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May 16, 2025

Jeffrey Kessler, Under Secretary
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Ave NW, Room 1093
Washington, DC 20230

Re: Section 232 National Security Investigation of Imports of Processed Critical Minerals and
Derivative Products (BIS-2025-0025; Docket No. 250422-0070; X-RIN 0694-XC124)

Dear Under Secretary Kessler:

Energy Fuels Inc. (“Energy Fuels” or the “Company”) submits these comments in response to the Notice of Request for Public Comments on the Section 232 National Security Investigation of Imports of Processed Critical Minerals and Derivative Products (the “Notice”) issued by the Department of Commerce (the “Department”).¹ The Notice was issued in connection with the Department’s investigation of the effects on US national security of Processed Critical Minerals and their derivative products (the “Investigation”).²

For the purposes of this Investigation and this submission, the term “Critical Minerals” means those minerals included in the “*Critical Minerals List*” published by the United States Geological Survey (“USGS”) and also includes uranium. The term “rare earth elements” (“REEs”) means the 17 elements identified as rare earth elements by the Department of Energy (“DOE”). Generally, rare earth elements are considered a subset of Critical Minerals. The term “Processed Critical Minerals” refers to Critical Minerals that have undergone the activities that occur after Critical Mineral ore is extracted from a mine up through its conversion into a metal, metal powder, or a master alloy. These activities specifically occur beginning from the point at which ores are converted into oxide concentrates; separated into oxides; and converted into metals, metal powders, and master alloys. The term “derivative products” includes all goods that incorporate Processed Critical Minerals as inputs. These goods include semi-finished goods (e.g., anodes and cathodes) as well as final products (e.g., motors, batteries, radar systems, wind turbines and their components, and advanced optical devices).

As a leading US producer of several Processed Critical Minerals, Energy Fuels is uniquely positioned to offer the Department a perspective on a large portion of the value chain, from extraction and processing of raw materials to production and refining of a number of Processed Critical Minerals. Energy Fuels appreciates this opportunity to provide its perspective and looks forward to working constructively with the Department.

¹ 90 Fed. Reg. 17372 (April 25, 2025).

² Executive Order 14272, Ensuring National Security and Economic Resilience Through Section 232 Actions on Processed Critical Minerals and Derivative Products (Apr. 15, 2025).

Company Overview

Energy Fuels is heavily invested in the US Critical Minerals industry. It operates the only US facility, at the White Mesa Mill (the “Mill”), currently producing advanced rare earth oxide products, namely neodymium-praseodymium (“NdPr”) oxide, derived from monazite, which is a valuable by-product of heavy mineral sands mining. Energy Fuels has also announced its technical ability to produce other REE oxides, including six of the seven REE oxides currently subject to Chinese export controls (samarium (“Sm”), gadolinium (“Gd”), terbium (“Tb”), dysprosium (“Dy”), lutetium (“Lu”) and yttrium (“Y”)). Energy Fuels’ White Mesa Mill produces REE oxides from a mineral called monazite, which is a valuable by-product of heavy mineral sands mining which targets other critical minerals that contain titanium and zirconium. Monazite is an important REE-bearing raw material mineral, as it contains excellent distributions of both the “light” and “heavy” REE oxides, needed for a variety of energy, mobility, manufacturing, and defense technologies. The Mill is the only US facility able to process monazite for the recovery of REE oxides. Energy Fuels has a current capacity to process 11,023 tons of monazite concentrate per year, capable of yielding roughly 1,102 tons of NdPr oxide per year—a critical ingredient for neodymium-iron-boron (“NdFeB”) permanent magnets used in electric vehicles (“EVs”), hybrid EVs, wind energy, advanced robotics, electronics, and critical defense applications. Energy Fuels plans to expand its processing capacity at the Mill in the next three years to process up to 66,139 tons of monazite, yielding up to roughly 6,934 tons of NdPr oxide, 315 tons of Dy oxide, and 89 tons of Tb oxide. From 66,139 tons of monazite, the Mill could potentially also produce, if needed by the U.S. government, Department of Defense, or commercial customers, up to roughly 5,982 tons of lanthanum (“La”) oxide, 12,786 tons of cerium (“Ce”) oxide, 914 tons of Sm oxide, 51 tons of europium (“Eu”) oxide, 883 tons of Gd oxide, 35 tons of holmium (“Ho”) oxide, 91 tons of erbium (“Er”) oxide, 8 tons of thulium (“Tm”) oxide, 55 tons of ytterbium (“Yb”) oxide, 6.6 tons of Lu oxide, and 830 tons of Y oxide.

Energy Fuels also operates the largest conventional vanadium production facility in the US at the Mill, producing more than 50 million pounds of vanadium V_2O_5 since 1980. Vanadium is a critical mineral used to strengthen steel and advanced alloys, along with chemical and battery applications.

Further, the Mill is the only conventional uranium mill and the largest uranium production facility in the US which has a licensed capacity to produce over 8 million pounds of natural uranium concentrate (“ U_3O_8 ”) per year. Since 1980, the Mill has produced over 35 million pounds of U_3O_8 , and has been the largest uranium producer in the US over the last several years. This uranium supply feeds the US civilian nuclear reactor fleet.

1. United States Imports of All Processed Critical Minerals and Derivative Products

The USGS 2025 Mineral Commodity Summary provides the most accurate and up to date information on US Critical Mineral imports. Table 1 shows US Net Import Reliance for a wide swath of mineral commodities. Highlighted in blue are minerals listed on the Critical Minerals List. Highlighted in orange are all instances where China is a leading exporter of mineral commodities to the US and further showing that the US is a net importer of almost all its Critical Minerals. Not shown on the chart are the complete list of REEs which are covered generally under the title “Rare Earths.”

