reliance continues to increase as mineral demand from essential industries, such as energy and transportation, soars. Notably, the World Bank sees mineral demand for advanced energy technologies jumping by nearly 500 percent by the year 2050.⁶ Copper demand alone may rise as much as 350 percent by 2050, according to one estimate.⁷

⁵ https://www.wilsoncenter.org/sites/default/files/media/uploads/documents/critical_minerals_supply_report.pdf

⁶ <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

⁷ (<https://www.sciencedirect.com/science/article/abs/pii/S0959378016300802>)

AEMA wants to emphasize that it does not generally view compliance with substantive environmental protection laws and regulations to be a problem, because our members' projects are designed and operated with state-of-the-art environmental safeguards, all our mining projects are fully bonded and are carefully reclaimed when mineral exploration and mining activities are complete. Instead, it is the federally mandated permitting process – and associated litigation and administrative delays – that have caused major problems. For mine projects that involve federal permits and authorizations, the National Environmental Policy Act (NEPA) process consistently causes lengthy federal permitting delays and frequently results in subsequent litigation. In July 2020, CEQ issued a report and supporting materials (<https://ceq.doe.gov/nepa-practice/eis-timelines.html>) compiling information related to the timelines for preparing Environmental Impact Statements (EISs) from 2010 through 2018. While the CEQ's Forty Questions state that the time for an EIS, even for a complex project, should not exceed 1 year, CEQ found that, across the federal government, the average time from issuance of a Notice of Intent (NOI) to completion of an EIS and issuance of a Record of Decision (ROD) was more than 4.5 years. Only one quarter of the EISs evaluated took less than 2.2 years, and another quarter required more than 6 years.

In recognizing the challenges associated with NEPA, the impacts of litigation must be considered because lawsuits are frequently the final step of any significant NEPA process. Typically, it is the NEPA analyses and federal permits for hardrock mining projects which are litigated in federal courts. Because NEPA litigation of mining projects is so common, our members routinely anticipate at least two to three years, or more, of litigation delays when planning their proposed mining projects. While some level of litigation risk is a reality we will always have in the United States, the mining industry faces consistent and unnecessary litigation hurdles based on the fact that NEPA policies and procedures are developed and implemented on a project-by-project basis. This project-by-project approach leads to inconsistencies that make various courts the arbiters of compliance and cause confusion across the industry as to how NEPA should be applied. Costly and time-consuming lawsuits burden projects and federal agencies and hurt communities waiting for jobs, tax revenues and other project-related benefits to materialize.

Most mining companies that progress mineral exploration to the stage of starting a mine are sophisticated and quite familiar with NEPA's requirements and related timing. They also understand their environmental obligations and—through the work of preparing complete applications for a Plan of Operations and other federal permits—have identified associated environmental permitting obligations, reclamation requirements, and both mine start-up and reclamation bonding costs. Although these applicants generally anticipate the time required for the NEPA review process, there are widespread concerns about the length of time it takes federal agencies to complete the process, which creates considerable uncertainty and complicates business plans and decisions and discourages investment.

Mining companies frequently engage private consultant experts to assist in preparing the required environmental baseline studies, environmental impact analyses, and mitigation plans. The applicants and their experts are generally the most familiar with the project proposal and are required to submit technical information to support analysis of environmental, cultural, and socioeconomic impacts, but may sometimes be restricted from preparing the NEPA document. When that happens, a draft EA or EIS is likely to include factual errors or incomplete information that results in delays and additional litigation risk and cost. It is the litigation delay and cost that are the wild cards for any proposed mining project, often with the result that NEPA litigation

delays render a project uneconomic or more difficult to finance. The 2020 CEQ regulations made it clear that applicants have a substantive role in the process and may even prepare an EIS for agency review.

Specifically, CEQ's 2020 regulations provided many commonsense, procedural changes to the NEPA process that AEMA believes are essential to improving its implementation and reducing the litigation risk that inconsistency brings, while still adhering to the basic tenets of the statute that allow for meaningful public input and support the federal decision-making process. These include well-reasoned bounds on timing, with exceptions for extraordinary situations, page limits, guidelines on proponent involvement, and particularly, rules for interagency cooperation including procedures for issue resolution. They also provide for high level agency accountability for not adhering to the requirements, which is especially important given the potentially significant implications on the viability of the critical and strategic mineral projects that our members represent.

