

Biden's Defense Production Act Order and Four Key Ways to Ensure Supply Chain Justice

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by Climate and Community Project

On March 31, the Biden Administration invoked a 1950 law called the Defense Production Act (DPA) to ramp up domestic mining for “clean energy technologies,” particularly for lithium-ion batteries used to power electric vehicles and other renewable technologies.¹ Putin’s invasion of Ukraine and sanctions on Russian oil and gas exports have put energy supply chains into the limelight, dramatically raising the price of fuel. Climate advocates in the United States called upon President Biden to use his executive powers to end fossil fuel dependence in order to weaken the geopolitical power of fossil fuels and address the climate emergency.²

Since transportation is the single largest source of US emissions, the Biden Administration has made the expansion of electric vehicles pivotal to its clean energy investment plan – making lithium a crucial mineral to its success. Sanctions on Russia and ongoing trade disputes between the US and China have increased tensions around global supply chains and energy security. President Biden sees onshoring so-called “critical minerals”³ as a way to respond both to appeals for national energy security⁴ and meet his climate commitments by ensuring that battery and electric vehicle companies have access to the critical minerals required for manufacturing.

The transition off of fossil fueled transportation is central to decarbonization. We must do so in a way that minimizes the devastating environmental and social impacts of critical mineral production by expanding mass transit and reducing the resource intensity of electrification.

Mining is one of the most environmentally harmful industries, with multinational mining companies and their governmental allies subjecting communities to rights violations and outright violence.⁵ Critical minerals like lithium are also in the crosshairs of escalating geopolitical conflict between economic superpowers vying for global dominance of 21st century green sectors. Furthermore, the growing gap between available market supplies of these metals and booming demand has pushed up prices and spread fears of shortages, raising the cost of battery and EV production.⁶ In some cases, price spikes and market panics are the result of the speculative activity of commodity traders.⁷

In the United States, frontline communities and Indigenous advocacy organizations are concerned the rapid



expansion of domestic mining for critical minerals will take precedence over rigorous environmental regulation and rights enforcement. This concern is based on precedent: permitting for the Thacker Pass lithium project in Nevada was fast-tracked as a result of Trump's Executive Order directing agencies to "accelerate" regulatory processes for critical minerals mining projects.⁸ The result was questionable environmental impact statements, limited opportunities for community review and participation, and subsequent protests and lawsuits.⁹ This precedent must not be repeated.

What the Presidential Determination Says:

- **Biden ordered the Department of Defense to include lithium, cobalt, graphite, nickel, and manganese as essential to national security and to ensure their supply.** The Department would ensure supply through "domestic mining and processing; recycling and reuse; and recovery from unconventional and secondary sources, such as mine waste."
- **Biden promised that the mining will be governed with high standards.** In a nod to environmental and Indigenous advocates, Biden's determination promises that the critical mineral sectors will be governed with "strong environmental, sustainability, safety, labor, Tribal consultation, and impacted community engagement standards." However, there is little information on how this would be done.
- **Biden directed \$750 million in the Defense Production Act Fund to ensure supply.** Specifically, the order calls for the funds to support feasibility studies for a range of mining-related projects including "beneficiation" (creating higher grade products), mine waste reclamation, and other projects. This could mean millions of dollars in subsidies for mining companies with questionable environmental and social practices.

The only way to ensure less environmental harm as we transition to a new energy system is to design that system with an eye to reducing its overall mineral requirements. We can simultaneously address the climate crisis and reduce extraction-related harm if we take a systemic approach to governing the economic sectors that shape demand for new mining. Given looming market shortages and high prices of various critical minerals, reducing the mineral intensity of the energy transition is not only environmentally sound but economically rational. Mineral intensity is not a given. The total volume of metals required by the energy transition are based on complex input-output models of the main drivers of future demand (such as policy decisions, consumer habits, and infrastructural investments); the International Energy Agency, for example, predicts a 4200% increase in demand for lithium between 2020 and 2040.¹⁰

President Biden should ensure that his executive actions related to critical minerals are paired with robust environmental and human rights regulations and aim to reduce overall mineral requirements:

1. Reform the 1872 General Mining Law. The provisions of the 1872 General Mining Law are out of step with the scale and impacts of contemporary large-scale mining, and the law contains no protections for communities and ecosystems. The Biden Administration itself has recognized the inadequacy, and discussed potential mining governance reform.¹¹ The Mining Law must be reformed to recognize Free, Prior, and Informed Consent of Indigenous peoples as laid out in the International Labor Organization's Convention 169,¹² and the United Nations' Declaration on the Rights of Indigenous Peoples.¹³ As advocated for by Earthworks and Earthjustice, it also must be amended to include environmental protections, including safeguards against water contamination and water overconsumption, require companies fund the environmental remediation of abandoned mines, and reduce mining wastes while ensuring wastes are safely stored.¹⁴ In addition, the law ought to include a provision for royalties for hard rock subsidies on public lands.

