Questions for the Record

Responses from Jonathan Rowntree, CEO, Niron Magnetics

House Select Committee on Strategic Competition Between the United States and the Chinese Communist Party
Hearing: "Predatory Pricing: How The Chinese Communist Party Manipulates Global Mineral Prices to Maintain Its Dominance"

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Representative Gus M. Bilirakis (FL-12)

Question 1

China continues to dominate key aspects of the critical mineral supply chain, which can create significant challenges for industries when those supply chains face disruptions. For example, China controls 80% of the global critical minerals processing capability and roughly 90% of the processing capability for rare earth elements. And recently, such disruption came to fruition when China decided to restrict certain rare earth exports, which are integral to industries like automotive manufacturing. What should a comprehensive plan from Congress and the Administration to build out domestic critical mineral supply chains look like? In cases where some minerals are not geographically located in the U.S., how can the U.S. better leverage its allies and rely less on foreign adversaries like China?

RESPONSE:

A comprehensive plan must pursue two parallel strategies: strengthening conventional rare-earth processing capacity and accelerating the development of alternative technologies such as iron nitride magnets that eliminate foreign dependencies entirely. The United States' reliance on China for rare earth magnets is so great that it is imperative that the federal government adopt a solution-neutral approach that supports both conventional methods and alternatives equally. Together, they create the diversified, resilient supply chain that American industry requires.

The United States currently consumes approximately 50,000 tons of permanent magnets annually. By 2040, that figure will at least double to 100,000 tons. Current U.S. domestic production remains negligible, in the single-digit tonnage range. Meeting this demand requires multiple approaches, including domestic rare-earth processing, allied partnerships, and alternative technologies using abundant domestic materials.

For minerals that America possesses in abundance, federal policy should prioritize domestic production. Iron ore from Minnesota's Mesabi Range and nitrogen from

atmospheric air can produce high-performance permanent magnets without any rare earth inputs. Iron nitride technology already serves approximately two-thirds of permanent magnet applications, and that figure will rise significantly as production scales. These domestically sourced alternatives deserve federal support equal to that provided for rare earth processing initiatives.

For minerals that America lacks in sufficient quantity, allied partnerships with Australia, Canada, Japan, South Korea, and European nations can reduce dependence on adversarial nations. American alternative magnet technologies could also be licensed or partnered with allied manufacturers to create multiple secure production nodes outside Chinese control. This diversifies the global magnet supply chain beyond simply relocating rare earth processing to allied countries, which still leaves those supply chains vulnerable to foreign anti-competitive tactics.

Concrete federal actions should include:

- Federal procurement preferences for domestically manufactured permanent magnets. Federal purchasing power validates American technologies and signals to private manufacturers that investing in domestic production will deliver reliable customer supply chains.
- Defense Production Act Title III authority extended to alternative magnet technologies alongside rare-earth processing initiatives. The Pentagon's investment in rare-earth magnets addresses short-term defense requirements, but American manufacturers across the automotive, energy, medical, and consumer sectors also need access to a secure domestic supply.
- Technology-neutral tax incentives that level the competitive playing field for all domestic permanent magnet manufacturers, regardless of input materials. Tax benefits for domestic producers should apply equally to conventional and alternative chemistries.
- Establishment of low-cost loan programs to help bridge the capital-intensive gap between pilot production and commercial scale. As this Committee has reported, such financing is critical for domestic manufacturers to reach volumes that compete with Chinese capacity.
- Lastly, tariff exemptions for manufacturing equipment purchased from allied trading partners, including Germany, Japan, and South Korea, would reduce capital costs for domestic producers.

Question 2

China successfully executed a long-term strategy to dominate the global critical mineral market, however this did not happen overnight. If the U.S. wants to elevate itself as a global leader in critical minerals, this will likewise take time and investment and require a multi-faceted approach. How long will it take for the U.S. to build out domestic critical mineral

supply chains capable of supplying the U.S. market? What are some of the reasons for such a long timeline? What role could efforts like permitting reform play in speeding up the build out of domestic supply?

RESPONSE:

The timeline for building domestic critical mineral capacity depends on which approach the United States pursues.

Conventional rare earth processing requires decade-long development cycles. Rare earth magnet production involves five distinct processing stages: mining, separation, metallization, alloy production, and magnet manufacturing. Each stage represents a capital-intensive chokepoint with complex technical requirements and significant regulatory considerations. New mines alone can take 10 to 15 years from discovery to production.

Alternative magnet technologies using abundant domestic materials can deploy far faster. Niron Magnetics broke ground in September 2025 on a facility that will produce up to 1,500 tons of iron nitride permanent magnets by 2027. This timeline of 18 to 24 months from construction start to commercial production demonstrates that breakthrough technologies can compress deployment schedules because they bypass the complex upstream processing that rare earth magnets require.