It is key to note that the level of import reliance for advanced REE materials shown in Table 1 below may be significantly understated, as the US has one large producing REE mine in California that has (until recently) sold beneficiated ore to customers with close ties to China, who processed and refined the contained REEs into advanced materials, and manufactured products and materials that were reimported for sale to US customers. Similar to Energy Fuels, the California mine is currently ramping up domestic REE processing capacity. However, the vast majority of processed REEs still comes from China, as shown in Tables 2 and 3, highlighting that US capacity to process REEs into commercially usable materials is limited and alternative processing sources are likewise scarce.³

³ Dr. Gracelin Baskaran, Critical Minerals and the Future of the U.S. Economy, CSIS (Feb. 2025), <https://www.csis.org/analysis/critical-minerals-and-future-us-economy>.

Table 1

2024 U.S. Net Import Reliance¹

Commodity	Net Import reliance as a percentage of apparent consumption in 2024	Leading Import sources (2020–23) ²
ARSENIC, all forms	100	China, ³ Morocco, Malaysia, Belgium
ASBESTOS	100	Brazil, Russia
CESIUM	100	Germany, China
FLUORSPAR	100	Mexico, Vietnam, South Africa, China ³
GALLIUM, metal	100	Japan, China, Germany, Canada
GRAPHITE (NATURAL)	100	China, ³ Canada, Mexico, Mozambique
INDIUM	100	Republic of Korea, Japan, Canada, Belgium
MANGANESE	100	Gabon, South Africa, Australia, Malaysia
MICA (NATURAL), sheet	100	China, Brazil, India
NIOBIUM (COLUMBIUM)	100	Brazil, Canada
RUBIDIUM	100	China, Germany, Russia
SCANDIUM	100	Japan, China, Philippines
STRONTIUM	100	Mexico, Germany
TANTALUM	100	China, ³ Australia, Germany, Indonesia
YTTRIUM, compounds	100	China, ³ Germany
GEMSTONES	99	India, Israel, Belgium, South Africa
ABRASIVES, fused aluminum oxide	>95	China, ³ Canada, Brazil, Austria
NEPHELINE SYENITE	>95	Canada
TITANIUM, sponge metal	>95	Japan, Kazakhstan, Saudi Arabia
POTASH	93	Canada, Russia, Belarus, Israel
BISMUTH, metal, alloys, and scrap	89	China, ³ Republic of Korea
IRON OXIDE PIGMENTS, natural and synthetic	87	China, ³ Germany, Brazil, Canada
TITANIUM MINERAL CONCENTRATES	86	South Africa, Madagascar, Canada, Australia
ANTIMONY, metal and oxide	85	China, ³ Belgium, India, Bolivia
PLATINUM	85	South Africa, Belgium, Germany, Italy
STONE (DIMENSION)	83	Brazil, China, ³ Italy, Turkey
DIAMOND (INDUSTRIAL), stones	81	India, South Africa, Russia, Australia
RARE EARTHS, ⁴ compounds and metals	80	China, ³ Malaysia, Japan, Estonia
PEAT	78	Canada
CHROMIUM, all forms	77	South Africa, Kazakhstan, Canada, Finland
COBALT, metal, oxides, and salts	76	Norway, Finland, Japan, Canada
BARITE	>75	India, China, ³ Morocco, Mexico
BAUXITE	>75	Jamaica, Turkey, Guyana, Australia
MAGNESIUM METAL	>75	Israel, Canada, Turkey, Czechia
TIN, refined	73	Peru, Bolivia, Indonesia, Brazil
ZINC, refined	73	Canada, Mexico, Republic of Korea, Peru
ABRASIVES, silicon carbide	69	China, ³ Brazil, Canada
RHENIUM	65	Chile, Canada, Germany, Poland
SILVER	64	Mexico, Canada, Republic of Korea, Poland
ALUMINA	59	Brazil, Jamaica, Australia, Canada
MAGNESIUM COMPOUNDS	52	China, ³ Israel, Brazil, Canada
GERMANIUM	>50	Belgium, Canada, China, Germany
IODINE	>50	Chile, Japan
LITHIUM	>50	Chile, Argentina
SELENIUM, metal	>50	Philippines, Mexico, Canada, Poland
TUNGSTEN	>50	China, ³ Germany, Bolivia, Vietnam
SILICON, metal and ferrosilicon	<50	Brazil, Russia, Canada, Malaysia
GARNET (INDUSTRIAL)	48	South Africa, Australia, India, China ³
NICKEL	48	Canada, Norway, Australia, Brazil
ALUMINUM	47	Canada, United Arab Emirates, Bahrain, China ³
DIAMOND (INDUSTRIAL), bort, grit, and dust and powder	47	China, ³ Republic of Korea, Ireland, Russia
COPPER, refined	45	Chile, Canada, Mexico, Peru
MICA (NATURAL), scrap and flake	41	China, Canada, India, Finland
VANADIUM	40	Canada, Brazil, Austria, South Africa
PALLADIUM	36	Russia, South Africa, Belgium, Italy
VERMICULITE	34	South Africa, Brazil, Zimbabwe
FELDSPAR	33	Turkey, Mexico
LEAD, refined	28	Canada, Republic of Korea, Mexico, Australia
PERLITE	26	Greece, China
BROMINE	<25	Israel, Jordan, China ³
TELLURIUM	<25	Canada, Philippines, Japan, Germany
ZIRCONIUM, ores and concentrates	<25	South Africa, Australia, Senegal
SALT	24	Canada, Chile, Mexico, Egypt
CEMENT	22	Turkey, Canada, Vietnam, Greece

Table 2

Share of Top Three Processing Countries of Selected Minerals, 2022

■ China
 ■ Russia
 ■ Chile
 ■ Indonesia
 ■ Japan
 ■ Finland
 ■ Canada
■ Argentina
 ■ Malaysia
 ■ Estonia
 ● 2019 top 3 share



Table 3

Share of Top Three Producing Countries in Mining of Selected Minerals, 2022

■ United States
 ■ Russia
 ■ China
 ■ Australia
 ■ Chile
 ■ Democratic Republic of Congo
 ■ Indonesia
■ Philippines
 ■ Mozambique
 ■ Peru
 ■ Madagascar
 ● 2019 top 3 share



With respect to uranium, the US purchased 51.6 million pounds of U_3O_8 ⁴ in 2023.⁵ Five percent (2.39 million pounds) came from the US in 2023 with the rest being imported from foreign sources.

