

Case Nos. 23-15259, 23-15261, 23-15262 (consolidated)

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE NINTH CIRCUIT**

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WESTERN WATERSHEDS PROJECT ET AL.,  
*Plaintiffs-Appellants,*  
and  
BURNS PAIUTE TRIBE,  
*Intervenor-Plaintiff-Appellant,*

v.

ESTER M. McCULLOUGH ET AL.,  
*Defendants-Appellees,*  
and  
LITHIUM NEVADA CORPORATION,  
*Intervenor-Defendant-Appellee.*

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On Appeal from the United States District Court for the District of Nevada  
Case No. 3:21-cv-00080-MMD-CLB  
(The Honorable Miranda M. Du)

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***AMICI CURIAE* BRIEF OF THE CHAMBER OF COMMERCE OF THE  
UNITED STATES OF AMERICA AND NATIONAL ASSOCIATION OF  
MANUFACTURERS  
IN SUPPORT OF APPELLEES AND AFFIRMANCE**

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## **CORPORATE DISCLOSURE STATEMENT**

Pursuant to Federal Rules of Appellate Procedure 29(a)(4)(A) and 26.1, the Chamber of Commerce of the United States of America and the National Association of Manufacturers state that they are non-profit corporations organized under the laws of the District of Columbia. The Chamber and the National Association of Manufacturers have no parent corporation, and no publicly held corporation owns 10% or more of the Chamber's or the National Association of Manufacturers' stock.

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## **IDENTITY AND INTEREST OF *AMICI CURIAE***

The Chamber of Commerce of the United States of America is the world’s largest business federation.<sup>1</sup> It represents approximately 300,000 direct members and indirectly represents the interests of more than three million companies and professional organizations of every size, in every industry sector, and from every region of the country. An important function of the Chamber is to represent the interests of its members in matters before Congress, the Executive Branch, and the courts. To that end, the Chamber regularly files *amicus curiae* briefs in cases, like this one, that raise issues of concern to the nation’s business community.<sup>2</sup>

The National Association of Manufacturers (“NAM”) is the largest manufacturing association in the United States, representing small and large manufacturers in all 50 states and in every industrial sector, including in the biopharmaceutical industry. Manufacturing employs nearly 13 million men and women, contributes \$2.9 trillion to the U.S. economy annually, has the largest economic impact of any major sector, and accounts for over half of all private-sector research and development in the nation. The NAM is the voice of the manufacturing

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<sup>1</sup> Pursuant to Federal Rule of Appellate Procedure 29(a)(4)(E), *amici curiae* state that no party’s counsel authored this brief in whole or in part, and that no entity or person, aside from *amici curiae*, their members, or their counsel, made any monetary contribution intended to fund the preparation or submission of this brief.

<sup>2</sup> All Appellees consented to a timely filed *amicus curiae* brief. All Appellants also consented so long as the *amicus curiae* complied with Ninth Circuit Rule 29-1.



community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

The Chamber and the NAM have a substantial interest in the resolution of this case because it will affect the supply, processing, and distribution of critical minerals in the United States and globally. Critical minerals such as lithium and cobalt play an increasingly essential role in the U.S. economy, providing crucial inputs necessary for electric vehicles, batteries, computers, and a wide range of other products.

Currently, the United States imports most of the critical minerals used in the country. Sharp increases in critical mineral production are essential if the nation is to achieve national, economic, energy, and environmental goals and to establish its own critical mineral mining and processing capacity. Timely and reliable federal agency approvals of critical mineral production on federal lands (where substantial amounts of domestic mineral resources are located) are, itself, essential to this goal.

Lithium Nevada Corporation's Thacker Pass Lithium Mine Project ("Thacker Pass Project") will be the nation's largest lithium mine and first lithium processing facility. It is a vital project. An adverse decision here would undermine this project and hinder investment in other critical mineral production efforts, imposing substantial burdens on the Chamber's and the NAM's members and the national economy. These impacts would be particularly acute for small businesses and

consumers. The Chamber, as the world’s largest business federation, and the NAM, as the representative of the manufacturing industry, are uniquely positioned to discuss the broad, real-world implications of this case.