Mineral Withdrawals Must be Limited

According to the GAO, the federal government manages about 650 million acres, or 29 percent, of the 2.27 billion acres of land in the United States.⁸ Former Department of Interior Solicitor, John Leshy (now a professor at the University of California Hastings College of Law), estimated in 2021 that of the approximate 650 million acres of public lands, roughly 400 million acres are set aside for conservation and preservation purposes and are functionally off-limits to mining.⁹ He also calculated that during the period from 1980 to 2020, the acres of conservation and preservation lands grew from 250 million acres to 400 million acres.¹⁰ Federal lands have been withdrawn from mineral entry to protect a variety of "special places," from national monuments and wilderness areas to military bases. For example, the national conservation lands system already includes 35 million acres of pristine, culturally diverse and scientifically important sites that have been withdrawn from mineral entry, including: 122 national monuments, 28 of which are managed by BLM; 23 national conservation areas; 30 National Scenic and Historic Trails; 200 designated Wild and Scenic Rivers; 260 congressionally designated wilderness areas; and 491 wilderness study areas.¹¹ Congress has closed or withdrawn areas to mineral exploration in favor of other uses, including for the following:

- National Parks;
- National Monuments;
- Indian reservations;
- Various types of Bureau of Reclamation projects;
- Military reservations;
- Scientific testing areas;
- Wildlife protection areas;
- National Wilderness Preservation System and Wilderness study lands; and

⁸ GAO Letter report to Senator Tom Udall entitled "*Hardrock Mining: Availability of Selected Data Related to Mining on Federal Lands*," May 16, 2019, available at: <https://www.gao.gov/assets/gao-19-435r.pdf>.

⁹ John D. Leshy, *America's Public Lands – A Look Back and Ahead*, 67th Annual Rocky Mountain Mineral Law Institute, July 19, 2021.

¹⁰ *Id.*

¹¹ BLM website: <https://www.blm.gov/programs/national-conservation-lands>.

- Wild and Scenic River designated and study areas.¹²

More withdrawals seem likely under Executive Order 14008 in which President Biden set a goal of preserving and restoring 30 percent of U.S. lands and waters by 2030.¹³

Shrinking the available land base where mineral exploration and mining are allowed would reduce the number of future mineral discoveries that can become mines. This would ultimately increase the Nation's reliance on foreign minerals and thwart the country's goals to increase domestic production and become more mineral independent. The 1980 House Subcommittee report discussed above recognized that removing lands from operation of the Mining Law was a serious threat to mineral security:

The most precious asset and the most fundamental requirement, access to land – primarily the mineral-rich public land – in which to search for minerals could well become the scarcest component in America's mineral supply future.¹⁴

Rather than asking whether additional lands need to be withdrawn, it would be more appropriate to ask whether some previously withdrawn lands with high mineral potential should become available for mineral exploration and development to address current critical minerals availability challenges. In light of our untenable and dangerous reliance on foreign minerals, it would be in the public's best interests to determine whether certain withdrawn lands that are not part of the National Park System or congressionally designated wilderness are more valuable for their mineral resources compared to scenic, cultural, recreational or other land uses. This evaluation should consider how the modern environmental protection standards that would apply to potential mineral development would minimize environmental impacts, maximize protection of cultural resources and scenic landscapes, require reclamation when mining is complete, and enable multiple uses on these lands for mining and nearby recreational uses both during and after mining.

As one example of how mineral withdrawals play out to this nation's detriment, in 2012, then-Secretary of Interior, Ken Salazar, finalized the withdrawal of 1 million acres of land well outside Grand Canyon National Park in Arizona. Although there was already a buffer around the park boundary in which many activities, including mining, are prohibited, advocates of the withdrawal successfully argued that an additional "buffer beyond the buffer" was necessary. Similar arguments were made with the recent withdrawal of 225,000 acres in the Superior National Forest in Minnesota.