2. Foreign Sources of Processed Critical Minerals and Derivative Products and Associated Risks

Reliance on foreign sources for Critical Minerals puts the US at serious risk of supply disruption and geopolitical tension with geostrategic adversaries like China and Russia.⁶

The US currently lacks sufficient domestic capacity to meet its growing Critical Minerals demand. As a result, the US relies heavily on imports of Critical Minerals from foreign sources, especially China, which processes 30 Critical Minerals listed on the Critical Minerals List.⁷ Other notable sources include Canada, Brazil, Russia, India, South Africa, and Australia, as shown in Table 1 above. According to the USGS, “of the 50 mineral commodities identified in the 2022 Final List of Critical Minerals, the United States was 100% net import reliant for 12, and an additional 28 critical mineral commodities (including the 14 ‘lanthanides,’ which are the rare earths) had a net import reliance greater than 50% of apparent consumption.”⁸ With regard to REEs in particular, the US imports 80% from foreign sources, the majority being from China.⁹ And, as

⁴ equivalent

⁵ 2023 Uranium Marketing Annual Report, EIA (Jun 2024), <https://www.eia.gov/uranium/marketing/pdf/2023%20UMAR.pdf>.

⁶ Marc Humphries, *China’s Mineral Industry and US Access to Strategic and Critical Minerals: Issues for Congress*, Cong. Rsch. Serv., R43864 (2015), <https://sgp.fas.org/crs/row/R43864.pdf>.

⁷ US Geological Survey, 2025, Mineral commodity summaries 2025 (March 2025) <https://doi.org/10.3133/mcs2025>.

⁸ US Geological Survey, 2025, Mineral commodity summaries 2025 (March 2025) <https://doi.org/10.3133/mcs2025>.

⁹ US Geological Survey, 2025, Mineral commodity summaries 2025 (March 2025) <https://doi.org/10.3133/mcs2025>.

described above, America’s import reliance on China for REEs is likely significantly understated as the 45,000 tons of REE oxide production was in the form of beneficiated, unprocessed ore, which was sold to customers in Asia (mainly China) for processing, refining, and manufacturing into advanced materials and products.

With respect to uranium, in 2023, the US purchased roughly 49 million pounds of U₃O₈ from foreign sources, with 2.4 million coming from domestic sources, representing a 95% / 5% split of foreign to domestic uranium sources. Of the foreign sourced uranium, 49% came from allied countries such as Canada and Australia, but 44% came from Russia or other eastern bloc countries such as Kazakhstan and Uzbekistan.¹⁰ Data for 2024 is not yet available from the Energy Information Agency (“EIA”), but in 2024 Congress passed the Prohibiting Uranium Imports Act (the “Russian Uranium Ban” or the “Ban”),¹¹ which bans imports of Russian unirradiated low-enriched uranium. Unfortunately, there are reports that Russia is circumventing the Ban by moving its uranium through third countries for processing and enrichment. (See Section 3 below).

3. Distortive Effects of the Predatory Economic, Pricing, and Market Manipulation Strategies and Practices Used By Countries That Process Critical Minerals That Are Exported to the United States

China has created an unfair Critical Minerals trading environment through the use of a variety of trade controls, including export controls, targeted US company trading restrictions, subsidies, and value added tax (“VAT”) Rebates, and Russian Uranium Ban circumvention. In addition, China holds inherent commercial advantages over the US, including significant existing mineral processing, refining, and manufacturing infrastructure and a large, well-trained workforce that US companies need to rebuild in order to be globally competitive. Each of these is discussed below.

(i) Export Controls:

China has placed export controls limiting or prohibiting export of certain Critical Minerals to the US, including several REEs (indicated below by a [*]) with particularly important military applications. These include Critical Minerals used in F-35 aircraft, Virginia- and Columbia-class submarines, Tomahawk missiles, Predator drones, and the Joint Direct Attack Munition (JDAM) series of smart bombs:¹²

- | | |
|-------------|---------------|
| • Gallium | • Indium |
| • Germanium | • Molybdenum |
| • Graphite | • Samarium* |
| • Antimony | • Gadolinium* |
| • Tungsten | • Terbium* |
| • Tellurium | • Dysprosium* |
| • Bismuth | • Lutetium* |

¹⁰ US Energy Information Administration, Uranium Marketing Annual Report With Data for 2023, US Energy Info. Admin. (June 6, 2024), <https://www.eia.gov/uranium/marketing/>.

¹¹ Prohibiting Russian Uranium Imports Act, Pub. L. No. 118-62, 138 Stat. 1022 (2024).

¹² Gracelin Baskaran and Meredith Schwartz, The Consequences of China’s New Rare Earths Export Restrictions, CSIS (April 14, 2025) <https://www.csis.org/analysis/consequences-chinas-new-rare-earths-export-restrictions>.

- Scandium*
- Yttrium*

(ii) *Targeted US Company Trading Restrictions:*

China has placed 73 US firms on its Unreliable Entities List, restricting Chinese exports of Critical Minerals to these firms.¹³ Because many of the designated companies operate in the defense and technology sectors, their access to essential REEs is diminished, harming US national security. Notable among the companies on China's Unreliable Entities List is Lockheed Martin (manufacturer of the F-35), General Dynamics and Huntington Ingalls Industries Inc (manufacturer of Virginia and Columbia class submarines), Raytheon (manufacturer of the Tomahawk Missile), General Atomics (manufacturer of the Predator drone), and Boeing (manufacturer of the JDAM).

(iii) *Subsidies:*

Reportedly 17 of China's 34 provincial-level governments have provided subsidies for mineral exploration.¹⁴ This funding aims to secure supply chains for high-tech industries such as semiconductors, electric vehicles, and robotics.

(iv) *VAT Rebate on REEs:*

China offers a 13% VAT rebate on exports of rare earth permanent magnets.¹⁵ The VAT rebate policies are reviewed biannually and potentially adjusted based on China's industrial priorities, allowing China to manipulate trade in favor of its own domestic REE industry.

