TESTIMONY OF ERIK MILITO
PRESIDENT, NATIONAL OCEAN INDUSTRIES ASSOCIATION
HEARING OF THE HOUSE NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON ENERGY AND MINERAL RESOURCES
DEEP DIVE: EXAMINING THE REGULATORY AND STATUTORY BARRIERS TO DEEP SEA MINING
January 22, 2026

Thank you, Chairman Stauber, Ranking Member Ansari, and members of the subcommittee. We appreciate the opportunity to testify about the importance of critical minerals, ocean mineral exploration, and the role of the U.S. government in forging a leadership position for the country.

Ocean mineral exploration, development, and processing presents a substantial opportunity for countries worldwide to secure vital supplies of critical minerals. Ocean minerals include shallow-water deposits, such as phosphorites and heavy mineral sands (containing titanium, zirconium, REEs), and deep-sea deposits, primarily consisting of sulfides, cobalt-rich crusts, metalliferous muds, and, perhaps of greatest present interest to industry, polymetallic nodules, with high concentrations of cobalt, lithium, manganese, nickel, tellurium, titanium, and rare-earth elements. The Cook Islands, Japan, Norway, Brazil, Sweden, Tonga, Fiji, Papua New Guinea, and other nations have already taken steps to explore for and/or develop critical minerals in their national waters. With no active exploration licenses in its national waters, the U.S. is at risk of falling behind. Simultaneously, China has firmly established itself as the dominant producer and processor of critical minerals. Ocean mineral exploration presents a very real opportunity for U.S. leadership in this space.

For more than 50 years, the National Ocean Industries Association ("NOIA") has represented the interests of all segments of the offshore energy industry. Our membership includes energy project developers and the entire supply chain of companies that make up an innovative energy system contributing to the safe and responsible exploration, development, and production of energy and resources for the American people. Our member companies are leading efforts in the U.S. and around the globe related to offshore oil and gas, offshore wind, offshore carbon capture and storage, and ocean mineral projects. The offshore energy industry has unique expertise in engineering projects at scale in the marine environment, economically producing massive quantities of energy and resources for the benefit of the American public, with safety

and environmental responsibility as core values. Given the economic and national security interests at stake, it is extremely important that we work together to advance policies that enable long-term U.S. leadership in ocean mineral exploration, development, and processing. We encourage Congress and the Administration to continue to take the steps necessary to enable research, exploration, and production of critical minerals in areas of the U.S. outer continental shelf and beyond. The advancement of the U.S. ocean mineral exploration industry will advance American prosperity through capital investment, job creation, manufacturing, technology leadership, and national security. NOIA and its members stand ready to work with policymakers to advance policies that ensure Americans can rely on an affordable and reliable energy and mineral resources system built on strong pillars of energy, economic, national, and environmental security.

Demand for Critical Minerals Is Rapidly Rising

With energy demand skyrocketing, driven by everyday needs and the rise of AI and data centers, the global economy will need a corresponding surge in production of critical minerals to support growing demand for electricity and other strategic uses. By 2030, U.S. data centers could consume over 11 percent of our electricity—quadruple today's share. In its Short-Term Energy Outlook released this month, the U.S. Energy Information Administration forecasts "electricity consumption will grow by 1% in 2026 and 3% in 2027, marking the first four years of consecutive growth since 2005–07, and the strongest four-year period of growth since the turn of the century."[1] The National Electrical Manufacturers Association predicts that U.S. electricity demand will increase by 2% annually and by more than 50% by 2050.[2] And it's not just AI and data centers. The surge in demand for electricity is also driven by consumer electrification of products like electric vehicles and heat pumps, by the reshoring of manufacturing, and by crypto mining.

As described by Daniel Yergin, Peter Orzag, and Atul Arya in the March/April volume of Foreign Affairs, the global economy is making a move toward "big shovels," precipitated by

[1] https://www.eia.gov/outlooks/steo/
[2] https://www.makeitelectric.org/wp-content/uploads/2025/04/grid-reliability-study-nema-deck.pdf

vastly more mining and processing of critical minerals that are needed to support the oncoming growth in electrical power generation and new technologies. Yergin sums up the issue extremely well:

> The International Energy Agency has projected that global demand for minerals needed for "clean energy technologies" will quadruple by 2040. At the top of the list are such critical minerals as lithium, cobalt, nickel, and graphite, as well as copper. Between 2017 and 2023 alone, demand for lithium increased by 266 percent; demand for cobalt rose by 83 percent; and demand for nickel jumped by 46 percent. Between 2023 and 2035, S&P expects demand for lithium to increase by another 286 percent; cobalt, by 96 percent; and nickel, by 91 percent…. S&P's analysis of future copper demand found that global copper supply will have to double by the middle of the 2030s to meet current policy ambitions for net-zero emissions by 2050. [3]

