

Comments on the 2025 Draft List of Critical Minerals

– USGS-2025-0039-0001

September 25, 2025
Via Regulations.gov

2025 Draft List of Critical Minerals
U.S. Geological Survey
12201 Sunrise Valley Dr.
Reston, VA 20192

Introduction

Thank you for the opportunity to comment on the proposed 2025 Draft List of Critical Minerals, Federal Register docket number USGS-2025-0039-0001. The below comments are specifically in response to the request for comment on the potential inclusion of metallurgical coal in the 2025 List of Critical Minerals. Earthjustice, Industrious Labs, Breathe Project, SteelWatch, Ohio River Valley Institute, Public Citizen, Group Against Smog & Pollution, Center for Biological Diversity, Allegheny-Blue Ridge Alliance, Montana Environmental Information Center, Kentucky Resources Council, Inc., Appalachian Citizens' Law Center, West Virginia Highlands Conservancy, Earthworks and Sierra Club strongly oppose the inclusion of metallurgical coal in the 2025 List of Critical Minerals.

Comments

Under the Energy Act of 2020, Section 7002(c)(4)(A), minerals may be deemed "critical" if they are "(i) essential to the economic or national security of the United States... (ii) the supply chain of which is vulnerable to disruption... and (iii) serve an essential function in the manufacturing of a product... the absence of which would have significant consequences for the economic or national security of the United States." In addition, Section 7002(a)(3)(B) of the same Act specifically excludes "fuel minerals" from the definition of critical minerals. Metallurgical coal for steelmaking does not meet any of the criteria for critical minerals set out in the Energy Act and is further prohibited from being designated as a critical mineral because of its use as a fuel.

Metallurgical coal does not serve an "essential function" in steel manufacturing and is not "essential" to "economic or national security"

Domestic steelmaking is important to our national economy and security, but metallurgical coal is no longer “essential” in the steelmaking process.

While metallurgical coal has historically played a central role in conventional blast furnace steelmaking that turns raw iron ore into steel, today, viable, scalable alternatives exist. Most notably, direct reduced iron (DRI), which eliminates the need for metallurgical coal in ironmaking.

DRI furnaces directly replace blast furnaces and today use methane gas instead of coke made from metallurgical coal. This existing technology is already successfully deployed at an industrial scale across the U.S. by three different companies in Ohio,¹ Texas² and Louisiana.³ While methane gas DRI already operates without coal, the technology continues to innovate and expand the use of alternative fuels. Companies like SSAB⁴ and Stegra⁵ in Sweden have proven that we can replace methane gas with green hydrogen made from renewable energy. Another alternative to the blast furnace process is molten oxide electrolysis (“MOE”), which requires no coal inputs and is currently being demonstrated by the U.S.-based Boston Metal.⁶

In addition to the capacity and potential of DRI furnaces to eliminate the need for metallurgical coal in the production of new steel products from iron ore, most U.S. steel is already produced through processes that recycle existing steel rather than creating new steel. The United States is a global leader in electric arc furnace (EAF) technology and innovation, which currently accounts for over 70% of U.S. steelmaking capacity⁷ and does not rely on metallurgical coal. This figure is projected to rise to 75% by 2030⁸ and 90% by

¹ Cleveland-Cliffs, *Producing High Quality HBI in Toledo*.

<https://www.clevelandcliffs.com/sustainability/environment/producing-high-quality-hbi-in-toledo>.

² ArcelorMittal, *ArcelorMittal Texas HBI*.

<https://northamerica.arcelormittal.com/our-operations/arcelormittal-texas-hbi>.

³ Teneva, *ENERGIRON enables Nucor to achieve a World Production Record* (November, 2024).

<https://tenova.com/newsroom/press-releases/energiron-enables-nucor-achieve-world-production-record>.

⁴ SSAB, HYBRIT®. *A new revolutionary steelmaking technology*.

<https://www.ssab.com/en-us/fossil-free-steel/insights/hybrit-a-new-revolutionary-steelmaking-technology>.

⁵ Stegra. <https://stegra.com/>.

⁶ Snook, J., Thorne, S., Hardison, R., Homicki, C., & Seidenfeld, J., Clean Energy Buyers Association, *Powering United States Primary Steel Decarbonization* (November, 2024),

https://cebayers.org/wp-content/uploads/2024/11/CEBA_Powering-United-States-Primary-Steel-Decarbonization_November-2024.pdf.