### **SUMMARY OF ARGUMENT**

Critical minerals such as lithium, cobalt, palladium, titanium, zinc, and platinum are indispensable ingredients of the modern global economy. They are essential to most hi-tech products, including smartphones, electric vehicles, satellites, medical devices, solar panels, and practically any product with a battery. Mining and processing critical minerals in the United States is a linchpin to effectively all the nation’s major economic, environmental, and national security objectives. The Thacker Pass Project—which the Bureau of Land Management (“BLM”) approved and which the Appellants seek to block—will play a key role in the nation’s efforts to ramp up critical minerals production.

A ruling that curtails domestic critical mineral production would profoundly disrupt the nation’s economy, energy security, and environmental priorities. Given the importance of critical mineral production, this Court should exercise extraordinary caution before extending its *Rosemont* analysis (i.e., the analysis set forth in *Center for Biological Diversity v. U.S. Fish & Wildlife Service*, 33 F.4th 1202 (9th Cir. 2022)) to a new and very different context, particularly given that *Rosemont*’s application to this case is not an issue that has been appealed. Granting

Appellants a vacatur to force a formal examination of mining claims underlying all land uses related to the Thacker Pass Project would be unprecedented, consume a massive amount of agency resources to implement, and render critical mineral projects in the United States even more difficult, if not impossible. This Court should affirm the District Court’s narrowly tailored relief, which keeps the project intact while BLM addresses any potential defects on remand.

### ARGUMENT

Critical minerals, like cobalt, zinc, and rare earth elements, are foundational to the modern economy.<sup>3</sup> They are the “building blocks” of many technologies, from common products such as laptops, cellphones, automobiles, and medical devices to national defense applications such as jet fighter engines and antimissile defense systems.<sup>4</sup> Critical minerals also play an essential role in the energy transition to a

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<sup>3</sup> The U.S. Geological Survey (“USGS”) has designated 50 mineral commodities as “critical minerals,” including lithium, the mineral primarily at issue here. *See* 2022 Final List of Critical Minerals, 87 Fed. Reg. 10381 (Feb. 24, 2022). Critical minerals “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.” 30 U.S.C. § 1606(c).

<sup>4</sup> *See Fact Sheet: Securing a Made in America Supply Chain for Critical Minerals*, THE WHITE HOUSE (Feb. 22, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/22/fact-sheet-securing-a-made-in-america-supply-chain-for-critical-minerals/>. *See generally* MARC HUMPHRIES, CONG. RSCH. SERV., RL45810, CRITICAL MINERALS AND U.S. PUBLIC POLICY (2019). In Table 5 of its publication, the Congressional Research Service outlined the major end uses of a variety of critical minerals. *See id.* at 30–32.

more diversified, less carbon-intensive economy. Renewable energy technologies such as solar panels, wind turbines, and electric vehicles rely on critical minerals. To meet many of the Administration’s renewable energy goals would require “a quadrupling of mineral requirements for clean energy technologies by 2040.”<sup>5</sup> A World Bank report estimates that a *five-fold* increase in critical mineral production is needed.<sup>6</sup>

Lithium is a prized resource because of its use in battery and other energy storage products. Indeed, lithium demand is expected to increase by over *40 times* by 2040 to meet global greenhouse gas reduction goals.<sup>7</sup> And because many devices

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<sup>5</sup> INT’L ENERGY AGENCY, THE ROLE OF CRITICAL MINERALS IN CLEAN ENERGY TRANSITIONS 8 (rev. ver. 2022), <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>; *see also Fact Sheet: Biden-Harris Administration Races to Deploy Clean Energy that Creates Jobs and Lowers Costs*, THE WHITE HOUSE (Jan. 12, 2022) (discussing the current Administration’s efforts “to scale up clean energy” such as advancing offshore wind, fast-tracking onshore clean energy projects, and building clean transmission lines), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/12/fact-sheet-biden-harris-administration-races-to-deploy-clean-energy-that-creates-jobs-and-lowers-costs/>.