The Center of the American Experiment has published a report entitled "Mission Impossible: Mineral Shortages and the Broken Permitting Process Put Net Zero Goals Out of Reach." In this report, the Center emphasizes that "modern life requires mining," noting that every person in the U.S. uses "more than 40,000 pounds of materials, minerals, metals, and fuels annually and over *three million pounds* during their lifetime."[4] The report highlights how there will very likely be a substantial shortfall in key critical minerals in the decades to come. The report also discusses the U.S. federal government's role in hindering the discovery and development of crucial minerals under U.S. jurisdiction. Fortunately, the U.S. has an opportunity to adjust its policies to elevate our stature and emerge as a safe, environmentally responsible, and leading producer of critical minerals, particularly through offshore mineral exploration, development, and processing.

The Role of Critical Minerals

Critical minerals are strategically significant for our economic and national security. Critical minerals are essential for military hardware, including fighter jets and submarines, and

[3] Yergin, Orzag, and Atul, "The Trouble Energy Transition," Foreign Affairs, March/April 2025, at 115.
[4] https://files.americanexperiment.org/wp-content/uploads/2024/10/Mission-Impossible-report-2024.pdf?v=1728416598&_gl=1*oe5j5s*_gcl_au*NDAzMjY0MjMyLjE3NDQ4MDg2ODU at page 2.

they are embedded in the technology and electronics we use every day. The Energy Act of 2020 has defined critical minerals as those that are (1) essential to the economic or national security of the United States; (2) have a supply chain that is vulnerable to disruption; or (3) serve an essential function in the manufacturing of a product, the absence of which would have significant consequences for the economic or national security of the U.S. The Act grants the Secretary of the U.S. Department of the Interior the authority to maintain a list of critical minerals based upon the above definition. Once a mineral is determined to be a critical mineral, it kickstarts research by the Department of Energy to better understand the use of and alternatives to the critical mineral, as well as analysis of policies to "inform future actions that may be taken to avoid supply shortages, mitigate price volatility, and prepare for demand growth and other market shifts."

The Secretary of the Interior generally works through the U.S. Geological Survey (USGS) in the implementation of these responsibilities. The USGS has analyzed key supply chains to develop the list of critical minerals. The list, most recently revised in November 2025, currently includes sixty minerals whose supply must be assured to avoid significant consequences to the United States economy and national security:

Significant demand growth is expected for critical minerals because of their importance in everyday life. Cobalt is used in batteries, magnets, pigments, superalloys, catalysts, and medical devices. Manganese is used in steel applications, batteries, pigments, glass, aluminum applications, fertilizer, and in water treatment. Nickel is used in batteries, magnets, stainless steel, desalination plants, armor plating, and medical applications.

The current list also includes what are known as "rare earth elements," which is a collection of elements critical for advanced technologies. These elements are abundant but hard to find in mineable concentrations. China, Vietnam, Russia, and India are well recognized as dominating the global rare-earth supply. Rare earths are generally used in magnetics, lighting, metal alloys, catalysts, ceramics, glass, and military defense. Rare earths are understood to be found in hydrothermal vents, metal-rich crusts of the earth, and polymetallic nodules often located in deep-sea regions.