(v) *Russian Uranium Ban Circumvention:*

Existing US policy already prohibits the import of any unirradiated low-enriched uranium produced in Russia under Section 2 of the Russian Uranium Ban.¹⁶ The Russian Uranium Ban prohibits the import of unirradiated low-enriched uranium that is produced in the Russian Federation or by a Russian entity. It also prohibits the import of Russian-origin uranium "that is determined to have been exchanged with, swapped for, or otherwise obtained . . . in a manner designed to circumvent the [Ban]." However, reporting suggests that circumvention is occurring through third countries. In the case of China, the US Government in 2024 conducted a probe of imports of Chinese uranium. This probe followed a significant increase in uranium shipments from China to the US after the Russian Uranium Ban was enacted.¹⁷

(vi) *Significant Existing Processing, Refining, and Manufacturing Infrastructure:*

¹³ China has paused export restrictions on 28 US companies for 90 days starting May 14, 2025. Global Times, China Temporarily Suspends Export Controls of Dual-Use Items for 28 US Entities Following Trade Talks: MOFCOM, GLOBAL TIMES (May 14, 2025), <https://www.globaltimes.cn/page/202305/1291234.shtml>.

¹⁴ Edward White, China Raises State Funding for Strategic Minerals Amid US Trade War, Fin. Times (Mar. 19, 2025), <https://www.ft.com/content/cace5b0f-e08c-4cb9-aac5-c3117d5a93bc>.

¹⁵ Michelle Michot Foss & Jacob Koelsch, *Of Chinese Behemoths: What China's Rare Earths Dominance Means for the US*, Rice University's Baker Institute for Public Policy (Dec. 19, 2022), <https://www.bakerinstitute.org/research/chinese-behemoths-what-chinas-rare-earths-dominance-means-us>; Mary Hui, *How China Uses Tax Policies to Defend Its Rare Earths Monopoly*, Yahoo Tech (Feb. 22, 2022), <https://tech.yahoo.com/business/articles/china-uses-tax-policies-defend-032811011.html>.

¹⁶ Prohibiting Russian Uranium Imports Act, Pub. L. No. 118-62, 138 Stat. 1022 (2024).

¹⁷ Timothy Gardner, *US Probes Uranium Imports from China to Prevent Circumventing Russian Ban*, Reuters (Sept. 17, 2024), <https://tech.yahoo.com/business/articles/china-uses-tax-policies-defend-032811011.html>.

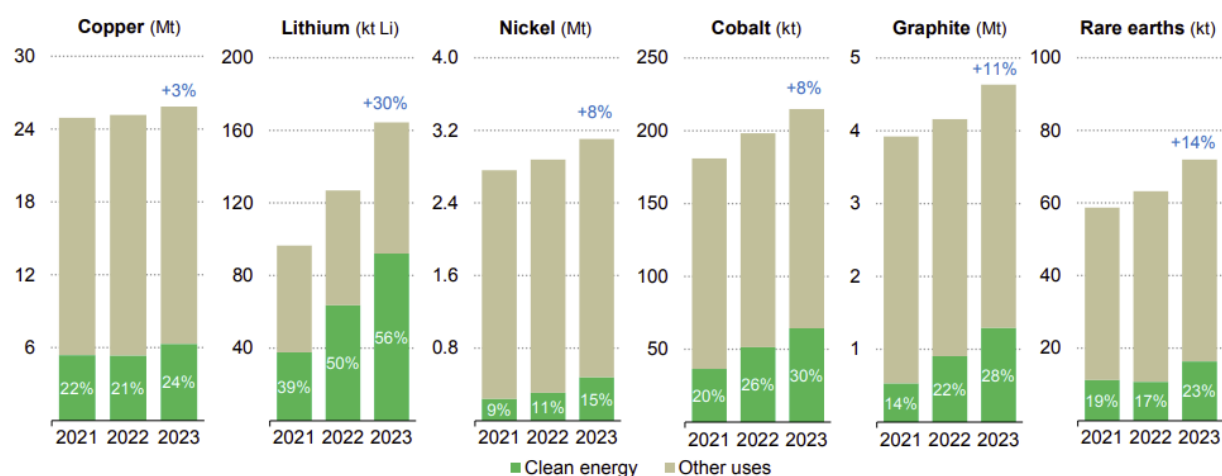
Over the past two to three decades, the Chinese government has made critical mineral and material production a national priority. To achieve this goal, billions of dollars have been spent in China to build world-leading processing, refining, manufacturing, and training/education infrastructure. This represents a significant benefit for Chinese companies over free-market competitors in the US. Asking US companies to spend billions of dollars of private capital to license, construct and commission large-scale mineral processing, refining and manufacturing infrastructure, while competing on price and product quality against Chinese companies who already have that operating infrastructure, may be an insurmountable hurdle without significant US government support. This problem is particularly acute for REEs. Russia has similar advantages in the uranium sector, with significant nuclear fuel capacity from the Cold War Era. While that capacity is currently the subject of a legislative ban, and the effects are currently somewhat mitigated, the threat remains, as large quantities of uranium products are still imported from Russia under exemptions, there is a growing threat of Russian uranium indirectly entering the US market through China (displacement and the like), and future geopolitical, economic and other factors may bring Russia’s massive nuclear capacity back into the fold, crushing the nascent US uranium and nuclear fuel industry just now beginning to get back on its feet.

4. Demand for Processed Critical Minerals and Derivative Products in the United States and Globally

Demand for Critical Minerals has historically increased year on year and is expected to continue to grow into the future.¹⁸ The International Energy Agency (“IEA”) graph in Table 4 shows the growth in demand for several key Critical Minerals between 2021 and 2023. In particular, global demand for REEs is expected to rise by as much as seven times by 2040 compared to 2020 demand.¹⁹ Because foreign suppliers are the primary source of REEs, without US intervention, it is likely that China will continue to monopolize the sector.