<sup>6</sup> *See* KIRSTEN HUND ET AL., WORLD BANK GROUP, MINERALS FOR CLIMATE ACTION: THE MINERAL INTENSITY OF THE CLEAN ENERGY TRANSITION 93–94 (2020), <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>.

<sup>7</sup> INT’L ENERGY AGENCY, *supra* note 5, at 8. Other lithium uses include NASA space shuttles and air conditioning system components. *See* Dwight C. Bradley et al., U.S. Geological Surv., *Lithium*, in CRITICAL MINERAL RESOURCES OF THE UNITED STATES, at K2 to K3 (2017), <https://pubs.usgs.gov/pp/1802/k/pp1802k.pdf>.

in our everyday lives have batteries (such as cellphones, laptops, and watches, and the ever-increasing number of electric vehicles), lithium needs are already ever-present and growing.<sup>8</sup>

The Thacker Pass Project—involving one of the world’s largest lithium deposits—could potentially meet 25% of global lithium demand.<sup>9</sup> The project will include construction and operation of the largest lithium processing plant in North America (there is only one other),<sup>10</sup> with about 66,000 tons of lithium to be produced annually.<sup>11</sup> All Americans directly benefit from increased domestic production of

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<sup>8</sup> See, e.g., HUMPHRIES, *supra* note 4, at 34–35 (presenting case study on lithium-ion batteries).

<sup>9</sup> According to the USGS, global lithium reserves are “approximately 13 million metric tons.” Bradley et al., *supra* note 7, at K13. Thacker Pass is estimated to hold lithium reserves of approximately 3.7 million metric tons. Alexi Zawadzki, *Thacker Pass*, LITHIUM AMERICAS (last visited May 4, 2023), <https://www.lithiumamericas.com/usa/thacker-pass/>.

<sup>10</sup> *Lithium Americas Awards MECS Contract for Thacker Pass Lithium Operation*, BUSINESS WIRE (Mar. 6, 2023), <https://www.businesswire.com/news/home/20230306005033/en/Lithium-Americas-Awards-MECS-Contract-for-Thacker-Pass-Lithium-Operation>; U.S. GEOLOGICAL SURV., MINERAL COMMODITY SUMMARIES 108 (Jan. 31, 2023) (“Commercial-scale lithium production in the United States was from one continental brine operation in Nevada.”), <https://pubs.usgs.gov/periodicals/mcs2023/mcs2023.pdf>.

<sup>11</sup> According to the Final Environmental Impact Statement published by BLM, the annual production capacity is expected to reach 66,000 tons per annum (tpa) of lithium products, with the first phase expected to be 33,000 tpa. See BUREAU OF LAND MGMT., DOI-BLM-NV-W010-2020-0012-EIS, THACKER PASS LITHIUM MINE PROJECT: FINAL ENVIRONMENTAL IMPACT STATEMENT 2-8 (Dec. 4, 2020).

lithium. For example, this project is expected to support batteries for “more than one million EVs [electric vehicles] annually in North America.”<sup>12</sup>

Requiring the sort of validity determinations requested by Appellants, as a prerequisite to project approval, would significantly disrupt production of any critical minerals. Such an unfavorable precedent would make agency approval of any project even more difficult, expensive, and time-consuming, harming the entire mining industry and the nation’s economy more broadly. Equally damaging, Appellants’ approach would undermine national security and worsen environmental outcomes.

**I. Reduced domestic production of critical minerals would hamper the U.S. and global economy.**

The Thacker Pass Project presents substantial economic benefits through job creation, tax revenues, and resource sales—all of which are jeopardized by this lawsuit. Beyond this project, constraints on critical mineral production writ large would imperil the supply chain, energy infrastructure projects, and the manufacturing industry as a whole.

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Some sources estimate even greater production. *See, e.g.,* Zawadzki, *supra* note 9 (80,000 tpa by second phase).