U.S. Policy Must Open Doors to Offshore Critical Mineral Development

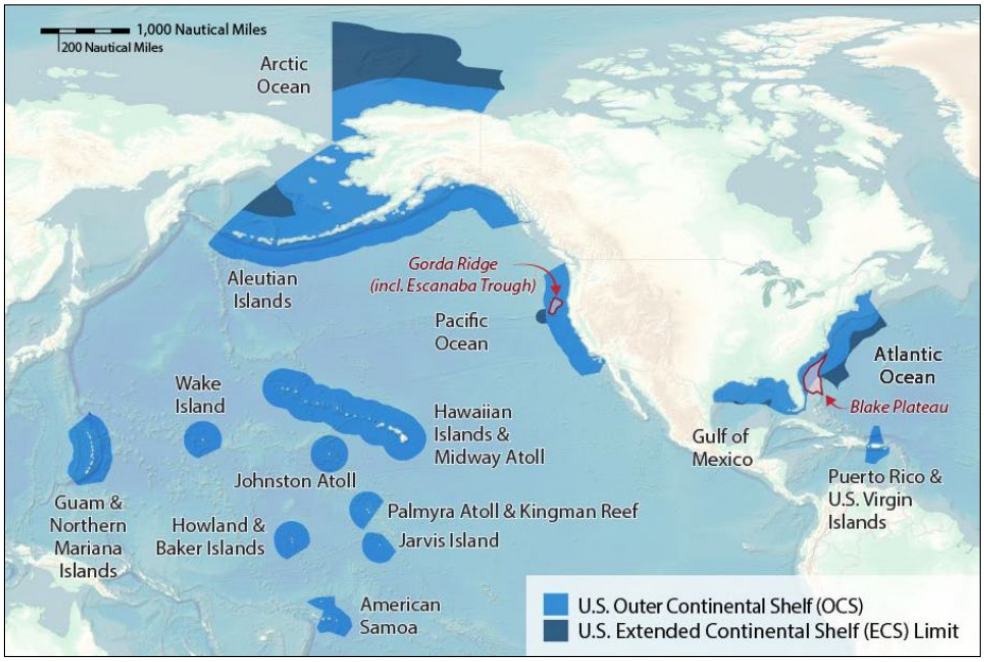
The Trump Administration has maintained a laser focus on promoting U.S. leadership in the procurement of critical minerals, including through offshore mineral exploration. On December 20, 2017, President Trump signed Executive Order 13817, "A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals," with the goal of reducing the nation's vulnerability to disruptions in the supply of critical minerals. On September 30, 2020, President Trump signed 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," which makes it the policy of the U.S. to "prioritize the expansion and protection of the domestic supply chain for minerals and the establishment of secure critical minerals supply chains." This Executive Order further directs federal agencies to allocate their resources to fulfill these purposes. On January 20, 2025, President Trump signed Executive Order 14156, "Declaring a National Energy Emergency," directing federal agencies to "facilitate the identification, leasing, siting, production, transportation, refining, and generation of domestic energy resources," including critical minerals. Finally, on April 24, 2025, President Trump took action specific to offshore mineral exploration, issuing Executive Order 14285,

"Unleashing America's Offshore Critical Minerals and Resources," framing offshore and seabed critical minerals as vital to U.S. national security, economic strength, and supply chain resilience. This E.O. emphasizes the critical importance of reducing dependence on foreign adversaries -- particularly China -- for strategic minerals used in defense, technology, and clean energy.

On February 3, 2025, Secretary Burgum, U.S. Department of the Interior (DOI), signed two orders that help advance the President's objectives for U.S. leadership in critical minerals. Secretarial Order 3417 formally instructs recovery and regulatory staff to find authorities that could facilitate offshore critical minerals development (including through permit and lease processes) as part of an emergency energy orientation. Secretarial Order 3418 reinforces DOI-wide support for expanding minerals supply chains, including offshore sources, by removing regulatory barriers, speeding permitting, and updating geological data. Both orders support the implementation of Executive Order 14285, "Unleashing America's Offshore Critical Minerals and Resources," which further directs the DOI, through the Bureau of Ocean Energy Management (BOEM), to establish expedited processes for prospecting, leasing, and permitting offshore mineral activities under the Outer Continental Shelf Lands Act (OCSLA). The offshore mineral exploration industry has responded positively to the Administration's steps to enable investment and development of critical minerals. BOEM has received requests for lease sales for critical mineral development offshore American Samoa and for heavy mineral sands and phosphorites offshore Virginia.

The U.S. outer continental shelf (OCS) is a promising region for the development of critical mineral resources to benefit U.S. consumers. The U.S. OCS includes not only those submerged lands adjacent to U.S. states, but also offshore areas adjacent to U.S. territories. This was made possible pursuant to provisions in the Inflation Reduction Act, which amended the definition of "state" in the OCSLA to include the U.S. territories. The following map is provided by the Congressional Research Service in its December 11, 2024 report, "Critical Minerals on the U.S. Outer Continental Shelf: The Bureau of Ocean Energy Management's Role and Issues for Congress," on page 2:

Figure 1. U.S. Outer Continental Shelf, Including Extended Continental Shelf



Source: CRS, modified from Bureau of Ocean Energy Management, "Outer Continental Shelf," https://www.boem.gov/oil-gas-energy/leasing/outer-continental-shelf, and using Stephen R. Hartwell et al., *Polygons of Global Undersea Features for Geographic Searches*, U.S. Geological Survey Open-File Report 2014–1040, ver. 1.1, June 2018, https://doi.org/10.3133/ofr20141040.

Notes: The OCS generally extends to 200 nautical miles (nmi) from shore. In some areas, the United States has claimed *extended continental shelf* (ECS) beyond this 200-nmi limit based on geological and geophysical data, thereby extending the outer limits of the OCS. In cases where the OCS abuts a neighboring country's continental shelf, the OCS may measure less than 200 nmi from the U.S. shoreline.