Table 4

Demand outlook for selected minerals, 2021-2023



¹⁸ International Energy Agency, *Global Critical Minerals Outlook 2024*, IEA (May 2024), <https://www.iea.org/reports/global-critical-minerals-outlook-2024>.

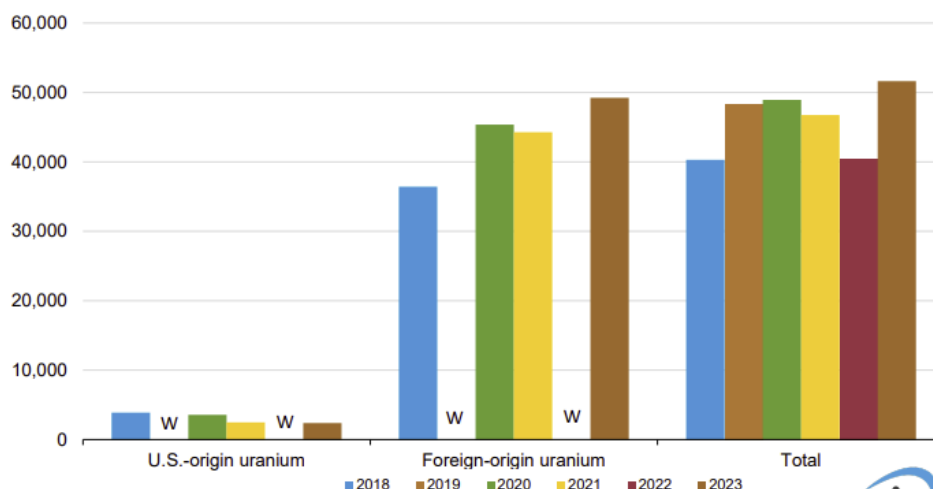
¹⁹ International Energy Agency, *Global Critical Minerals Outlook 2024*, IEA (May 2024), <https://www.iea.org/reports/global-critical-minerals-outlook-2024>.

Similarly, uranium demand has increased steadily. Table 5 shows the general trend towards increased uranium demand over the past five years with increasing demand fulfilled by foreign uranium suppliers.²⁰

Table 5

Figure 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year 2018–2023

thousand pounds U₃O₈e equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2023)



5. Global Supply Chains for Processed Critical Minerals and Derivative Products

Global supply chains for Processed Critical Minerals and Derivative Products face several risks. Firstly, as discussed throughout this submission and shown in Tables 1, 2, and 3, China controls the vast majority of Processed Critical Mineral and derivative product supply chains. This gives China significant leverage over the US defense and technology sectors and exposes the US to potential supply chain disruptions due to geopolitical tensions, export restrictions, and market manipulations (discussed more in Section 3 above). Further, the lack of domestic processing capabilities means the US exports raw materials only to re-import them in finished products.²¹ For example, according to the Center for Strategic & International Studies, “[i]n 2023, the United States produced more than 12% of the REEs mined globally but exported 93% of those materials[,]” due to a lack of processing capabilities.²²

Uranium, which fuels nuclear reactors, provides another significant example of the risks of relying heavily on non-domestic sources. The US has the largest civilian nuclear reactor fleet in the world, producing 19% of US electricity.²³ The first Trump Administration issued the Nuclear Fuel Working Group Report (“Working Group Report”) following a government review of the

²⁰ US Energy Information Administration, *2023 Uranium Marketing Annual Report*, US Dep’t of Energy (June 2024), <https://www.eia.gov/todayinenergy/detail.php?id=55555>.

²¹ Dr. Gracelin Baskaran, *Critical Minerals and the Future of the U.S. Economy*, CSIS (Feb. 2025), <https://www.csis.org/analysis/critical-minerals-and-future-us-economy>.

²² Dr. Gracelin Baskaran, *Critical Minerals and the Future of the U.S. Economy*, CSIS (Feb. 2025), <https://www.csis.org/analysis/critical-minerals-and-future-us-economy>.

²³ Slade Johnson, *The United States Operates the World’s Largest Nuclear Power Plant Fleet*, US Energy Info. Admin. (Apr. 24, 2025), <https://www.eia.gov/todayinenergy/detail.php?id=65104>.

causes of the United States' overdependence on Russia and state-owned entities for nuclear fuel. The report states:

Nuclear power is intrinsically tied to National Security. America has lost its competitive global position as the world leader in nuclear energy to state-owned enterprises, notably Russia and China, with other competitor nations also aggressively moving to surpass the US. It is in the US national security interest to preserve and grow the assets and investments of the entire US nuclear enterprise. We can do so by addressing domestic and international security interests, expanding nuclear generation, minimizing commercial fleet fiscal vulnerabilities, assuring defense needs for uranium, and leveling the playing field against state-owned enterprises.²⁴

Five years later, and the situation has not improved to the extent it would have had the Trump-era recommendations been fully implemented. The most recent data available from EIA (June 2024 Uranium Marketing Report) states:

The largest sources of uranium delivered in 2023 was of foreign origin with Canada the top source at 27% of total deliveries, followed closely by Australia and Kazakhstan with 22% of total deliveries each. Russian-origin material accounted for 12% of total deliveries and Uzbekistan-origin material accounted for 10% of total deliveries. United States material accounted for 5% of total deliveries in 2023, the same percentage as 2022.²⁵

The primary result of the Working Group Report was to establish a Strategic Uranium Reserve by investing a small sum to stockpile U_3O_8 and natural uranium hexafluoride (“ UF_6 ”) material over 10 years from U.S. companies. The report recommended acquiring \$1.5 billion of material over 10 years, but Congress ultimately appropriated only \$75 million for one (1) year. Energy Fuels benefited from selling some uranium over the then-prevailing spot price but not a significant enough amount to justify significantly ramping-up its domestic uranium production. Subsequent actions to support the production of LEU and HALEU have not benefitted the front end of the fuel cycle and while there is more production than when the report was issued, due to improved market conditions, waivers are still being granted for relief from the law passed in 2024 to ban all imports of Russian uranium. Uranium imports from China have increased as Russian material seeks to find new markets through which to ship their material to the US. Allowing state-owned production into the US continues to erode our domestic uranium mining and processing industry. Despite the sound recommendations of the Nuclear Fuel Working Group, the US still is not capable of sufficiently meeting our needs domestically as material produced by state-owned programs (predominantly Russian-controlled, but also Kazakh, Uzbek, and Chinese controlled) continue to undermine US commercial producers.