<sup>12</sup> Archana Rani, *GM to Invest \$650m in Thacker Pass Mine Developer Lithium Americas*, MINING TECHNOLOGY (Feb. 1, 2023), <https://www.mining-technology.com/news/gm-thacker-pass-mine-lithium>.

**A. The Thacker Pass Project creates significant local and national economic benefits.**

Mining projects generate billions of dollars in economic activity and support thousands of jobs nationwide. In its Final Environmental Impact Statement, BLM assessed the direct economic impacts of the Thacker Pass Project.<sup>13</sup> It determined that the project would create almost 1,000 new jobs and would generate substantial local, state, and federal tax revenues. The construction phase alone would inject \$265.4 million into the local economy. Multiple companies have made large investments in the Thacker Pass Project.<sup>14</sup> Vacatur of the Thacker Pass Project would forfeit these acknowledged economic benefits (which are not seriously contested), upset investment-backed expectations, and cripple one of Nevada's economic priorities. Vacatur would inflict a severe setback on the national economy as well.

**B. Domestic critical mineral production is essential to minimize supply chain risks and disruptions in the manufacturing sector.**

The potential economic disruptions go beyond a single project in Nevada. Lengthening the federal approval process for mining projects would increase reliance on critical mineral imports. Recent years have taught that domestic energy

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<sup>13</sup> See BUREAU OF LAND MGMT., *supra* note 11, at 4-86 to 4-91 (Dec. 4, 2020).

<sup>14</sup> See Rani, *supra* note 12. Indeed, the State of Nevada found that the Thacker Pass Project could jumpstart the state's clean energy industry. See ROLAND STEPHEN ET AL., SRI INTERNATIONAL, REALIZING NEVADA'S ELECTRONIC, INNOVATIVE, AND CONNECTED FUTURE 3 (2023), <https://goed.nv.gov/wp-content/uploads/2023/03/Nevada-Statewide-Plan-Final-3.1.23.pdf>.

markets are increasingly vulnerable to disruptions on the international stage. None are more vulnerable than critical minerals production.

Although critical minerals are essential to many key products manufactured in the United States, our nation depends heavily on imported minerals. Of the 50 USGS-designated critical minerals in 2022, the United States relies entirely on net imports for 12 of them and obtains more than 50% of an additional 31 critical minerals via imports.<sup>15</sup> This trend has only worsened in recent years. According to the USGS, our nation has doubled the number of minerals for which it is either 50% or 100% import-reliant over the past 60 years.<sup>16</sup> This dependence highlights the need for further domestic production. A decision from this Court that further restricts and burdens the mining industry's federal approval process would only accelerate this troubling trend.

Overreliance on critical mineral imports creates chokeholds in the supply chain, giving foreign governments immense leverage over our economy and security. As the Government Accountability Office has explained, “the supply chains for critical minerals generally follow a linear path” from raw material

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<sup>15</sup> See U.S. GEOLOGICAL SURV., *supra* note 10, at 20.

<sup>16</sup> See STEVEN M. FORTIER ET AL., U.S. GEOLOGICAL SURV., COMPARISON OF U.S. NET IMPORT RELIANCE FOR NONFUEL MINERAL COMMODITIES 1–2 (2015), <https://pubs.usgs.gov/fs/2015/3082/fs20153082.pdf>.



extraction and processing to consumption and recycling.<sup>17</sup> The initial steps of this supply chain (i.e., mineral extraction and processing) greatly influence the later steps (i.e., product manufacturing and use). Thus, according to the White House, “annual domestic mining activities, valued at less than \$100 billion, enable more than \$3 trillion in domestic value-added industry sectors, out of a \$20 trillion economy.”<sup>18</sup>

As a result, if the country increasingly relies on critical minerals imports, the U.S. hi-tech manufacturing sectors will become ever more vulnerable to trade shocks. Because many critical minerals are the bottleneck resource (i.e., the determinative ingredient in various products), any trade disruption of these minerals would immediately affect the production and consumption of many end-products. Thus, interruptions in critical mineral trades due to COVID-19 directly led to semiconductor chip shortages, which in turn constrained the auto manufacturer market, the used cars market, and even the rental car market.<sup>19</sup>

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<sup>17</sup> See U.S. GOV’T ACCOUNTABILITY OFF., GAO-22-104824, CRITICAL MINERALS: BUILDING ON FEDERAL EFFORTS TO ADVANCE RECOVERY AND SUBSTITUTION COULD HELP ADDRESS SUPPLY RISKS 8 (2022).