2. Rapidly build out critical mineral recycling infrastructure. Recycling critical minerals has become far more technically and economically feasible, and would directly lower the need for new mining. According to a recent report from Earthworks, recycling has the potential to reduce demand in 2040 by approximately 25 percent for lithium, 35 percent for cobalt and nickel and 55 percent for copper.¹⁵ The United States should rapidly build out recycling infrastructure and capacity, as well as mandate that battery manufacturers use recycled feedstock, much like the European Union may soon require.¹⁶

3. Invest in Independent and Publicly Funded Research and Development (R&D). Much of the current Presidential Determination focuses on supporting feasibility studies and R&D related projects, potentially funneling mining companies massive subsidies. Currently, the Department of Energy works directly with the private sector on R&D pertaining to critical minerals and batteries.¹⁷ We must ensure that taxpayer-funded research is objective, free of corporate influence, and open and accessible to the public.

In particular, a public R&D program for critical minerals should (1) quantify lithium mining's environmental consequences (including related to water consumption and contamination, GHG emissions and

localized pollution, and biodiversity), with attention to the differential impacts that vary based on deposit location, deposit type, and extractive technique, and (2) provide transparent data on the best available methods to reduce both mineral intensity of battery design and the localized environmental impacts of extraction.

4. Fund a Green New Deal for Transportation, focused on reducing car dependency. The current car-dependent transportation system cannot be overhauled without addressing and reducing the harms of mining. The demand for new lithium mining is primarily driven by the demand for lithium batteries used in the growing market for passenger electric vehicles. This car-centric approach to electrifying and eliminating emissions from the transportation sector is more resource-intensive than an alternative approach centered around mass transit, micromobility, and a built environment that is not engineered for car dependency.¹⁸

A car-centric path of decarbonization risks being both slower¹⁹ at cutting emissions and more mineral-intensive than an approach that rapidly scales up public transit, while also depriving us of the many other varied benefits and quality of life improvements we stand to see by rolling back car dependency.²⁰ Our recently published report, *A Green New Deal for Transportation*, lays out just such a vision, with detailed attention to how to remake the transportation sector.²¹ Our forthcoming report, *Globally Just Pathways to Zero Emissions*, will build on this work, zooming in on the varying resource intensities of different approaches to decarbonizing transportation.

Ultimately, a globally just energy transition must connect the dots between the frontlines of extraction and the end-use of green technologies and infrastructure, guided by commitments to rapid climate action and supply chain justice. In the case of lithium batteries, electric vehicles, and the extraction they require, this entails reducing the total resource footprint of battery manufacturing and deployment; requiring recycling, recovery, reuse, and repair; and improving the governance of new extraction by empowering and enforcing community rights, implementing binding environmental regulations, and adopting inclusive decision-making practices.

The most rapid decarbonization would involve a more balanced electrification of transportation that relies more on public transit, while protecting communities from needless mining.

1. “Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended,” The White House, March 31, 2022, <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/31/memorandum-on-presidential-determination-pursuant-to-section-303-of-the-defense-production-act-of-1950-as-amended/>.
2. “Over 200 groups call on Biden to use the Defense Production Act to help Ukraine by accelerating the clean energy transition,” Stand.earth, March 9, 2022, <https://www.stand.earth/BidenDPASignOn>.
3. Thea Riofrancos, “Shifting Mining From the Global South Misses the Point of Climate Justice,” *Foreign Policy*, February 7, 2022, <https://foreignpolicy.com/2022/02/07/renewable-energy-transition-critical-minerals-mining-onshoring-lithium-evs-climate-justice/>.
4. Lisa Murkowski, Joe Manchin III, James E. Risch, and Bill Cassidy, “Letter to President Biden on Mineral DPA Authorities,” March 11, 2022, <https://www.murkowski.senate.gov/imo/media/doc/03.11.22%20-%20Letter%20to%20President%20Biden%20on%20Mineral%20DPA%20Authorities1.pdf>.
5. Sebastian Luckeneder, Stefan Giljijum, Anke Schaffartzik, Victor Maus, and Michael Tost, “Surge in global metal mining threatens vulnerable ecosystems,” *Global Environmental Change* 69 (2021), <https://doi.org/10.1016/j.gloenvcha.2021.102303>; “Tracking the human rights implications of the mineral boom powering the transition to a net-zero carbon economy,” Business and Human Rights Resource Centre, Accessed April 6, 2022, <https://trackers.business-humanrights.org/transition-minerals/>; “Last Line of Defence,” Global Witness, September 13, 2021, <https://www.globalwitness.org/en/campaigns/environmental-activists/last-line-defence/>.
6. Stephen Edelstein, “Analysts: Raw material price surge will put EVE battery affordability gains on hold until 2024,” *Green Car Reports*, March 10, 2022, https://www.greencarreports.com/news/1135251_raw-material-price-surge-ev-battery-affordability-gains-on-hold-until-2024.
7. Eric Onstad, “LME forced to halt nickel trading, cancel deals, after prices top \$100,000,” *Reuters*, March 8, 2022, <https://www.reuters.com/business/lme-suspends-nickel-trading-day-after-prices-see-record-run-2022-03-08/>.
8. Jennifer Solis, “Tribes seek pause on development of lithium mine,” *Nevada Current*, August 28, 2021, <https://www.nevadacurrent.com/2021/08/28/tribes-seek-pause-on-development-of-lithium-mine/>; Executive Office of the President, “Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals From Foreign Adversaries and Supporting the Domestic Mining and Processing Industries,” October 5, 2020, <https://www.federalregister.gov/documents/2020/10/05/2020-22064/addressing-the-threat-to-the-domestic-supply-chain-from-reliance-on-critical-minerals-from-foreign>.

