

# Mining for War: Assessing the Pentagon's Mineral Stockpile

How can the Pentagon's energy transition mineral stockpiles be repurposed toward the green transition?

4 Dec 2025 • [Lorah Steichen](#)

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## Executive Summary

Driven by concerns about supply chain vulnerabilities amid escalating great power competition with China, the Pentagon is accelerating efforts to secure access to the so-called critical minerals, which are essential to military industries. Central to this push is a ramped-up effort to stockpile these materials within the Defense Logistics Agency (DLA) National Defense Stockpile. The Pentagon's expanding demand for critical minerals risks diverting vital resources away from civilian decarbonisation initiatives and accelerating militarised competition at a time when global collaboration is essential for a just climate transition. When industrial strategy is shaped by military and national security priorities, it not only entrenches geopolitical conflict but also distorts pathways for equitable climate action, redirecting public resources and state capacity away from the broader demands of rapid and just decarbonisation. This briefing examines how the Pentagon's role in mineral supply chains, particularly through stockpiling, challenges the global energy transition.

Key findings:

- Since the passage of the One Big Beautiful Bill Act, which earmarked billions of dollars to bolster the National Defense Stockpile, the DLA has solicited contracts to stockpile a growing list of critical minerals, including several materials essential to the energy transition.
- The DLA plans to stockpile almost 7,500 metric tons of cobalt. That amount of cobalt could be used instead to produce 80.2 gigawatt hours of battery capacity — more than double existing energy storage.

- The DLA's planned cobalt and graphite stockpiles could be used instead to produce approximately 100,000 electric buses — fifteen times more than are currently in operation across the United States.

The global transition to low carbon energy hinges on access to minerals which are vital components of renewable technologies. Estimates suggest that at least thirty energy transition minerals and metals (ETMs), such as lithium, cobalt, graphite and rare earth elements (REE), form the material basis of the energy transition.<sup>1</sup> Many of these same materials are also used to manufacture military technologies: everything from precision-guided weaponry and advanced communication systems to an emerging arsenal of military technologies such as AI-driven autonomous warfare platforms. Virtually every modern weapons system relies on mineral components.<sup>2</sup> The US government refers to these materials as “critical minerals”, where “criticality” is defined by a material’s economic or national security importance and susceptibility to supply disruptions.<sup>3</sup> Such designations authorize new modes of state intervention to ensure access and production, such as financial support, regulatory fast-tracking and other market-crafting efforts.<sup>4</sup> While there are overlaps, shorthanded in this briefing as “dual-use”, not all decidedly “critical” minerals are ETMs, nor are all ETMs captured within US critical mineral lists.

Beyond military applications, some of these same minerals are increasingly in demand for civilian technologies such as semiconductors, large-scale data centres and AI computing infrastructure, further intensifying competition for constrained supply chains.<sup>5</sup> As demand grows, global supply chains for these materials face mounting pressures, driven less by geological scarcity at present than by limited refining and processing capacity and the potential for future market volatility. In the United States, efforts to secure critical minerals are increasingly driven by concerns over China’s dominance in mineral markets and the perceived strategic vulnerabilities this creates amid intensifying great power rivalry — a posture that has not only persisted, but escalated across the first Trump, Biden, and now second Trump administrations. Washington is ramping up stockpiles, forging trade deals, investing in domestic production and even taking equity stakes in mineral companies to “onshore” supply and assert dominance over mineral supply chains.<sup>6</sup> By exerting control over the sourcing and distribution of critical minerals, the Pentagon is diverting materials away from civilian-led decarbonisation efforts while maintaining its

role as the world's largest consumer of fossil fuels and a major driver of climate change.<sup>7</sup>

This briefing considers the US military's role in driving extractive demand by analysing recent procurement activity by the Defense Logistics Agency (DLA), with a focus on critical and dual-use minerals. These materials are increasingly relevant not only to military supply chains and digitalisation but also to civilian renewable energy technologies, raising urgent questions about how resources are allocated and for what interests. Given the significant social and environmental harms associated with large-scale mining, mineral resources should be directed towards socially useful sectors. Advancing a just energy transition requires strong environmental regulation and enforcement, along with coordinated planning across sectors to support a sustainable industrial strategy, which centres equity, reduces emissions and directs public investment toward long-term green transformation.<sup>8</sup> By analysing recent trends in the DLA's stockpiling of critical and dual-use minerals, this briefing demonstrates the US military's expanding influence over mineral supply chains and associated risks to the energy transition and global resource governance.