²⁴ U.S. Dep't of Energy, Restoring America's Competitive Nuclear Advantage (Apr. 2020), <https://www.energy.gov/sites/prod/files/2020/04/f74/Restoring%20America%27s%20Competitive%20Nuclear%20Advantage-Blue%20version%5B1%5D.pdf>.

²⁵ U.S. Energy Information Administration, 2023 Uranium Marketing Annual Report (June 2024), <https://www.eia.gov/uranium/marketing/pdf/2023%20UMAR.pdf>.

6. Current and Potential Capabilities of the United States to Process Critical Minerals and Their Derivative Products

The US has a significant capacity to increase production of many critical minerals and secure diversified supply chains for those minerals, for which it does not have sufficient domestic reserves. For example, it is expected that by 2030, Energy Fuels' expanded and expedited critical minerals and mining operations could meet a significant percentage of US REE demand, including up to 50% of NdPr demand and up to 100% of domestic "heavy" REE demand (depending on the particular REE product). To support this effort, Energy Fuels is planning to expand its monazite derived REE capacity in the next 2-3 years to 61,139 tons yielding further REE oxides used for energy, technology and defense applications, including NdPr, Tb, Dy, and potentially Sm, Gd, Lu, Y, and other REE oxides naturally contained in monazite. Energy Fuels purchases all of the monazite currently available in the US, primarily from heavy mineral sands ("HMS") mines owned by The Chemours Company in Florida and Georgia. There are no other near-term, large-scale sources of monazite in the US. However, there are large scale sources of monazite in allied nations. In fact, Energy Fuels has acquired interests in three (3) large-scale HMS mines in Australia, Madagascar, and Brazil as discussed below. Energy Fuels and other US companies can strengthen US critical minerals security by developing these diversified supply chains in allied countries, and indeed Energy Fuels has shown that US companies can redirect monazite sales from China to the US, which was the case in 2021 when Energy Fuels redirected Chemours' monazite from China to the Mill in Utah for processing into REE oxides.

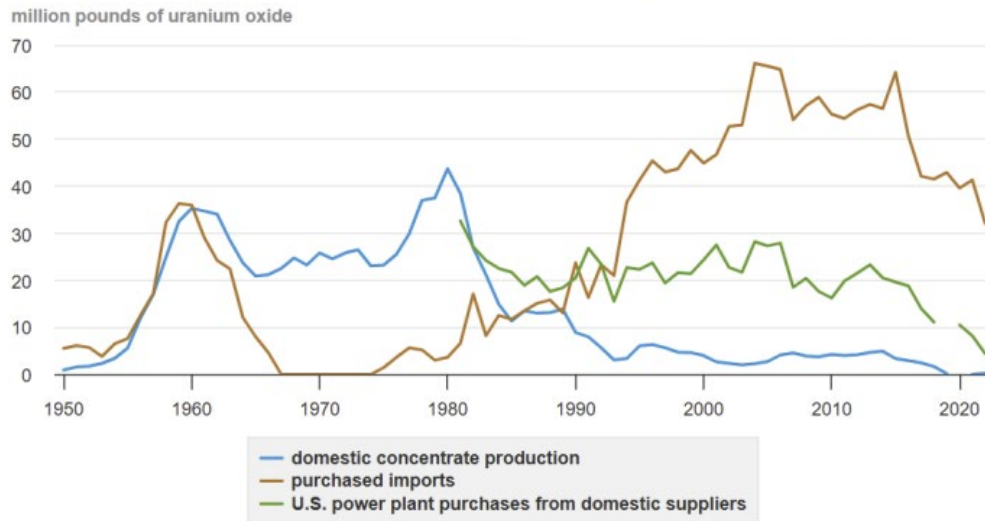
Access to these REEs from allied nations has been secured by Energy Fuels and should be supported by the US Government. Energy Fuels currently owns, or is in joint ventures, for world class HMS projects in allied nations. With sufficient incentives and protections, two projects can be ready to go into construction in 6 to 12 months. Toliara in Madagascar could produce up to 33,069 tons of monazite per year, and the Donald Project in Victoria, Australia could produce up to 15,432 tons of monazite per year. These two projects alone could annually produce roughly 4,850 tons of NdPr oxide, 220 tons of Dy oxide, 66 tons of Tb oxide, 661 tons each of Sm and Gd oxide, etc.

With respect to uranium, the US has the capacity to satisfy a much larger percentage of domestic demand from domestic mines, mills and processing facilities than is currently the case. As shown in Table 6 below, the US was once a significant uranium producer between 1960 and 1980, and increased domestic production will address the goal of playing a larger part in the world market in the future.²⁶

²⁶ Gracelin Baskaran & Meredith Schwartz, *Fueling the Future: Recommendations for Strengthening US Uranium Security*, Ctr. for Strategic & Int'l Stud. (Feb. 5, 2025), <https://www.csis.org/analysis/fueling-future-recommendations-strengthening-us-uranium-security>.

Table 6

Figure 1: Sources of Uranium for U.S. Nuclear Power Plants, 1950-2022



Source: "The United States imports most of the uranium it uses as fuel," U.S. Energy Information Administration, August 23, 2023, <https://www.eia.gov/energyexplained/nuclear/where-our-uranium-comes-from.php>.