⁷ Steel Manufacturers Association, *New Study: Enough Scrap to Meet Rising U.S. Demand for Recycled Steel* (February, 2025).

<https://steelnet.org/new-study-enough-scrap-to-meet-rising-u-s-demand-for-recycled-steel/>.

⁸ Chavan, S., Persistence Market Research, *U.S. Hot Briquetted Iron Market Size, Share, and Growth Forecast from 2025 - 2032* (February, 2025),

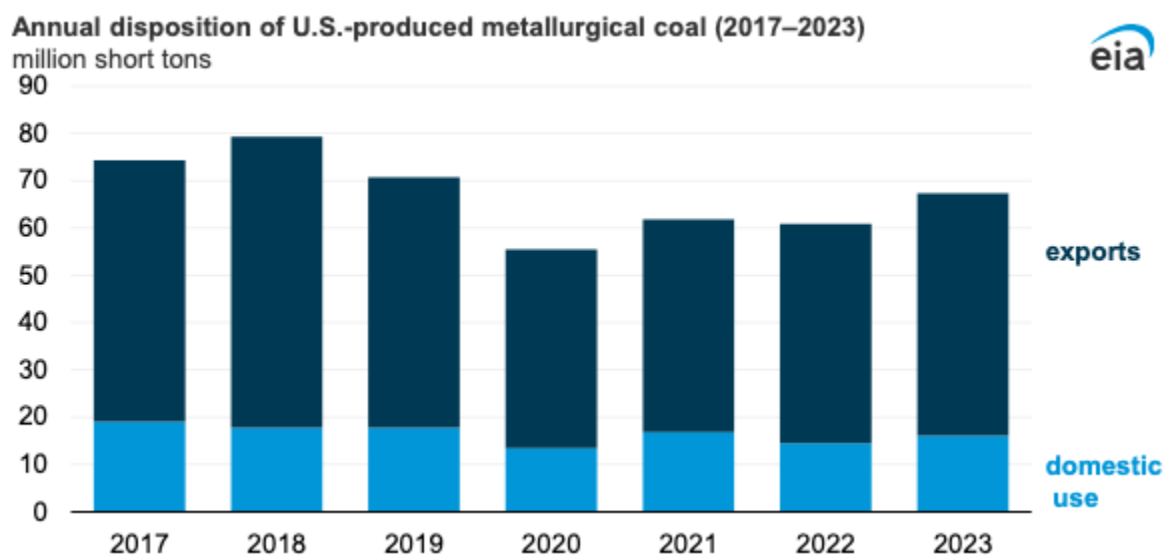
<https://www.persistencemarketresearch.com/market-research/us-hot-briquetted-iron-market.asp>.

2040.⁹ Therefore, as U.S. steel production increasingly relies on EAFs and other advanced technologies rather than blast furnaces, reliance on metallurgical coal will continue to decline. While new ironmaking is still critical to the EAF process in a few important applications, DRI products already meet those needs, further negating the need for metallurgical coal to protect iron and steelmaking for “our national economy and security.”

As was noted in the Draft List of Critical Minerals, “mineral criticality is not static, but changes over time.”¹⁰ Industry trends clearly show that demand for metallurgical coal to produce steel is only decreasing. In other words, metallurgical coal is no longer essential for steelmaking, is only continuing to diminish in importance, and is therefore not a critical mineral.

The metallurgical coal supply chain is not “vulnerable to disruption”

The U.S. metallurgical coal supply chain is already overwhelmingly domestic and primarily for export, ensuring it is not “vulnerable to disruption.” According to the U.S. Energy Information Administration, “Of the estimated 67 million short tons of metallurgical coal produced in the United States in 2023, 76% (51 million short tons) was exported to coke



producers and steelmakers around the world.”¹¹ In fact, as seen in the figure below, the U.S. exported significantly more metallurgical coal than it used domestically for each of the past

⁹ Steel Manufacturers Association, New Study: Enough Scrap to Meet Rising U.S. Demand for Recycled Steel (February, 2025), <https://steelnet.org/new-study-enough-scrap-to-meet-rising-u-s-demand-for-recycled-steel/>.

¹⁰ 90 Fed. Reg. at 41,593.

¹¹ Energy Information Agency, *Reasons behind the price premium for U.S. metallurgical coal exports* (April, 2024). <https://www.eia.gov/todayinenergy/detail.php?id=61924#>.

seven years. During the same time period, the U.S. has imported less than 1.7 million tons annually.¹² Clearly, the U.S. is not dependent on imports of metallurgical coal.