The reasons for lengthy rare earth development timelines include mineral exploration and reserve verification, environmental review and permitting, construction of mining and processing infrastructure, development of separation and metallization facilities, and qualification of materials for demanding applications. Each stage creates potential delays. A significant benefit of iron nitride's alternative chemistry is that it does not pose the same environmental challenges as neodymium permanent magnet manufacturing. Unlike the mine-to-magnet pipeline, iron nitride production faces no mining or processing permitting constraints and their attendant delays. Our 1,500-ton facility does not meet federal requirements for a Title V Air Permit. However, our planned 10,000-ton facility will require federal permitting that could take 18 to 24 months; streamlining this process while maintaining appropriate environmental safeguards would accelerate our ability to scale domestic production.

Permitting reform could accelerate rare-earth mining and processing by reducing project approval timelines for projects that meet environmental standards. However, permitting reform alone cannot address the fundamental challenge: rebuilding a five-stage processing infrastructure that China spent three decades consolidating. Alternative technologies that eliminate processing stages can reach commercial scale faster, regardless of permitting timelines, because they face fewer regulatory touchpoints and require simpler facility configurations.

A comprehensive strategy should pursue both approaches simultaneously. Permitting reform accelerates conventional rare-earth development, while federal support for alternative technologies delivers domestic supply on shorter timelines. The combination provides near-term resilience while building long-term capacity.

Question 3

China uses unfair practices like aggressive subsidization to undercut prices and dominate foreign markets. We've seen China use this playbook in other areas such as the auto industry. Can you discuss the ways in which China uses unfair practices to dominate critical mineral supply chains, and likewise uses those strategies to impose leverage over industries like automotive and battery manufacturing? What can the United States to do compete against an adversary who doesn't play fair? And using the auto industry as an example, how can we maintain affordability for customers as we shift supply chains away from China?

RESPONSE:

China's strategy for dominating critical mineral supply chains follows a clear pattern: subsidize domestic producers to enable below-cost exports, maintain artificially low prices until foreign competitors exit the market, then consolidate control over global supply. Beijing executed this strategy over three decades with rare-earth magnets, accepting losses while driving Western production capacity to near zero. Once China controlled 90 percent of rare earth processing and magnet manufacturing, rising to over 98 percent for the most strategic heavy rare earths, Beijing gained the ability to restrict supply, control prices, and impose leverage over any industry dependent on these materials.

The automotive sector illustrates this vulnerability. Every new vehicle—whether internal combustion or electric—requires substantial quantities of permanent magnets for traction motors. When China restricted rare-earth exports in April 2025, targeting heavy rare-earth metals like dysprosium and terbium rather than neodymium, American automakers faced immediate production disruptions. At least one U.S. carmaker idled assembly lines while executives scrambled for export licenses from Chinese officials. European manufacturers shut down factories entirely. These restrictions targeted precisely the materials that enable magnets to operate at the elevated temperatures required by automotive applications.

The global pricing of rare-earth magnets cannot be undercut by materials that foreign governments do not control. Iron nitride manufacturing costs derive from commodity iron ore and atmospheric nitrogen, both domestically sourced and processed entirely within the United States. A foreign government can manipulate rare-earth prices, but it cannot manipulate the price of Minnesota iron ore or the air we breathe. This structural advantage makes alternative technologies resistant to price fluctuations that have bankrupted Western rare-earth competitors over the past three decades.

At commercial scale, iron nitride magnets can be priced competitively with neodymium magnets. Our cost structure is based on commodity inputs and American labor, making pricing fundamentally more stable and predictable than rare earth magnets, which remain vulnerable to potential market manipulation. Supply chain disruptions, emergency stockpiling, and diplomatic scrambles for export licenses impose hidden costs that consumers ultimately bear. Domestic production provides price stability alongside supply security.

Question 4

Given China's proven price manipulation to dominate global critical minerals supply chains, do you think Chinese auto manufacturers pose an existential threat to the U.S. auto market? Should the United States allow Chinese auto and battery companies to manufacture here in the United States?

RESPONSE:

Niron Magnetics is a permanent magnet manufacturer, not an automotive or battery company. Questions about whether to allow Chinese vehicle and battery manufacturers to operate in the United States involve complex considerations of industrial policy, national security, and economic competitiveness that fall outside our expertise. Congress, the administration, and the U.S. automotive and battery manufacturing sectors are better positioned to consider those questions.

Representative Jill Tokuda (HI-02)

Question 1

Would it help to develop a secure critical minerals industry if the Commerce or Energy departments had authority to offer financial assistance—including offtake agreements and price guarantees—for critical minerals focused on the commercial market, just like the Defense Department does for the national security market?

RESPONSE:

Extending the financial assistance authorities that the Defense Department currently uses for national security applications to commercial markets would significantly accelerate the development of a secure domestic critical minerals industry.

