



RARE ELEMENT RESOURCES

**Testimony of Ken Mushinski
President and Chief Executive Officer**

Rare Element Resources (RER)

before the

House Committee on Small Business

“Securing America's Mineral Future: Unlocking the Economic Value Beneath Our Feet”

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Introduction

Chairman Williams, ranking Member Velazquez, and esteemed members of the Committee. Thank you for the opportunity to address the Committee on an issue of vital importance to our nation and world today, securing critical minerals, specifically rare earths, for our nation’s defense and high-tech industries and supporting small business in meeting that need.

My name is Ken Mushinski, and I am the President and Chief Executive Officer of Rare Element Resources. We are a Wyoming-based publicly traded company with a critical rare earth deposit and a state-of-art innovative rare earth processing and separation demonstration plant in Wyoming. Since our founding in 1999, we’ve invested over \$170M in developing our USGS recognized¹ world-class rare earth deposit and proprietary separation technology.

Executive Summary

I believe you are all well-versed in why Rare Earth Elements (REEs) are critical components in modern technology, essential in everything from smartphones and electric vehicles to wind turbines and defense systems. REEs are enablers to the evolution of our high-tech world, and vital to our American defense systems. It is also widely known that China dominates rare earth mining and processing and is taking deliberate actions to control the entire manufacturing space for all systems and components that utilize rare earths for downstream products. This has created an untenable national economic and security scenario.

Small businesses like Rare Element Resources (RER), including the other companies testifying before you today, have unique technologies and the potential to innovate and contribute to domesticating the REE supply chain; from mine to magnets. However, our small companies face specific challenges and have distinct needs that must be addressed to ensure a sustainable domestic REE supply chain.

The rare earth market is a niche market that presently has very limited domestic capability and capacity. RER has been and is currently working to correct this longstanding strategic issue

¹ The U.S. Geological Survey (2010) mineral resource map located at <https://www.usgs.gov/centers/gggsc/science/airborne-geophysics-rare-earth-element-deposits-agreed>

affecting our defense, energy, technology and transportation sectors that has left our country at the mercy of Chinese market dominance and manipulation.

As an example of the obstacles faced by RER and others in the critical minerals industry, RER completed its resource confirmation and commenced National Environmental Policy Act (NEPA) permitting of the Bear Lodge Project, located within the Black Hills National Forest, in 2011 and spent over \$30 million progressing our NEPA assessment. This long and tedious process, which was protracted and often delayed due to red tape and lack of government resources, culminated in the publication of a draft EIS in January 2016. This multi-year, millions of dollar effort was ultimately derailed through Chinese market manipulation whereby the supply market was flooded with Chinese mined and processed REE products such that the prices of rare earths worldwide bottomed out. As a result, RER's, as well as other REE development companies', access to capital quickly disappeared, ultimately resulting in cessation of operations – due solely to a lack of funds and project economics.

Realizing we could not compete with the predatory Chinese market dominance, RER, in conjunction with its now majority shareholder (an affiliate of General Atomics), pivoted to proving and demonstrating our novel and proprietary REE separation technology so that we, and potentially other domestic rare earth companies, would not be reliant on China to separate the rare earth concentrates produced here in the U.S. Our goal is to not only compete with China in rare earth production, but to also create a path for processing and separation that is economically and environmentally superior- adhering to all U.S. environmental regulations while supplanting the environmentally detrimental and costly steps in conventional Chinese technology.

With that challenge in front of us, RER, with partial funding from the Department of Energy (DOE) and the state of Wyoming and supported by the Wyoming state and Federal delegations, has constructed and will soon begin operating our \$66M+ demonstration plant that is intended to prove RER's separation technology, already confirmed in pilot scale testing, on an industrial scale.