7. Value of the Current Level of Imports of All Processed Critical Minerals and Derivative Products By Total Value and Country of Export

The USGS 2025 Critical Minerals Commodity Summary estimated that the value of net minerals imports for the US in 2024 was \$178 billion. The report covered nearly 100 different minerals including the 50 Critical Minerals on the Critical Minerals List. The Commodity Summary did not give a break-down of the value of imports for each mineral, but for REE's it estimated the net import value at \$170 million.²⁷ For uranium, the EIA estimated net imports for 2023 amounted to 49,239,000 pounds of U₃O₈e at a weighted average price of \$43.80 per pound U₃O₈e amounting to approximately \$2.16 billion in value.²⁸

8. Proposed Remedies

Energy Fuels' position as a leader in the Critical Minerals and uranium industry gives it a unique perspective to suggest potential remedies for the national security risks presented by US dependence on imported Processed Critical Minerals and derivative products. The following presents our proposed trade remedies designed to protect US national security interests and strengthen the US domestic Critical Minerals and uranium industries.

a. Processed Critical Mineral, REE, and Derivative Product Remedies

The proposed Critical Minerals remedies follow a three-part strategy: (i) tariffs on Chinese and Russian Critical Minerals, (ii) an incentive structure to support the purchase of US-produced Critical Minerals, and (iii) establishment of a US Strategic Critical Minerals Reserve. Each of these components are discussed in turn below.

²⁷ US Geological Survey, 2025, Mineral commodity summaries 2025 (March 2025) <https://doi.org/10.3133/mcs2025>.

²⁸ U.S. Energy Information Administration, 2023 Uranium Marketing Annual Report (June 2024), <https://www.eia.gov/uranium/marketing/pdf/2023%20UMAR.pdf>.

(i) *Enforce a 100% Tariff on All Processed Critical Minerals and Derivative Products from Russia and China:*

Russian and Chinese dominance over the Critical Minerals sector presents a significant risk to US national security. Accordingly, the US should place a 100% tariff on all Processed Critical Minerals and derivative products sourced, processed, produced, or otherwise procured from Russian or Chinese entities or other foreign entities of concern contemplated by Section 40207 of the Bipartisan Infrastructure Law and as interpreted by the US DOE under its Final Interpretive Guidance on the Definition of Foreign Entity of Concern (May 3, 2024, as amended from time to time) (collectively, “FEOCs”).

The expectation should be that such tariffs will persist for at least seven to ten years, to encourage the long-term contracts required to finance and construct the required US mining and production infrastructure.

(ii) *Establish a Tariff on the Import of Processed Critical Minerals and Derivative Products:*

To promote US domestic production of processed critical minerals and derivative products, the Administration should also place a tariff on all processed critical minerals and derivative products imported into the US that are not sourced, processed, produced, or otherwise procured from an FEOC, which could be set at a lower rate than the tariff rate applicable to FEOCs. However, understanding that US purchasers currently have limited options for purchasing US-produced processed critical minerals and derivative products (currently, there is limited US production of REE oxides and no US production of REE metals and permanent magnets), the Administration should also offer a waiver of this tariff for imported processed critical minerals and derivative products that contain a stipulated minimum US-produced content (e.g., 20% of the contained REE oxides or REE metals). For example, if a company imports a shipment of permanent magnets containing the stipulated US content, then the US purchaser would be eligible for a waiver of the tariff on the entire shipment of permanent magnets. If the US purchaser imports a shipment of permanent magnets containing less than the stipulated US content, then the entire shipment of permanent magnets would be subject to the full tariff. The stipulated US content would be based on current US production capacity which would be reassessed annually and increased based off increases in US production capacity. The expectation should be that such tariffs would be set at high enough levels and persist for at least seven to ten years, to encourage the long-term contracts required to finance and construct new mines and production capacity of US-produced processed critical minerals and/or derivative products. This should help new US facilities and production to compete with existing Chinese facilities.

Alternatively, the US could impose a tariff on the foreign content of any processed critical mineral or derivative product. For example, if a company imports NdPr containing 60% US content and 40% non-Russian/Chinese foreign content, tariffs would only be charged on the 40%. Again, the expectation should be that such tariffs would be set at high enough levels and persist for at least seven to ten years, to encourage the long-term contracts required to finance and construct the required US mining and production infrastructure. However, this alternative tariff structure would require a higher level of tariffs to result in the same incentive for US production as the previously mentioned structure, because only the US-content portion of the tariff, not the entire tariff, would effectively be waived. This would also result in US purchasers paying a tariff on non-US content, which could be coming from allied nations, in all circumstances.

It is also very important to ensure that no tariffs be imposed in any circumstances on raw materials used to produce Processed Critical Minerals, such as monazite, xenotime and any other raw materials from which REEs are concentrated or separated. These raw materials, and in particular monazite, contain superior “heavy” REE concentrations from which REEs can be separated or processed. Monazite and xenotime purchases from foreign sources form a large part of the Chinese REE program, and for the United States to be able to compete with China, US producers need to be able to compete for raw material sources from allied nations without import restrictions. Like China, the US should encourage imports of critical mineral ores and raw materials, especially where domestic mines are not sufficient to compete globally on cost or quantity, as is the case with REEs.

(iii) *Create a Strategic Critical Minerals Reserve to Help Establish a Price Floor for Critical Minerals:*

Energy Fuels—and every other domestic producer of REEs—would be incentivized to produce critical minerals through minimum/floor prices for REE products. This would allow them to attract private capital to build the necessary infrastructure to secure US REE capacity, in addition to covering the cost of operating domestic facilities at the highest global standards for health, safety, and environmental protection. Establishing tariffs should help to encourage floor price contracting. Government stockpiling by creating a Critical Minerals Reserve can further establish the required floor prices, while at the same time providing the US with an emergency reserve of Critical Minerals in case of supply shortages. For instance, there is a growing commercial market for NdPr (a “light” REE oxide used for NdFeB magnets used in hybrids/EVs, advanced robotics, wind energy, etc.), and potential customers have expressed a willingness to consider floors for NdPr (but, in the absence of tariffs and a Critical Mineral Reserve, such customers currently do not have an adequate incentive to enter into floor-price contracts sufficient to support facility financing, construction and production at the levels necessary to meet US needs). A Critical Minerals Reserve would operate in the same way as the Uranium Reserve discussed below.