## Militarised Mineral Supply Chains

The Pentagon is a major actor in mineral acquisition and planning, wielding outsized influence over domestic supply chains and in the global race for resources. This influence stems in part from the sheer scale of the US military. Sustained by a one trillion USD annual budget, the United States accounts for nearly 40 per cent of all military expenditures by countries around the world, spending more on war than the next nine countries combined.<sup>9</sup> At home, military spending also consumes a disproportionate share of public resources. The Pentagon accounts for over half of federal discretionary spending and nearly two-thirds of all federal contracting, with procurement contracts to private firms representing over half of military spending every year.<sup>10</sup> In 2022, 36 per cent of Pentagon contracts went to just five private companies major war profiteers: Boeing, Lockheed Martin, Northrop Grumman, General Dynamics and Raytheon.<sup>11</sup> Beyond these industry giants, the Pentagon purchases a vast array of other goods and services, everything from food, fuel and uniforms to high-tech surveillance technologies, accounting services and raw materials. This vast procurement machinery links US military planning to global

extractive frontiers, intensifying demand pressures and influencing how and where resources are sourced.

In addition to its outsized scale and budget, the Pentagon exercises unique authorities relative to other agencies that allow it not only to influence mineral supply chains but to shape entire markets: absorbing risk, directing investments and creating demand signals that build strategic industrial capacity for military ends.<sup>12</sup> Through mechanisms like DLA stockpiling and the Defense Production Act (DPA), the Pentagon directly procures raw materials and channels investment into selected mining and processing projects.<sup>13</sup> These powers give the military latitude to steer industrial development according to military objectives — often at the expense of environmental oversight. For example, President Trump's 2025 Executive Order titled "Immediate Measures to Increase American Mineral Production", which invokes the DPA to accelerate domestic mineral development, calls for the suspension of standard environmental review as required by the National Environmental Policy Act (NEPA).<sup>14</sup>

According to a recent analysis of US public financing for mineral projects, the Pentagon has funded or signalled interest in supporting at least twenty mining initiatives in the US and Canada through DPA spending authorities, totalling nearly one billion USD since 2023.<sup>15</sup> In a striking example of this expanding market role, the US government has moved to take direct equity stakes in "critical mineral" companies — an unprecedented step in modern US industrial policy.<sup>16</sup> In July the Pentagon became the single largest shareholder in the United States' only rare earths mine, purchasing 400 million USD in shares in the company MP Materials and negotiating a ten year offtake agreement, a contract to purchase a fixed portion of future production, backed by price supports to stabilise the market and guarantee returns.<sup>17</sup> The first in what has become a series of stakes in several companies, the tool not only shapes mineral supply chains but also consolidates the Pentagon's control over them.<sup>18</sup>

Another expression of the Pentagon's expanding role in mineral supply chains is the revival of Cold War era stockpiling practices through the DLA. The US military's primary logistics arm, it leverages purchasing power and contracting mechanisms to carry out procurement, storage, distribution and technical services. Established in 1961 at the height of the Cold War, the agency was created to centralise and streamline military supply operations as the United States expanded its global military footprint. One of its key functions became

the management of the National Defense Stockpile (NDS), a reserve of non-fuel raw materials deemed essential for national security first established in 1939.<sup>19</sup> From the outset, stockpiling was explicitly tied to military readiness — the very notion of “criticality” emerged within this context, defined by a material’s strategic function and its vulnerability to supply shocks — criteria, and bellicose associations, that remain core to today’s critical mineral designations.<sup>20</sup>