9. Bahouth Brian, “Federal Judge Consolidates Lawsuits, Plaintiffs Opposing the Tacker Pass Lithium Mine,” *Sierra Nevada Ally*, August 11, 2021, <https://sierranevadaally.org/2021/08/11/federal-judge-consolidates-lawsuits-plaintiffs-opposing-the-thacker-pass-lithium-mine/>; Evan Malmgren, “The Battle for Thacker Pass,” *The Nation*, September 23, 2021, <https://www.thenation.com/article/activism/thacker-pass-mine-protest/>.
10. International Energy Agency, “The Role of Critical Minerals in Clean Energy Transitions,” *World Energy Outlook*, May 2021, <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>.
11. “Biden-Harris Administration Fundamental Principles for Domestic Mining Reform,” February 22, 2022, <https://www.doi.gov/sites/doi.gov/files/biden-harris-administration-fundamental-principles-for-domestic-mining-reform.pdf>; Natural Resources Committee, “Mining Reform Legislation,” <https://naturalresources.house.gov/imo/media/doc/HR%202579%20Mining%20Reform%20Fact%20Sheet.pdf>.
12. International Labor Organization, “Indigenous and Tribal Peoples Convention 1989,” https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:REV,en,C169,/Document.
13. The United Nations, “United Nations Declaration on the Rights of Indigenous Peoples,” September 13, 2007, <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>.
14. Earthworks, “1872 Mining Law - Reform Requirements,” Accessed April 4, 2022, https://earthworks.org/issues/1872_mining_law_reform_requirements/; Blaine Miller-McFeeley, “To Create a Clean Energy Future, Mining Reform Must Be Front and Center,” *EarthJustice*, June 28, 2021, <https://earthjustice.org/from-the-experts/2021-june/to-create-a-clean-energy-future-mining-reform-must-be-front-and-center#:~:text=Reform%20Domestic%20Mining%20Laws%3A%20Mining,clean%20up%20their%20toxic%20messes>.
15. Earthworks, “Reducing new mining for electric vehicle battery metals: responsible sourcing through demand reduction strategies and recycling,” April 27, 2021, <https://earthworks.org/publications/recycle-dont-mine/>.
16. “Green Deal: Sustainable batteries for a circular and climate neutral economy,” European Commission, December 10, 2020, https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2312.
17. Beth Burmahl, “Bridging the lithium battery supply chain gap — a new alliance in the U.S.” *Argonne National Laboratory*, October 27, 2021, <https://www.anl.gov/article/bridging-the-lithium-battery-supply-chain-gap-a-new-alliance-in-the-us>.
18. “Peter Greim, A.A. Solomon, and Christian Breyer, “Assessment of lithium criticality in the global energy transition and addressing policy gaps in transportation,” *Nature Communications* 11, (2020), <https://www.nature.com/articles/s41467-020-18402-y>.
19. Alenandre Milovanoff, I. Daniel Posen, and Heather L. MacLean, “Electrification of light-duty vehicle fleet alone will not meet mitigation targets,” *Nature Climate Change* 10 (2020), <https://www.nature.com/articles/s41558-020-00921-7>.
20. Ting Xia, Yign Zhang, Shona Crabb, and Pushan Shah, “Cobenefits of Replacing Car Trips with Alternative Transportation: A Review of Evidence and Methodological Issues,” *Journal of Environmental Public Health* (2013), doi: 10.1155/2013/797312; Dan Bowman, “The Pursuit of Happiness: How Commute Mode Affects Commute Mood,” *Mobility Lab*, September 29, 2020, <https://mobilitylab.org/2020/09/29/the-pursuit-of-happiness-how-commute-mode-affects-commute-mood/>.
21. Freemark, Yonah, Billy Fleming, Caitlin McCoy, Rennie Meyers, Thea Riofrancos, Xan Lillehei, , Daniel Aldana Cohen. “Toward a Green New Deal for Transportation: Establishing New Federal Investment Priorities to Build Just and Sustainable Communities.” *Climate and Community Project*, 2022.