As AEMA noted in our comments on the Arizona withdrawal at the time,¹⁵ the United States was already importing 90 percent of its uranium in 2009, and northern Arizona holds "42% of the nation's estimated undiscovered uranium endowment... To withdraw this critical resource from location and entry under the Mining Law, with no environmental benefit or necessity, is short-

¹² See BLM website: <https://www.blm.gov/programs/energy-and-minerals/mining-and-minerals/locatable-minerals/mining-claims/locating-a-claim>; see also Attachment 5, "List of Select Federal Laws Amending or Affecting the Mining Law of 1872," identifying principal laws under which federal lands have been withdrawn from mineral entry.

¹³ See Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" (January 27, 2021) and the "America the Beautiful Initiative."

¹⁴ 1980 Subcommittee Report, *op cit.* page xv.

¹⁵ Northwest Mining Association (now AEMA), Comment Letter on Notice of Proposed Withdrawal, 74 Fed. Reg. 35887, October 19, 2009.

sighted and dangerous.” In the wake of Russia’s invasion of Ukraine on February 24, 2022, the United States has found the will to ban the import of all manner of Russian goods and commodities, but it is unable to wean itself off of Russian uranium imports – a troubling situation for domestic power generation and national security.

The Grand Canyon withdrawal is a real-world example of a problem AEMA has frequently raised in theory, and that is now playing out before us. The federal government placed federal lands off-limits to mineral entry that could have provided the uranium needed for power generation and national security purposes from highly regulated, state-of-the-art mining operations. The United States has often withdrawn federal public lands from mineral entry before fully understanding the mineral potential of the withdrawn lands. Although the United States had a considerable understanding of the deposits in northern Arizona, policy makers failed to fully weigh the long-term ramifications of the withdrawal, which are now coming into clearer focus. At a time when the need for carbon-free, baseload power is ramping up, some of the nuclear power industry’s best domestic sources of uranium are inaccessible. This is a self-inflicted wound. Uranium is not currently listed as a “critical mineral,” but has been designated as such in the past and given its strategic importance, should be returned to the list in the future.

AEMA and our members oppose removing lands from mineral entry, but at the very least, every time a withdrawal or land use restriction is proposed to remove federal land from mineral entry, the decision makers should develop a full understanding of the land’s mineral endowment. Otherwise, the United States runs the risk of repeating the same short-sighted land management exemplified with the Grand Canyon withdrawal, which has put much-needed uranium resources off limits to mining.

Conclusion

Since 1970, Congress has consistently and repeatedly recognized that minerals and mining are essential to all facets of our economy, society, and national defense. For example, the MMPA (1970), the FLPMA (1976), the MMRDA (1980), the Energy Act (2020), the IJIA (2021), and most recently the IRA (2022) all direct the Executive Branch agencies to respond to the Nation’s need for domestic minerals.

Unfortunately, these Congressional directives have gone largely unheeded as more lands continue to be withdrawn from mineral entry and permitting timelines, costs, and risks have become intolerable. Our risky reliance on imported minerals is a direct result of five decades of ignoring Congress’ clear directives that minerals should be mined from public lands to help satisfy the Nation’s need for minerals. Despite the urgent need to increase domestic mining and reduce our dependency on foreign minerals, today it can take 10 years or more to permit a mine.

The Departments of the Interior and Agriculture must start complying with the law; compliance is not discretionary. Through their land management agencies, BLM and the Forest Service, these departments must reverse the trend of the last 50 years during which it has become increasingly difficult to access potentially mineralized public lands and to secure the necessary permits to explore for minerals and build mines.

The findings in the IJIA that “critical minerals are fundamental to the economy, competitiveness, and security of the United States” and that “the Federal permitting process has been identified as

an impediment to mineral production and the mineral security of the United States” must result in constructive action to streamline permitting and eliminate permitting impediments.

For the aforementioned reasons, we wholeheartedly support H.R. 1, the Lower Energy Costs Act, and urge its swift passage. We look forward to continuing to work with you to ensure America has a secure and affordable supply of the minerals and metals needed for our modern society.

Sincerely,

A handwritten signature in black ink that reads "Mark D. Compton". The signature is written in a cursive style with a large, stylized "M" and "C".

Mark Compton
Executive Director