Although its role waned after the Cold War, the DLA’s stockpiling function has reemerged as the Pentagon seeks to secure critical minerals and reduce dependence on foreign, especially Chinese, sources.<sup>21</sup> The agency began reevaluating rare earth supply vulnerabilities as early as 2014 and more recently announced plans to procure and stockpile a suite of critical minerals amid an influx of funding from Trump’s Big Beautiful Bill (outlined in greater detail below).<sup>22</sup> Previously in 2022, the Departments of Energy, State and Defense signed an interagency agreement to begin stockpiling materials to “support the U.S. transition to clean energy and national security needs”, a move justified as enhancing “American energy security and 21st century competitiveness.”<sup>23</sup> Yet even when cast in broader terms, disbursements through the NDS remain structurally oriented toward military priorities, limiting their deployment to the wider civilian economy. Materials in the NDS can only be released by the president in times of declared war or if otherwise deemed necessary “to serve the interest of national defense only.”<sup>24</sup>

The revival of stockpiling practices has unfolded alongside a broader shift in how ETMs are framed across news, policy and industry communications. With a growing emphasis on urgency, scarcity and looming military threats, securing mineral supply chains is increasingly portrayed as essential to geopolitical security and a pathway to economic stability. This policy and industry-driven framing fosters a “growth at any cost” mentality that undermines regulation, standard-setting, multilateral cooperation, long-term perspectives and broad notions of rights and responsibilities — all key tenets of a just energy transition.<sup>25</sup> The narrative aligns with the material interests of multinational mining corporations, weapons manufacturers and other financial stakeholders who stand to profit from unchecked extraction, whether under the banner of national security or the energy transition. While there is no immediate shortfall of most ETMs, military demand for key transition minerals risks diverting materials from civilian decarbonisation needs and inflating long-term demand

projections, a dynamic that risks accelerating mining expansion, even in the absence of near-term scarcity. <sup>26</sup>

Additionally, the extraction of critical minerals has profound environmental and social costs. In the absence of robust recycling systems, growing demand for critical minerals drives new mining ventures in a global industry notorious for disastrous environmental, human, worker and Indigenous rights violations.

<sup>27</sup> Mining operations often flatten entire ecosystems, generating massive volumes of toxic waste and contaminating soil and water — pollution that can persist long after a mine is closed with disastrous implications for human and environmental health. <sup>28</sup> The harms inflicted at sites where raw materials for weapons are extracted prefigure similar patterns of ecological devastation and public health crisis that occur at every stage of a weapon's lifecycle, from manufacturing and testing to deployment and disposal. <sup>29</sup> In other words, the ecological devastation and toxic legacies caused by military technologies begins with raw material extraction and persists throughout at every stage of their lifecycle of destruction.

The merging of geopolitical threats with business interests, used to justify the military's growing demand for so-called critical and dual-use minerals, reflects a broader problem of material capture in which resources and state capacity are directed toward military priorities. <sup>30</sup> Diverting materials away from essential civilian uses like renewable energy infrastructure, risks slowing decarbonisation efforts at a time when rapid action is crucial. Moreover, stockpiling fuels a dangerous dynamic of military competition, where access to materials becomes a geopolitical contest decided by force rather than a shared resource for the global energy transition. By capturing these materials to fuel the war machine, the Pentagon not only drains resources needed for urgent climate solutions but also perpetuates a destructive cycle of militarism that undermines global peace and sustainability while crowding out the civilian functions of the federal government. This misplaced prioritisation threatens both the planet's future and the possibility of a just, collaborative energy transition that benefits all people rather than narrow military interests.

## The Growing Military Mineral Stockpile

Materials profiled in this briefing reflect emerging stockpiling priorities and trends as well as their relevance to both military supply chains and civilian clean

energy technologies. This analysis reviews recent procurement activity by the DLA, with a focus on contract awards and solicitations related to critical minerals as listed by the federal government's System for Award Management.