<sup>18</sup> THE WHITE HOUSE, BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH 153–54 (June 2021), <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>.

<sup>19</sup> See, e.g., Ondrej Burkacky et al., *Semiconductor Shortage*, MCKINSEY & COMPANY (last visited May 4, 2023), <https://www.mckinsey.com/industries/semiconductors/our-insights/semiconductor-shortage-how-the-automotive-industry-can-succeed>.

Even beyond the COVID-19 pandemic and the ongoing Ukraine crisis,<sup>20</sup> foreign governments have moved to nationalize critical mineral industries within their borders. For example, Chile, the second largest producer of lithium, recently announced that it would nationalize the country's lithium industry; Mexico did the same with respect to its lithium deposits last year; and in 2020, Indonesia banned exports of nickel ore, which is an important material for battery production.<sup>21</sup> The multifaceted threats to critical mineral imports underscore the need for robust domestic production.

**C. Expanding renewable energy will be impossible without reliable access to critical minerals.**

Impeding domestic critical mineral production would also derail the nation's efforts to expand renewable energy sources and reduce greenhouse gas emissions.

In the last year alone, the federal government has announced plans to spend over \$150 billion on renewable energy projects and manufacturing facilities—surpassing the prior five years' worth of such investments.<sup>22</sup> And the current

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<sup>20</sup> See Jim Kilpatrick, *Supply Chain Implications of the Russia-Ukraine Conflict*, DELOITTE INSIGHTS (Mar. 25, 2022), <https://www2.deloitte.com/us/en/insights/focus/supply-chain/supply-chain-war-russia-ukraine.html>.

<sup>21</sup> Matthew Chye, *Factbox- Chile Lithium Move Latest in Global Resource Nationalism Trend*, REUTERS (Apr. 21, 2023), <https://www.reuters.com/article/chile-lithium-resources-nationalism-idAFL4N36O0U3>.

<sup>22</sup> AM. CLEAN POWER, CLEAN ENERGY INVESTING IN AMERICA 1 (Apr. 2023).

Administration has set a 2030 goal of reducing carbon emissions by 50–52% from 2005 levels. The United States cannot meet these if it lacks the necessary critical mineral supplies.<sup>23</sup>

As part of its national energy agenda, the United States also seeks to maintain a leadership role in advanced energy technologies, such as advanced nuclear, energy efficiency systems, large-scale renewables, energy storage and batteries, high-efficiency low-emission power plants, and carbon capture and storage/utilization. Again, this global leadership hinges on critical minerals.

## **II. Reduced domestic production of critical minerals would undermine national security.**

The countries that possess the bulk of critical minerals are not our closest allies, making domestic production a national security imperative. China “processes approximately 90% of the world’s rare earth elements, along with 50% to 70% of lithium and cobalt, according to the International Energy Agency.”<sup>24</sup> The defense

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<sup>23</sup> See, e.g., Daniel Yergin, Opinion, ‘Net Zero’ Will Mean a Mining Boom, WALL ST. J. (Apr. 12, 2023), <https://www.wsj.com/articles/net-zero-will-mean-a-mining-boom-electric-cars-minerals-oil-fossil-fuels-climate-change-policy-cb8d5137>; Shannon Osaka, *Minerals are Crucial for Electric Cars and Wind Turbines. Some Worry Whether We Have Enough*, WASH. POST (Feb. 2, 2023), <https://www.washingtonpost.com/climate-environment/2023/02/02/critical-minerals-run-out-shortage/>.

