FACT SHEET | AMERICAN SECURITY, ECONOMY & TRADE, ENERGY & ENVIRONMENT

SETTING THE BEARINGS FOR A ROCKY ROAD AHEAD

December 18, 2025

WHY THE FUTURE OF THE UNITED STATES DEPENDS ON RARE EARTH ELEMENTS

On October 10, 2025, the Chinese Communist Party (CCP) introduced new export controls for both critical minerals[1] (CMs) and rare earth elements[2] (REEs). The CCP implemented a new rule that specifies exports that are used in U.S. military equipment, or those with dual-use applications for military assets, even those containing as little as 0.1% of REEs, are prohibited from being sent to the United States. In response, the Trump Administration moved to secure the United States' national security interests by proposing a 100% tariff on all Chinese goods by November 1, 2025. After Chairman Xi and President Trump met at APEC 2025, China announced that it would delay its export controls for a year, with the U.S. agreeing to do the same on its tariffs.

Following the President's trip to Asia, and the signing of various deals and frameworks with Asian countries (including China), the message from the United States is slowly becoming clearer: the winner of the race for CMs and REEs will define the future of the global economy. Integral to various parts of America's supply chains, most Americans are unaware of how these elements are used and how reliant America has become on foreign entities for their refinement and importation. The United States should continue to implement a strong CM-national security strategy, or else we will be forced into continued dependence on the CCP.

DEALS ALREADY STRUCK BY THE TRUMP ADMINISTRATION

The Trump Administration has made positive strides in the REE space by striking deals with various countries. Through these deals, the United States has been able to gain access to new heavy REE pipelines, bypassing Chinese middlemen. The dealmaking began in April 2025 with the U.S.-Ukraine minerals deal and continued with the framework for a deal between the United States, Rwanda, and the Democratic Republic of the Congo to expand U.S. foreign trade and investment within the mining sectors of both countries.

Recently, Australian Prime Minister Anthony Albanese and President Trump signed a monumental deal, that solidified U.S. and Australian collaboration on REEs, which included a joint investment of over $3 billion in crucial supply chain projects. Following this, several additional deals and frameworks were signed during the president's recent trip to Asia, including Malaysia, Japan, and China. Negotiations resulted in China delaying the previously mentioned rare earth export controls, while the Japan and Malaysia deals focused on ensuring supply chain security by bolstering infrastructure through investment. President Trump's proactive actions are securing global supply chains with allies, encouraging investment in necessary infrastructure, and reestablishing geographical influence that had been ceded to China over the past four decades.

GLOBAL RESERVES OF RARE EARTH MINERALS

REE reserves are distributed across many nations, some of which are not reliable partners. China holds the largest share (33.8%) of global REE reserves, amounting to 39 million metric tons. The next four nations—Brazil, India, Australia, and Russia—hold 28.8% of global reserves, with Australia being the only non-Chinese-aligned trading partner of the U.S. possessing a share of that magnitude. This reserve

[1] "Any mineral, element, substance, or material designated as critical by the Secretary of the Interior, acting through the director of the U.S. Geological Survey."
[2] "The rare-earth elements (REEs) are 15 elements that range in atomic number from 57 (lanthanum) to 71 (lutetium); they are commonly referred to as the "lanthanides." Yttrium (atomic number 39) is also commonly regarded as an REE because it shares chemical and physical similarities and has affinities with the lanthanides. Although REEs are not rare in terms of average crustal abundance, the concentrated deposits of REEs are limited in number."

distribution presents substantive concerns for U.S. market accessibility, given that BRICS is a growing collective that has been historically aligned with Chinese economic interests abroad.

Region / Country	Approx. Rare Earth Reserves (million metric tons)	Percent of Global Reserves (%)
China	39	33.8
Brazil	10.7 (estimated including smaller holders)	16.2
Other Countries	1.5	8.2
India	44	5.3
Australia	21	4.4
Russia	6.9	2.9
Vietnam	5.7	2.7
African Continent	1.9	1.6
United States	3.8[3]	1.5
Greenland (Denmark)	3.5	1.2
Global Total	**130**	**100**

Note: Data sourced from USGS "Mineral Commodity Survey, 2025" [4]

CHINA UNILATERALLY DOMINATES RARE EARTH MINERALS PROCESSING

Today, China refines 92% of the world's REEs supply and controls nearly 100% of rare earth magnet manufacturing. Furthermore, China maintains a monopoly on the rare earth refining industry, controlling 99% of the world's refining capacity for heavy REEs. More recently, the CCP has reorganized the country's mining industry, merging several mining companies under the state-controlled China Rare Earth Group, which, as of June 2025, controlled ~60-70% of the country's heavy REE output. Under Chapter 1 of the Company Law of the People's Republic, the CCP has broad authority to govern domestic industries according to the interests of the national government, including the organization of China's domestic mining companies.