Further, the current trends of the industry suggest that U.S. demand for metallurgical coal will decrease even if domestic steel manufacturing increases. The supplementary information in the Federal Register notice states that “materials are not considered critical as defined by the Energy Act for a variety of reasons, including that the U.S. meets its needs for these materials largely through domestic mining and processing and thus a supply disruption is considered unlikely.” This statement directly applies to metallurgical coal because it is domestically mined and processed in excess of demand.

Metallurgical coal is a “fuel mineral”

While metallurgical coal is mostly used in steelmaking, it is also used as a fuel in some coal-fired power plants, as documented in a recent Bloomberg investigation.¹³ In fact, a May 2025 analysis from the U.S. Department of Energy (“DOE”) noted that “metallurgical coal may be used in thermal applications.”¹⁴ Nevertheless, DOE justified its classification of metallurgical coal as a “critical material” in that analysis by asserting that “coal used in the steel-making process serves a non-fuel mineral purpose.”¹⁵ However, the Energy Act’s definitions of “critical mineral” and “critical material” do not invoke the “purpose” of the mineral or material; they simply and unambiguously exclude all “fuel minerals” from both definitions.¹⁶ Furthermore, Congress has already explicitly defined coal as a mineral fuel through the Mining and Mineral Policy Act of 1970.¹⁷ Just because metallurgical coal is also used in the production of some steel does not abrogate the plain meaning of the Energy Act or congressional intent dating back decades.

As others have noted, the physical differences that are used to categorize different types of coal “are not rigid categories: they lie on a spectrum, with some overlaps.”¹⁸ This is precisely why metallurgical coal does not meet the “non-fuel” definition: Pulverized Coal Injection (“PCI”) coal and semi-soft, for instance, can be used in the steelmaking process but can also be used for traditional thermal purposes. The lack of any clear definitions for

¹² EIA Coal Data Browser, <https://www.eia.gov/coal/data/browser/>.

¹³ Bloomberg, *Coal Loophold Undermines Bank Pledges to Cut Fossil-Fuel Funding* (June, 2025). <https://www.bloomberg.com/news/articles/2025-06-24/banks-insurers-curbs-on-thermal-coal-undermined-by-loophole>.

¹⁴ DOE, *The Intrinsic Role of Coal in Achieving Steel Dominance* (May, 2025) at 5, <https://www.energy.gov/sites/default/files/2025-05/doe-intrinsic-role-of-coal-in-achieving-steel-dominance.pdf> (“DOE Analysis of Metallurgical Coal”).

¹⁵ DOE Analysis of Metallurgical Coal at 2.

¹⁶ Section 7002(a)(3)(B) of the Energy Act of 2020.

¹⁷ The Mining and Mineral Policy Act of 1970, 30 U.S. Code § 21a (“For the purpose of this Act “minerals” shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium.”).

¹⁸ Wright, M. SteelWatch, *Met coal: what it is and why it is a climate risk* (2025), https://steelwatch.org/wp-content/uploads/2025/04/2504_MetCoal-1.pdf.

what counts as metallurgical coal could lead to the unintentional – or willful – classification of some thermal coal as “critical” regardless of whether it will be used in the steelmaking process or not.

In addition, while Section 7002(c)(4)(B) of the Energy Act of 2020 permits the Secretary to include on the critical minerals list any substance designated as critical by another agency (such as the Department of Energy), that section clearly only allows the Secretary to do so for minerals which do not meet all three of the criteria laid out in Section 7002(c)(4)(A). It does not allow the Secretary to override the definition of a critical mineral in 7002(a)(3) which categorically excludes “fuel minerals” like coal. Because metallurgical coal may be used as a fuel it does not meet the definition of a critical mineral and it must not be included in the 2025 List of Critical Minerals.