<sup>24</sup> Camille Erickson, *US Critical Mineral Imports Increase YOY as China Maintains Supply Chain Grip*, S&P GLOBAL MARKET INTEL. (Aug. 20, 2021), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-critical-mineral-imports-increase-yoy-as-china-maintains-supply-chain-grip->

industry needs those critical minerals for advanced semiconductors and missile guidance systems, superalloys for turbines and hypersonic missiles, and solar panels on military satellites, just to name a few.<sup>25</sup> Thus, at a time when American military readiness remains as vital as ever,<sup>26</sup> our core military apparatus depends on foreign sources of critical minerals.<sup>27</sup> Equally troubling, because of China's monopoly over certain critical minerals, "there has been a transfer of technology from U.S. firms and others to China in order to gain access" of such minerals.<sup>28</sup>

China has not hesitated to weaponize its natural resources. In 2010, in retaliation over a fishing dispute, China cut off all rare earth element exports to Japan for nearly two months. Rare earth element prices skyrocketed between 100% and

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66133214; *see also* INT'L ENERGY AGENCY, *supra* note 5, at 13 (showing in various charts China's share in critical mineral extraction and processing).

<sup>25</sup> *See* Morgan D. Bazilian et al., *Argument, America's Military Depends on Minerals That China Controls*, FOREIGN POLICY (Mar. 16, 2023), <https://foreignpolicy.com/2023/03/16/us-military-china-minerals-supply-chain/>; *see also* HUMPHRIES, *supra* note 4, at 1 n.1 (military end use), 12 (reliance on China).

<sup>26</sup> Bazilian et al., *supra* note 25.

<sup>27</sup> One observer cautions that "China, essentially, has the power to influence U.S. energy production, defense technologies, and other industries that rely on the same critical materials." Parker Bolstad & Jordy Lee, *Argument, Energy Independence Doesn't Mean What It Used To*, FOREIGN POLICY (July 26, 2021), <https://foreignpolicy.com/2021/07/26/energy-independence-climate-change-us-national-security/>.

<sup>28</sup> *See* HUMPHRIES, *supra* note 4, at 5.

1300%.<sup>29</sup> Japan's automobile industry immediately suffered due to semiconductor shortages.<sup>30</sup> Japan eventually reduced its reliance on Chinese critical mineral sources.<sup>31</sup>

### **III. Reduced domestic critical minerals production, and the resulting increased reliance on foreign sources, produces worse environmental and worker safety outcomes.**

A country cannot develop renewable energy without critical mineral mining and processing. Estimates for increased demand are staggering. As one of many examples, to meet 2050 renewable energy goals set in the Paris Agreement, demand for graphite, cobalt, and nickel will grow by 20 to 25 times.<sup>32</sup> Increased critical mineral demand in the renewable energy sector is occurring at three levels: first, at the power source level, where critical minerals are necessary for creating photovoltaic cells in solar panels or creating the magnets and motors in wind

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<sup>29</sup> See *China's Monopoly on Rare Earths: Hearing Before the Subcomm. on Asia & Pac. of the H. Comm. on Foreign Aff.*, 112th Cong. 2 (2011) (statement of Rep. Donald A. Manzullo, Chairman, Subcomm. on Asia & Pac.).

<sup>30</sup> EUGENE GHOLZ, COUNCIL ON FOREIGN RELS., RARE EARTH ELEMENTS AND NATIONAL SECURITY 3 (2014) (citing Martin Fackler & Ian Johnson, *Japan Retreats in Test of Wills with the Chinese*, N.Y. TIMES, Sept. 25, 2010, at A1).

<sup>31</sup> Mary Hui, *Japan's Global Rare Earths Quest Holds Lessons for the US and Europe*, QUARTZ (Apr. 23, 2021), <https://qz.com/1998773/japans-rare-earths-strategy-has-lessons-for-us-europe>; see also Morgan D. Bazilian & Gregory Brew, *The Missing Minerals*, FOREIGN AFFAIRS (Jan. 6, 2023), <https://www.foreignaffairs.com/united-states/missing-minerals-clean-energy-supply-chains>.