The DLA's contracting behaviour provides a useful, though incomplete, window into how military priorities clash with broader resource needs for the energy transition.<sup>31</sup> A significant portion of materials used to produce weapons and other military infrastructure flows through private weapons manufacturers, whose operations are largely shielded from public scrutiny. This flow of materials into military infrastructure — including surveillance systems, weapons platforms, and fossil-fuelled war machines — remains largely undocumented. There is no publicly available accounting of military demand for key minerals essential to the energy transition. This lack of transparency constitutes a major accountability gap, obscuring military resource consumption, representing a barrier to justice-based transition planning.

Despite these limitations, analysis of recent DLA activity demonstrates emerging priorities in stockpiling dual-use minerals, highlighting the US military's role in supply chains vital to both military and energy transition technologies. The DLA stockpiles about 48 minerals and alloys in six depots across the United States.<sup>32</sup> Trump's Big Beautiful Bill earmarked 7.5 billion USD for critical minerals, including two million USD specifically for the NDS.<sup>33</sup> The table below<sup>34</sup> outlines DLA stockpiling contracts and solicitations since the passage of the Bill.

**Table 1: DLA Stockpiling Solicitations Since the Passage of the Big Beautiful Bill Act**

Material	Volume (metric tonnes)	Key military applications	Key transition applications
Antimony	Up to 3,032.66t	Munitions, flame retardants	Not typically considered an ETM, but used energy storage
Cobalt*	Up to 7,480.35t	Aerospace, munition systems	Energy storage
Graphite	Up to 49,433.28t	Wide range of military hardware, e.g. tanks, artillery, missiles	Energy storage
Indium	222t	Radar and targeting electronics	Solar energy
Nickel niobium alloy	Up to 655.95t	Aerospace	Nickel is used in wind and solar energy, and energy storage
Niobium	Up to 172.53t	Aerospace	Not typically considered an ETM
Rare earth elements (REE)**	Dysprosium oxide: ~30t Gadolinium oxide: ~900t Samarium oxide: ~3,500t Scandium metal: up to 10t Terbium oxide: ~10t	Aerospace, missiles, radar systems, drones and surveillance technology	Energy storage, wind energy
Rhenium	40t	Jet engine components and rocket nozzles	Not typically considered an ETM
Tantalum	Up to 242.87t	Aerospace, armor-piercing projectiles and other specialized equipment withstanding high temperatures	Not typically considered an ETM
Tungsten	Tungsten ores and concentrates: 1,715t Sodium tungstate: 2,000t	Guided missiles, armour-piercing munitions and heat-resistant alloys	Not typically considering an ETM, but used in wind and solar energy, and energy storage

\*The DLA cancelled this contract opportunity due to "outstanding issues with the Statement of Work that need resolution before offers may be solicited," but intends to re-issue the solicitation upon resolution.

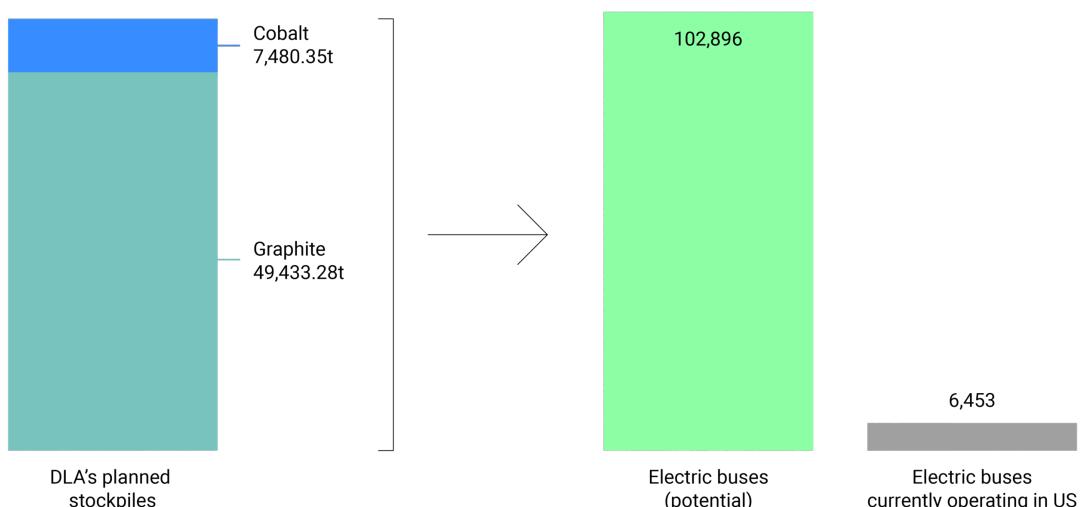
\*\*REEs are 17 elements with some chemical similarities to one another. They are only rare in the sense that they are not found in concentrated deposits and need to be separated. Specific military and transition applications for REE depend on the specific element.