According to BOEM, many of the critical minerals and all the rare earth elements occur in the U.S. outer continental shelf:

However, according to the U.S. Geological Service (USGS), "as of June 2024, only 26.1% of the global seafloor has been mapped at high resolution." There remains an extreme lack of information on the commercial availability of critical minerals located in the U.S. OCS. BOEM had identified five categories of deposits on the U.S. OCS that may contain critical minerals, including heavy mineral sands, phosphorites, hydrothermal vents, ferromanganese crusts, and polymetallic nodules.

The DOI, through BOEM, has the authority to evaluate the U.S. OCS for mineral development potential and to lease offshore acreage for critical mineral development. BOEM has also issued regulations allowing leasing of non-oil and gas minerals, including critical minerals. BOEM's regulations cover pre-leasing activities, such as prospecting through geological and geophysical surveys, as well as leasing offshore acreage for the right to explore for and develop offshore minerals. BOEM is developing a National Offshore Critical Mineral Inventory (NOCMI) initiative to locate, identify, and understand potential critical minerals on the OCS. The Bureau of Safety and Environmental Enforcement (BSEE), also within DOI, has authority over safety and environmental requirements, including compliance with BSEE regulations and BOEM-approved plans. BOEM has not yet held any lease sales for critical minerals but has taken steps forward for lease sales offshore American Samoa and the Mariana Islands and most recently by initiating the process for a potential mineral lease sale offshore Virginia.

Concurrently, international waters, located beyond any one nation's Exclusive Economic Zone (EEZ) or 200 nautical miles from coastlines, has been the focus of extensive mineral exploration over many decades. Polymetallic nodules, which contain nickel, cobalt, copper, and manganese, found in the Clarion Clipperton Zone (CCZ) in the Pacific Ocean, are the primary focus for current-day exploration and commercial recovery efforts. The National Oceanic and Atmospheric Administration (NOAA) at the U.S. Department of Commerce has authority for ocean mineral exploration from the deep seabed beyond national jurisdiction by U.S. citizens and entities pursuant to the Deep Seabed Hard Mineral Resources Act (DSHMRA), enacted in 1980 in response to growing interest in mining valuable minerals on the deep ocean floor, particularly polymetallic nodules. NOAA delivered implementing regulations for exploration licenses and commercial recovery permits in 1981 and 1989, respectively, issuing four exploration licenses, delivering one programmatic environmental impact statement (EIS) across the CCZ and four

regional EISs subsequently. DSHMRA covers exploration (surveying, sampling, testing), commercial recovery (mining and extraction), transportation, and processing related to seabed minerals, and applies only to hard mineral resources, not oil, gas, or living resources. NOAA implements DSHMRA primarily through its Office of Coastal Management and ensures compliance with the National Environmental Policy Act through its processes. Once a license is issued, NOAA monitors compliance with license conditions, requires regular reporting, can modify, suspend, or revoke licenses, and coordinates with other federal agencies as needed. Currently, there are two active exploration licenses held by Lockheed Martin. The Metals Company and Deep Sea Rare Minerals have both confirmed they have applications under review by NOAA, and there are believed to be many more active applications under the agency's review.

On September 5, 2025, public comment concluded on a proposed rule from NOAA that would expressly allow for a consolidated license and permit review process [*Revisions to Regulations for Exploration License and Commercial Recovery Permit Applications*] in response to Executive Order 14285. NOAA found that, "over the past decades there has been a vast improvement in the technological capability for deep seabed mining, and the industry has obtained a substantial amount of information from deep seabed exploration activities and expressed a readiness for commercial recovery." NOIA commends the federal government for enabling applicants who have completed the requirements to move to commercial operations in a more streamlined manner.

America's Offshore Energy Industry is Poised to Advance U.S. Leadership in Offshore Mineral Exploration, Development, and Processing

America's offshore energy industry has decades of experience working in the marine environment, in deep water conditions, to safely and responsibly produce the energy required to fuel America and our allies. Our industry is made up of leading innovators, focusing on cutting-edge technologies, including artificial intelligence, data analytics, subsea robotics, modern geophysical mapping, and the advancement of incredible technologies to solve the greatest energy, and now mineral, challenges. From our experience, offshore safety has been enhanced through modern geosciences, leading-edge engineering design, improved subsea and remote

technologies, shared best practices, and innovative safety systems. We continuously improve the safety and environmental performance of our operations so that our workers and communities are protected and that our environmental footprint continues to decrease. Our offshore industry is well-suited for the challenges of deep-sea mining so that the U.S. can better achieve its goals of reducing dependency on China and other adversaries for supplies of critical minerals.