Even with the expected success from the demonstration plant operations, without additional support and funding from the government, RER and other innovative small businesses face monumental hurdles. Being a small business attempting to establish a first-of-its-kind commercial business in a niche market, that is unattractive to larger established mining enterprises, access to capital is paramount. Access to capital requires a certain level of market stability, a stability that is thwarted by Chinese influence. RER and our peers cannot afford to invest hundreds of millions of dollars to commercialize our projects only to have our efforts and investment undermined by Chinese adversarial market manipulation.

Small businesses like RER unfortunately find themselves in a paradox whereby investors, and potential industry supply chain partners, require certainty in the markets and yet this is not possible with the ongoing threat of Chinese market interference.

We believe that addressing this nascent market's unique challenges requires a multi-faceted approach involving market stabilization through engaging in government offtake agreements, creating incentives for private capital, unlocking grants for commercialization efforts, and regulatory streamlining. By meeting these needs, policymakers and industry stakeholders can unlock the potential of small business and create a secure, resilient and sustainable REE supply chain, right here in America.

Chinese Dominance of the REE Market Impedes Market Entry

As many now realize, China's dominance and manipulation of the rare earth extraction, processing and separation, and permanent magnet production is an existential risk to our modern world. It is estimated that China controls 60–70% of global REE mining and over 85–90% of processing capacity including 99% of Heavy REE processing. Heavy rare earths, including dysprosium, are a small market, but of the utmost importance to our modern defense systems.

This dominance allows China to influence global prices, making it risky for competitors to invest, and as we have seen just recently, export controls by China strains the U.S. and its allies' ability to produce and progress our technology. Just last week, a report was published on the extent to which Beijing's curb on rare-earth magnet exports furthered choked off supplies to the world. This report confirmed that exports of RE magnets from China fell 74% in May from a year earlier, a move that was felt throughout the automotive, electronics and the defense industries². Even if China determined in its sole judgment that they would commence exports again, the Chinese REE prices can be, and have before been, set artificially low due to subsidies, state support, or strategic dumping, which undercuts new entrants, and prevents global market competition.

Permitting Obstacles Further Impede a Diversified REE Market

Because REEs are typically found in low concentrations, mining them often requires large-scale operations and complex chemical processing. With these challenges, environmental regulations make REE projects costly and slow to permit due to the stringent and often inefficient U.S. permitting framework. These are realities that China is simply immune to as they are not held to these same environmental standards. It is noteworthy that over the prior few months, however, several initiatives for more efficient permitting paths for critical mineral projects have been designed and/or advanced here in the U.S. Those programs include FAST-41 and Transparency Project designation through the Permitting Council. We are appreciative of these efforts driven by the current Administrations' executive orders, and we believe it is a step in the right direction to bring critical mineral projects, like our Bear Lodge Rare Earth Project, online in a more reasonable timeframe. However, these actions alone will not allow a project like Bear Lodge to

² Miao and Feng (2025, June 19) "China Flexes Chokehold on Rare Earth Magnets as Exports Plunged in May" Wall Street Journal.

reach commercialization due to lack of financing options, influenced by the opaque Chinese led rare earth market.

Rare Earth Supply and Demand Uncertainty Discourages Investment

While highly strategic, REE markets are relatively small in volume when compared to mainstream commodities such as iron, copper, or precious metals (thousands of tons per year vs. millions of tons per year) and therefore of less interest to major mining companies, which prefer to focus on lower-risk, high-volume commodities. As a result, REEs are seen as too small and too high of a market risk, and better suited for specialized nimble and innovative small companies.

Further, demand for REEs is largely concentrated in the high-tech industries, which makes growth projections speculative. Unlike other commodities, there is no transparent market and trading system, which results in investor concern about demand growth. Combined with the risk and cost of a new supply or the inherent impact on that supply by Chinese dominance and predatory practices, these factors make investments riskier for public companies focused on stable returns – especially small business in need of capital investment.