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As noted in the table, many of the materials included in the DLA's recent stockpiling activities are not materials typically considered essential to the energy transition. Rather than aligning with climate or renewable energy goals, the DLA's stockpiling priorities are driven by national defence imperatives.<sup>35</sup> However, many of the same materials in the NDS could be used to support the rapid deployment of renewable energy technologies and advance broader decarbonisation goals. Cobalt and graphite, for example, are key ETMs, used extensively in battery technologies that power electric vehicles and enable large-scale energy storage, both critical components of the energy transition.<sup>36</sup> The amount of cobalt and graphite the DLA has recently solicited for the National Defense Stockpile could supply the cobalt and graphite needed to manufacture over 100,000 electric buses — a substantial share of the fleet required to reorder the US transportation system to prioritise electrified public transit over car dependency.<sup>37</sup> Today, fewer than 6,500 electric buses are in operation nationwide.<sup>38</sup>

### Figure 1: Cobalt and Graphite Stockpiles Could Electrify US Transit

The DLA's planned cobalt and graphite stockpiles could instead produce more than 100,000 electric buses — 15 times more than are currently in operation across the United States.



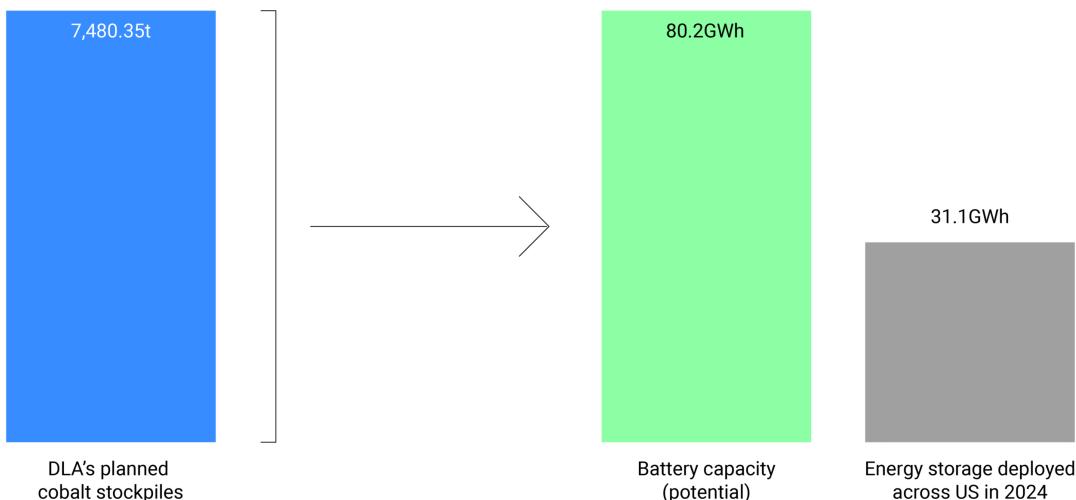
Source: US General Services Administration (GSA) System for Award Management (SAM) database (2025); Climate and Community Institute (2025); Calstart (2025); Climate and Community Institute (2023).