The Pentagon's recent investments in rare earth processing demonstrate the effectiveness of federal offtake agreements and price guarantees. These commitments reduce

investment risk by ensuring that production will find buyers at predictable prices, enabling companies to secure financing for capital-intensive facilities.

However, defense applications represent only a fraction of American permanent magnet consumption. U.S. industries consume roughly 50,000 tons of permanent magnets annually, with demand projected to at least double by 2040 as electric vehicle production and robotics applications accelerate, data center construction increases, renewable energy installations expand, and aerospace systems modernize. The automotive, energy, medical device, and consumer electronics sectors that drive the majority of this demand currently have no access to federal financial assistance comparable to that available to defense programs.

Commerce or Energy Department authority to offer offtake agreements and price guarantees for commercially focused production would fill this gap. Such authority would enable federal agencies to support domestic magnet manufacturers serving private sector customers, accelerating the scale-up of production capacity that benefits the entire American economy.

The structure matters as much as the authority itself. Financial assistance should remain technology-neutral, supporting both conventional rare earth processing and alternative magnet technologies using abundant domestic materials. Diversification strengthens supply chain resilience more effectively than concentration in any single approach.

Question 2

Would you agree that creating domestic demand by prohibiting U.S. companies from purchasing rare earths from China—unless no alternative domestic or allied source is available—could be a good way to ensure U.S. industry and investors have the stability they need to invest?

RESPONSE:

Creating reliable domestic demand is essential for attracting the capital investment required to build American production capacity. However, the current state of U.S. magnet manufacturing argues for a different approach than prohibition.

American magnet production capacity remains in the single-digit tonnage range. Allied European and Australian output is similarly low. U.S. industries consume roughly 50,000 tons of permanent magnets annually. Prohibiting American manufacturers from purchasing Chinese magnets while domestic capacity is so low could disrupt production across the automotive, aerospace, medical device, and consumer electronics sectors. The gap between current supply and demand is simply too large to bridge through restrictions alone.

Rather than prohibition in the near term, the federal government should focus on technology-agnostic financial incentives and low-cost loans to nurture this young industry and help it scale. This approach builds domestic capacity without disrupting the manufacturers who depend on magnet supply today.

Specifically, I would recommend:

- Technology-neutral tax incentives that apply to all domestically manufactured permanent magnets, regardless of input materials and chemistries.
- Low-cost loan programs that help domestic producers bridge the capital-intensive gap between pilot production and commercial scale. As this Committee has reported, such financing is critical for American manufacturers to reach volumes that compete with Chinese capacity.
- Federal procurement preferences that create demand signals strong enough to justify private sector capital investment in scaling production.
- Offtake agreements and price guarantees from the Commerce or Energy departments for commercially focused production, comparable to what the Pentagon provides for national security applications.

These supply-side investments would accelerate domestic capacity development. As American production scales, graduated sourcing requirements could then be introduced with realistic timelines that align with growing domestic supply. The sequence matters: build capacity first, then shift demand toward domestic sources as that capacity becomes available.

Question 3

Would you support restricting the export of high-value e-waste, much of which goes to China, to provide a feedstock for recycling of rare earth magnets?

RESPONSE:

Recycling makes a meaningful contribution to supply chain resilience for rare-earth magnets. End-of-life motors, hard drives, and electronic devices contain recoverable rare earth materials that currently flow to China for processing. Retaining this feedstock domestically provides raw materials for American recyclers while reducing the waste stream that benefits Chinese processors.

In December 2025, the European Commission said it will begin restricting exports of rare earth waste in an effort to secure critical raw materials necessary for automotive, consumer, and defense manufacturing. The U.S. should consider a similar action. However, the U.S. industry for recycling rare earths is not at a scale—either technologically or commercially—to actually capitalize on such a restriction.

If implemented, export restrictions should target the specific waste streams with the highest rare-earth content, including permanent-magnet motors, hard disk drives, and industrial equipment with substantial magnet volumes. Overly broad restrictions could burden recyclers handling materials with minimal strategic value.

Domestic recycling capacity must scale to absorb retained feedstock. Restrictions without corresponding investment in American processing facilities would simply accumulate materials without recovering their value.

However, while recycling helps to address the existing stock of rare earth magnets, it cannot meet growing demand on its own. American industry consumes roughly 50,000 tons of permanent magnets annually, with demand projected to at least double by 2040. Even aggressive recycling programs will recover only a fraction of this volume.

This is why we advocate for a diversified approach. Recycling complements rare earth processing and alternative magnet technologies using abundant domestic materials. Each approach strengthens supply chain resilience. None alone provides complete security. A comprehensive strategy should support all three pathways, recognizing that alternatives like iron nitride can eliminate the need for rare earth inputs in approximately two-thirds of applications while recycling and domestic rare earth processing address the remainder.