These market challenges are worsened by high capital needs and long payback periods for critical minerals projects. REE projects often require hundreds of millions to over a billion dollars to become sustainable, covering exploration, development, mining, processing, separation, and sometimes downstream manufacturing. The uncertain offtake pricing adds to the risk. Most critical minerals projects take 10–15 years from exploration to production, tying up investor capital with uncertain returns and complicating offtake agreements. Customers like EV makers or magnet manufacturers are hesitant to commit to unproven suppliers, increasing investor risk without confirmed agreements.

Recommendations to Support a Domestic Secure REE Industry

This begs the question, how does America protect its interest in these *seeds of technology*?

The key to progressing a domestic rare earth supply chain, from mine to magnets requires market certainty. We believe that certainty can be obtained through government-backed, bankable, long-term contracts, possibly to establish a strategic reserve of critical REEs. Additionally, government grants or guarantees tailored to small businesses in the REE sector to progress a project are vital. RER would not be in our current position today, with our processing and separation demonstration plant, without the support of the DOE and the state of Wyoming, all of which we are extremely appreciative. However, the leap from demonstration to commercialization is perilous for small businesses given the increased financial burden in technology and commercial advancement.

Additional low-interest loans aimed at resource exploration and technological innovation should also be supported and backstopped by the government; as well as creating tax incentives during development and operations to reduce the financial pressures of capital-intensive development projects.

On the regulation side of the process, compliance with the environmental permitting process creates another challenge for small businesses. Although critical to protecting our environment, mining and permitting processes have become overly burdensome with layers of scrutiny and multiplication of efforts between agencies. The U.S. must streamline permitting processes to reduce costly bureaucratic delays and create a regulatory framework that balances environmental concerns with economic viability, an issue that we appreciate has not gone unnoticed by this Administration.

Further, due to the global REE market China domination, small businesses struggle to find buyers for their products or to secure long-term contracts with large manufacturers. It is imperative that market access programs to connect small businesses with international buyers be encouraged, and U.S. suppliers be showcased not only to our internal market but also to our allied nations.

Finally, in a sector where efficiency and sustainability are paramount, small businesses must adopt cutting-edge technologies for REE extraction and, as RER has, separation. We believe additional funding for the development of cost-effective and eco-friendly technologies must be urgently progressed. RER knows first-hand, that although open calls for funding opportunities are released quite consistently, and responsive white papers are being submitted by us and other like companies, the years pass, and letters are then received stating there is “strong interest” by agencies like the Department of Defense and the DOE, but we are told in those letter that there is “no funding”. The drive to invest seems to be there, yet the fuel to get it done doesn’t seem to exist.

Conclusion

In conclusion, RER encourages Congress to pursue policies and support funding to support small businesses that are innovating and progressing a secure, domestic rare earth supply chain:

- **Government purchasing to establish strategic stockpiles.** Government purchasing through long-term contracts with price stability mechanisms will bring clarity to the investment community on not only demand but also pricing that supports commercial economics. This will drive private investment into the REE small business sector.
- **Government grants unlocked for industry innovation.** DOD and DOE funding is limited, even though open calls for projects are being released. The funding to progress small business innovation and progress on REE projects should be supported such that those initiatives can come to fruition. Unlocking the funding through the

DOD and DOE grant and financial assistance award programs that are backlogged can meaningfully move small businesses toward commercialization.

- **Government guarantees to encourage private investment and loans.** Similar to purchasing agreements, government guarantees will entice private investment and unlock capital to small businesses.
- **Permitting reform to bring surety to project timeliness.** Permitting reform to streamline duplication and red tape will bring certainty to the permitting and licensing process for small REE companies which in turn will drive investment, while reducing the extraordinary cost of permitting.

We believe these types of initiatives will help to remove the significant market obstacles and barriers to progress for small businesses engaged in the REE supply chain so that collectively, we become the solution to the very real and present danger to our nation's defense and high-tech industries.

I am honored to be here today to share with you RER's unique and intimate experience as a small business in the rare earth industry and I look forward to addressing any questions. Thank you.