Conclusion

Metallurgical coal does not meet the criteria to be included in the 2025 List of Critical Minerals and doing so would further endanger the jobs and economic growth promised by modern manufacturing investments in our domestic iron and steel industry. According to leading U.S. coal-based steelmaker Cleveland-Cliffs, their plan to convert a coal-based furnace to methane gas DRI would have increased jobs at the site by 170 workers.¹⁹ Similarly, a study from the Ohio River Valley Institute on transitioning the Mon Valley Works in Pennsylvania to green hydrogen DRI-EAF found that the total number of jobs would go up, notably reversing the current trend of job loss.²⁰

Not only is ironmaking possible without metallurgical coal, it is also economic. As a result of their innovation, SSAB and Stegra are earning a 30% price premium for their advanced iron and steel products made without coal.²¹ In the U.S., Cleveland-Cliffs estimated that it would save \$150 per ton of liquid steel by switching from coal to gas.²²

¹⁹ Cleveland-Cliffs, *Cleveland-Cliffs Selected to Receive \$575 Million in US Department of Energy Investments for Two Projects to Accelerate Industrial Decarbonization Technologies* (March, 2024). <https://www.clevelandcliffs.com/news/news-releases/detail/629/cleveland-cliffs-selected-to-receive-575-million-in-us>.

²⁰ Ohio River Valley Institute, *Green Steel in the Ohio River Valley* (April, 2023). (<https://ohiorivervalleyinstitute.org/wp-content/uploads/2023/04/Green-Steel-in-the-Ohio-River-Valley-FINAL-6.pdf>).

²¹ Swiss Business School, *Stegra's Green Revolution: Redefining Steelmaking for a Zero-Carbon Future* (January 2025). <https://www.sbs.edu/cscfs-news/stegras-green-revolution-redefining-steelmaking-for-a-zero-carbon-future/>.

²² Cleveland-Cliffs, *Cleveland-Cliffs Selected to Receive \$575 Million in US Department of Energy Investments for Two Projects to Accelerate Industrial Decarbonization Technologies* (March, 2024). <https://www.clevelandcliffs.com/news/news-releases/detail/629/cleveland-cliffs-selected-to-receive-575-million-in-us>.

Further, coal mining contaminates groundwater, produces toxic dust, and recently has been shown to produce more methane globally than oil or gas operations.²³ The toxic waste streams produced by coal mining have been harming communities across the U.S. for centuries. Each year, new research shows the co-location of poor health outcomes and of coal mining activity, particularly in Appalachia, where the vast majority of metallurgical coal resources in the U.S. are located.²⁴ If USGS were to include metallurgical coal in the 2025 List of Critical Minerals, such a federal designation would stifle innovation in steel production and force communities to pay the price for expanded coal operations.

Rather than entrenching coal in federal materials policy, the U.S. should focus on strengthening its leadership in clean, modern steel innovation to secure its future competitiveness. According to the Bipartisan Policy Center, "Inclusion can make a specific type of mineral project eligible for federal funding, subject to a streamlined permitting process, or more competitive due to fees placed on imports."²⁵ Designating metallurgical coal as a "critical material" would artificially prop up a dying industry, pave the way for more pollution, and undermine our competitiveness.

Prioritizing and potentially subsidizing²⁶ metallurgical coal, mostly for export, directly undermines American manufacturing, competitiveness and innovation. The below-listed organizations urge the U.S. Geological Survey not to include metallurgical coal in the 2025 List of Critical Minerals.

Respectfully submitted,

Earthjustice
Industrious Labs
Breathe Project
SteelWatch
Ohio River Valley Institute
Public Citizen
Group Against Smog & Pollution
Center for Biological Diversity
Allegheny-Blue Ridge Alliance
Montana Environmental Information Center

²³ Ryan Driskell Tate, *Bigger than Oil or Gas? Sizing Up Coal Mine Methane*, Global Energy Monitor (Mar. 2022), https://globalenergymonitor.org/wp-content/uploads/2022/03/GEM_CCM2022_r4.pdf.

²⁴ Appalachian Voices, Human Health Impacts, <https://appvoices.org/end-mountaintop-removal/mtr101/health-impacts/>.

²⁵ Bipartisan Policy Center, *Which Minerals are Critical? It's More Complicated Than You Think* (August, 2024). <https://bipartisanpolicy.org/blog/which-minerals-are-critical-its-more-complicated-than-you-think/>.

²⁶ InsideClimate News, *In Trump's Megabill, a Clean Energy Phase Out and a Big, Beautiful Tax Break for Met Coal Exporters* (July, 2025). <https://insideclimatenews.org/news/02072025/big-beautiful-bill-met-coal-tax-break/>.

Kentucky Resources Council, Inc.
Appalachian Citizens' Law Center
West Virginia Highlands Conservancy
Earthworks
Sierra Club