America's offshore energy industry has decades of experience operating in the marine environment, in both deep and shallow water, to safely and responsibly produce the energy required to fuel America and our allies. Our industry is made up of leading innovators focused on cutting-edge technologies, including artificial intelligence, data analytics, subsea robotics, and modern geophysical mapping, advancing incredible technologies to solve the greatest energy challenges. From our experience, offshore safety has been enhanced through modern geosciences, leading-edge engineering design, improved subsea and remote technologies, shared best practices, and innovative safety systems. We continuously improve the safety and environmental performance of our operations so that our workers and communities are protected and heard, and our environmental footprint is continually minimized.. An emerging and durable U.S. offshore mineral exploration industry will drive capital investment, job growth, STEM education, and technology development for the benefit of all Americans. Our industry will also be central to our strategic efforts to compete with China in the global race for securing critical mineral resources.

As well-stated by Yergin, Orzag, and Arya, "China already has a dominant position in mining and predominant position in processing of minerals into metals essential for renewable energy infrastructure. It accounts for over 60 percent of the world's rare-earth mining production (compare with nine percent for the United States) and more than 90 percent of the processing and refining of rare earths. It produces 77 percent of the world's graphite, processes 98 percent of it, and processes over 70 percent of the world's lithium and cobalt and almost half of the copper."[5] While China's lead in the land-based mining and processing is clear – it does not lead in deep sea mineral development – this is the opportunity that exists for the US today through the encouragement and support for this emerging industry and our own American companies. The

[5] Yergin, Orzag, and Atul, "The Troubled Energy Transition," Foreign Affairs, March/April 2025, at 116.

President has made clear the urgency of addressing this increasingly dire situation. In addition to U.S. onshore mining regions, the U.S. OCS and the high seas provide major opportunities for our country to prospect for and develop the critical minerals that we will need for decades to come.

Regulatory Certainty is Requisite for Advancing U.S. Leadership in Ocean Mineral Exploration, Development, and Processing

Public policy will play a central role in the ability of the U.S. to establish a leadership role in global ocean mineral exploration, development, and processing. We urge Congress to continue working with the Administration to advance a regulatory framework for domestic waters that is predictable and science-based, including leasing and time-bound permitting pathways that provide open access to exploration, regulatory certainty, and security of tenure for companies satisfactorily executing permitted activities. This further includes: clearly defined lease terms, conditions, and timelines; transparent lease sale processes; and revisions to overly broad protected designations applied to unmapped or unexplored areas of the OCS that unnecessarily restrict access. In international waters, this includes: increased clarity in application review and issuance processes, supporting developers as this emerging industry transitions to commercial production, and modernizing DSHMRA to the present day.

NOIA is a big supporter of permitting reform to boost confidence for investing in U.S.-managed and approved projects. We support the SPEED Act, and its provisions for streamlined permitting, judicial reform, and permit certainty. Whether through the legislative or regulatory process, the ocean mineral exploration industry similarly needs the certainty of a swift, clearly defined permitting, oversight, and approval process to build the confidence to invest.

In the global economy, regulatory uncertainty across any business sector can inevitably push investment to other regions of the world. This is particularly true for an emerging industry like ocean mineral exploration. U.S. companies, already developing world-class mapping, robotics, and environmental technologies, are encouraged by the Administration's steps to advance ocean exploration opportunities. We need to work together to build a durable framework for sanctioning projects so we can avoid losing that investment to other regions, thereby risking the permanent offshoring of intellectual property and high-value jobs.

We urge the federal family to construct a framework that streamlines permitting and eliminates inconsistencies and duplicative requirements. We have the opportunity to become the global technology leader in ocean mineral exploration, development, and processing. It will thus be vital to ensure that the regulatory framework provides companies with the flexibility to research, develop, demonstrate, and deploy new and advanced technologies. In summary, we encourage Congress, DOI, and the DOC to work together to establish appropriate policies and ensure that sufficient resources are available to the American offshore minerals industry.

Conclusion

We appreciate the subcommittee's efforts to assess our country's growing needs for offshore critical minerals and the government's role in meeting that demand. We encourage Congress and the Administration to continue to take the steps necessary to enable research, exploration, development, and processing of critical minerals in areas of the U.S. outer continental shelf and the high seas. NOIA and its members stand ready to work with policymakers to advance policies that ensure Americans can rely on an affordable and reliable energy and mineral resources system built on strong pillars of energy, economic, national, and environmental security.