The REEs listed below are critical to the U.S.'s GDP, insofar as they are critical to U.S. supply chains and economic interests. The products that the metals are used to produce—i.e., samarium for guided missiles, lutetium for petroleum refineries, and terbium for electric lamp bulbs and parts—if withheld, would have severe economic and national security implications. The U.S. Department of the Interior (USDOI) released a report in August 2025 that outlined which minerals and REEs are critical to the US economy.[5] USDOI determined the value of each mineral by running scenarios that weighed the potential disruptions their absence would have on American trade. The highest ranking REEs, in terms of weighted net decrease in the U.S. GDP, are below:

Mineral Commodity	Probability-Weighted Net Decrease (USD)	Statistical Risk Category
Samarium	4.50 billion	High
Lutetium	2.06 billion	High

[3] "This number does not reflect potential to "mine" coal ash deposits for REE"
[4] "Reserves refers to already identified REEs that can be extracted using technology and resources presently available. It does not account for other unknown / currently unextractable deposits. It is also important to note that China has disproportionately invested more in mining compared to other countries and therefore retains a higher percentage of global reserves. "
[5] "These GDP numbers should be taken as a baseline as the minimum of what can happen in a worst-case scenario. Further tertiary consequences, such as the collapse of whole industries as a result of price hikes and increased industrial costs, are not accounted for in these numbers. "

Terbium	1.81 billion	High
Dysprosium	1.62 billion	High
Gadolinium	758 million	High
Yttrium	295 million	High
Thulium	180 million	Elevated

Note: Data sourced from USGS "Methodology and Technical Input for the 2025 U.S. List of Critical Minerals—Assessing the Potential Effects of Mineral Commodity Supply Chain Disruptions on the U.S. Economy, 2025"

A DWINDLING DOMESTIC WORKFORCE AND PERSISTENT PERMITTING PROBLEMS

While the United States has remained relatively competitive in mining REEs, the bottleneck comes at the refining step; most of our domestic output is sent to China for processing. Part of this issue stems from a shrinking workforce. Projections by the Energy Information Administration (EIA) indicate that by 2029, more than half of the mining workforce (~221,000) will have retired and need to be replaced.

Meanwhile, U.S. institutions awarded only 300 degrees in the mining and mineral engineering field in 2023—a 3.85% decrease from the previous year. Even as new mining projects have opened in the United States, these degrees have seen an overall decrease of 39% since 2016. With an impending labor shortage in the manufacturing sector, 2.1 million positions are predicted to go unfilled by 2030. Large gaps in the workforce have a significant impact on mining and refining, as well as downstream jobs, such as the manufacturing and assembly of REE magnets used throughout the defense industry.

Issues also exist within the current permitting processes. Today, the average time to construct a mine in the United States, from discovery to extraction, is 29 years. Despite the U.S. having more advanced and economical separation technologies, China can accomplish the same process in half the time. Much of that derives from misguided domestic policy, like the National Environmental Policy Act (NEPA). NEPA's expansive permitting requirements can add 7–10 years to approvals for critical mineral separation and refining facilities, which in turn can also lead U.S. mining projects to lose more than one-third of their value. NEPA's procedural ambiguities, and overly burdensome requirements, need to be addressed to preserve economic viability and ensure domestic capacity keeps pace with strategic needs.

CONCLUSION

The combination of China's domination of REE stockpiles and refineries, coupled with domestic labor and manufacturing shortcomings, creates challenges for future U.S. positioning in the global market. Most importantly, Americans lose out on opportunities for growth and prosperity here at home. President Trump is taking decisive steps to close the gap with China by negotiating new REE deals with our partners, but more must be done to curb China's rise and its use of export controls against the United States.