Moreover, grid-scale battery storage, which plays a critical role in stabilising the electricity grid by storing and dispatching excess energy from variable renewable sources like wind and solar, will need to grow significantly to support the energy transition. At the same time, battery storage systems are mineral intensive.<sup>39</sup> Compared to the 1015.23t of cobalt that went to battery storage in 2024, the nearly 7,500t of cobalt slated for the DLA stockpile could be used

instead to produce 80.2 gigawatt hours of battery capacity — more than double existing energy storage.<sup>40</sup> This highlights the significant potential for these materials to accelerate clean energy deployment.

**Figure 2: Potential Grid Battery Storage Expansion from Cobalt Stockpile**

The DLA's planned cobalt stockpile could be used to build an equivalent of 80.2 GWh of battery capacity — more than double the energy storage deployed across the US in 2024



Source: US General Services Administration (GSA) System for Award Management (SAM) database (2025); IEA Critical Minerals Dataset (2025); IEA Global Critical Minerals Outlook 2025 (2025); American Clean Power (2025); U.S. Department of Energy (2023).

Notes: Quantification based on the mid-range material intensity of cobalt per stationary storage lithium-ion battery.

Military demand for transition minerals could also drive new forms of ecological destruction by accelerating harmful extractive practices. Deep-sea mining, a relatively untested method of extracting metals from the ocean floor, is gaining global momentum despite widespread concerns about its environmental risks and unproven benefits.<sup>41</sup> In March 2025, the US federal government escalated its pursuit of deep-sea mining by partnering with The Metals Company (TMC) to commercially explore mining in the international seabed, justifying the move as necessary to secure supply chains for military technologies and strategic autonomy while bypassing ongoing multilateral negotiations.<sup>42</sup> The move was followed by an executive order signalling intent to “restore American dominance in offshore critical minerals and resources.”<sup>43</sup> The multi-billion dollar push for deep-sea mining relies on overstated claims about material scarcity, social benefits and economic gains.<sup>44</sup> Far from responding to real need, the latest push for deep-sea mining is entangled in opportunistic industry attempts to capitalise on geopolitical volatility and present deep-sea mining as a US national security imperative, a move that itself could heighten global insecurity and provoke new conflicts.<sup>45</sup> Circumventing

international law undermines multilateral governance and risks intensifying competition over contested waters, escalating conflict in the Pacific and turning the international seabed into a contested arena of resource extraction and strategic competition — a dynamic which has been described as a “literal race to the bottom.”<sup>46</sup>

## Beyond Military and Mineral Dominance

The Pentagon’s demand for critical and dual-use minerals skews global mineral supply chains toward military interests. In a context where mining is constrained to meeting socially useful and needed purposes — prioritising rapid decarbonisation while minimising the harms of extraction — channelling minerals and metals to the military diverts resources from necessary civilian uses. This diversion slows progress towards a sustainable and equitable energy future: the materials essential to the energy transition should accelerate decarbonisation, not feed an insatiable war machine. At a time when collective action is crucial to confront climate crisis, the expansion of militarised mineral supply chains deepens geopolitical competition and privileges militarised forms of security over collective wellbeing.<sup>47</sup> True security lies not in military or “mineral dominance”, but in building systems that sustain both people and the planet.

### Recommended policy approaches

#### 1 Curb excessive demand

Implement policies that promote recycling and reduce mineral demand overall. Regulate and reduce demand from sectors with high mineral intensity and environmental impact, such as military activities and data centres, to alleviate pressure on transition mineral resources.

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#### 2 Embed justice and accountability

Enforce labour, environmental and Free, Prior and Informed Consent (FPIC) conditions on all public procurement contracts for minerals and technologies, promoting social and ecological responsibility throughout supply chains.

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### 3 Democratise resource governance

Establish transparent, civilian-led industrial policy tools to stabilise markets, safeguard supplies, serve the public interest and ensure equitable access to transition minerals. Reform emergency powers to align with civilian climate goals.

### 4 Foster global solidarity

Build international cooperation, including coordination with China on climate technology collaboration to reduce duplication in supply chains, lower mining demand and ease geopolitical tensions impacting mineral markets.

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