Appropriate price floors could also be created by the US government buying programs, both within and/or outside of a Critical Minerals Reserve. The US military needs “mid” and “heavy” REEs, for which there is no or a limited commercial market. This includes samarium (Sm), gadolinium (Gd), terbium (Tb), dysprosium (Dy), lutetium (Lu), and yttrium (Y), which are six (6) of the seven (7) REEs subject to Chinese export controls as of April 4 (for reference, Sm and Gd are “mid” REEs, and the rest are “heavy” REEs, with categories based on their respective atomic weights). If the US government would purchase these “mid” and “heavy” REE oxides at supportive pricing (which is roughly 3x – 10x above current reported, “China-manipulated” prices), and price floors were implemented for commercial customers for NdPr, Energy Fuels would be able to produce a wide variety of REE oxides at reasonable margins, while attracting the capital needed to install the needed infrastructure to produce roughly 50% of domestic requirements for NdPr and up to 100% of domestic requirements for “mid” and “heavy” REE oxides. The US government could also help create a floor for all the REE oxides, including NdPr, since the US government also needs NdPr for use in NdFeB magnets used in a wide variety of defense applications.

There are other alternative approaches to creating price floors for REEs, uranium and any critical minerals and materials, including “contracts for difference,” whereby US companies sell their products on the open market. However, if sales prices were to fall below a certain floor threshold, the US government would reimburse the companies for the difference between the floor

and the actual realized sales price. Such a program could be “revenue-neutral” by requiring companies to reimburse the US government for past payments, if prices rose above a ceiling threshold. Tax credits, government grants, low-interest loans, loan guarantees, completion guarantees, and other programs could help solve the dual challenge of incentivizing the construction of infrastructure and making sure companies can realize appropriate operating margins to ensure long-term financial sustainability and stability.

The level of support would need to be higher in the early years, as US companies catch up to Chinese companies. Levels of support and programs could be reassessed in the future once the US industry achieves a sustainable, globally competitive state.

b. Proposed Uranium Remedies

The proposed uranium remedies also follow a three-part strategy: (i) enforcement of the existing ban on Russian uranium, (ii) an incentive structure to support the purchase of US-mined uranium, and (iii) re-establishing the Trump-era US uranium reserve.

(i) Enforce the Existing Ban on Russian Uranium:

This 232 Investigation should result in enforcement of the Russian Uranium Ban, particularly as it relates to circumvention by clarifying for the industry that Russian-origin uranium remains Russian-origin even if it is enriched or converted in a third-party country. This would prevent the reported “red washing” of Russian uranium through third countries (discussed more in Section 3 above). Further, the DOE should immediately cease considering all pending and future waiver requests under the Russian Uranium Ban, finding that cost is not a sufficient hardship to incur additional national security risk.

(ii) Establish a Variable Tariff on All Foreign U_3O_8 with a Waiver for Purchases of or Offers to Purchase at Least 5% Domestic Uranium:

To promote US domestic production and processing of uranium, the Administration should consider a tariff on all uranium and uranium materials imported into the US. However, understanding that US uranium purchasers currently have limited options for purchasing US-origin fuel, the Administration should also offer a waiver for US purchasers who contract to purchase at least 5% or offer to purchase at least 5% US domestically produced uranium during the fiscal year. Currently, US uranium production capacity is 5%, and the 5% purchasing requirement is based off of this amount, so the 5% purchasing requirement should be reassessed annually and increased based off increases in US production capacity. The expectation should be that such tariffs would be set at high enough levels and persist for at least seven to ten years, to encourage the long-term contracts required to finance and construct new mines and production capacity.

(iii) Re-Establish the US Strategic Uranium Reserve:

To secure the ability to convert and enrich uranium to fabricate fuel for domestic reactors and the growing need for power in the US, the Administration should use its authority under the Energy Policy Act of 1992 and allocate funds under the next fiscal year budget to immediately re-establish the Strategic Uranium Reserve by instructing the National Nuclear Security Administration (“NNSA”) and the office of Nuclear Energy at the DOE to acquire up to 20 million pounds of domestic, US-origin uranium over five (5) years. DOE has a standing program, from the previous Uranium Reserve effort, that could immediately and efficiently enter the market again to purchase uranium from existing mines and should be updated to include uranium from mines receiving expedited permitting consideration through the Fast 41 Permitting Dashboard and other

Executive Orders and authorities seeking American mineral security and energy dominance. The President's Budget Request should include, and Congress should appropriate, at least \$2.0 billion in the next fiscal year appropriation to secure the reserve as quickly as possible, with such money allocated to both spot purchases for available material in the short-term and long-term contracts with domestic uranium producers with delivery terms that could extend beyond the initial five (5) year buying program; but no longer than five (5) years beyond the initial five (5) year buying program in order to establish large-scale production as quickly as possible. The establishment of these long-term contracts will give much needed certainty to the front end of the fuel cycle. Material procured through this program should be made available for government utilization as well as the commercial market. Secure, affordable supply of domestic fuel should be a goal shared throughout the nuclear fuel supply chain from miner to processor to enricher to fuel fabricator to utility to consumer. DOE should utilize the reserve and other purchasing ability to double the reactor loads available under the American Assured Fuel supply in recognition of the goal to expand the utilization of American-made nuclear power.

Conclusion

Energy Fuels supports the Department's efforts to ensure that imports of Critical Minerals and their derivative products do not harm the domestic industry nor the national security of the US. We are happy to participate in a thorough investigation and to offer guidance to the Department in developing targeted recommendations that support our Critical Minerals industry.

To remain a leader in the energy, defense, and technology sectors, the US must maintain reliable and affordable Critical Minerals supply chains. To achieve security in the Critical Minerals sector, the US must develop its own reserves of Critical Minerals and derivative products, of which it has significant amounts. US based companies, like Energy Fuels, have the ability to meet US demand for many Critical Minerals. Our industry and the country will benefit from thoughtful and targeted measures designed to ensure that the US industry continues to prosper and our country's national security is protected.

Energy Fuels looks forward to working with the Department in its investigation and welcomes your questions.

Thank you for your consideration.

Respectfully submitted,



Mark Chalmers
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Energy Fuels Inc.