<sup>32</sup> See INT'L ENERGY AGENCY, *supra* note 5, at 8; see also *supra* paragraph accompanying notes 5 and 6.

turbines;<sup>33</sup> second, at the electricity network level, where critical minerals are essential to transmission lines and power distribution systems that connect the power grid to scattered wind farms and solar arrays;<sup>34</sup> and third, at the energy storage level, where critical minerals like lithium are the key component of batteries used to store renewable power.

Increasing storage is essential to scaling up renewable power. Wind and solar power inherently face “intermittency” problems (i.e., it is never sunny and windy all the time). Thus, to meet electricity demand at any given point, some of the power generated from these renewable sources must be stored for later use via batteries, the most common form being lithium-ion batteries.<sup>35</sup> Since critical minerals are core ingredients in batteries, a limited critical mineral supply (including lithium) necessarily limits opportunities to increase the use of renewable energy.

Electric vehicles similarly require critical minerals. The batteries that power electric vehicles “depend on five critical minerals whose domestic supply is

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<sup>33</sup> See INT’L ENERGY AGENCY, *supra* note 5, at 54–74. To be clear, critical mineral demand is not limited to supporting wind and solar power. Critical mineral needs abound in other low-carbon power-generation sources too (albeit in varying degrees), such as hydropower, geothermal energy, nuclear power, and bioenergy. *See id.* at 69, 71–74.

<sup>34</sup> *See id.* at 76–82.

<sup>35</sup> See, e.g., ENV’T & ENERGY STUDY INST., FACT SHEET: ENERGY STORAGE 1–2, 4 (Feb. 2019).

potentially at risk for disruption: lithium, cobalt, manganese, nickel, and graphite.”<sup>36</sup>

The Congressional Research Service recently reported that the United States is “heavily dependent on imports for these minerals for use in EV batteries.”<sup>37</sup>

Projections from 2019 indicate that lithium demand would have to rise more than 20-fold for electric vehicles to replace conventional cars.<sup>38</sup> More recent figures project a 40-fold increase.<sup>39</sup> The United States and Germany—countries with some of the highest electric vehicle sales—have “some of the most vulnerable supply chains” due to heavy reliance on battery and raw mineral imports.<sup>40</sup>

Unless the United States shifts rapidly to domestic mining and processing, countries with weaker environmental and labor standards will continue to control the global market for critical minerals. China currently dominates the critical minerals processing market. Thus, even if the United States begins to mine critical minerals, those minerals may still need to be shipped to China for processing. For

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<sup>36</sup> BRANDON S. TRACY, CONG. RSCH. SERV., R47227, CRITICAL MINERALS IN ELECTRIC VEHICLE BATTERIES i (2022) (italics removed).

<sup>37</sup> *Id.*

<sup>38</sup> Mark P. Mills, Opinion, *If You Want ‘Renewable Energy,’ Get Ready to Dig*, WALL ST. J. (Aug. 5, 2019), <https://www.wsj.com/articles/if-you-want-renewable-energy-get-ready-to-dig-11565045328>.

<sup>39</sup> See INT’L ENERGY AGENCY, *supra* note 5 and accompanying text.

<sup>40</sup> See Isabeau van Halm & Cathy Mullan, *Booming EV Sales Challenge Critical Mineral Supply Chains*, ENERGY MONITOR (Feb. 14, 2022), <https://www.energy-monitor.ai/sectors/transport/booming-ev-sales-challenge-mineral-supply-chains/>.

example, mined lithium must be processed into a usable material such as lithium carbonate, which is then used as an ingredient for lithium-ion batteries. And China controls almost 60% of the world's capacity for processing lithium into lithium carbonate.<sup>41</sup>

To state the matter bluntly, China does not share our nation's commitment to environmental protection and worker safety. The United States features one of the world's safest and most protective mining regimes.<sup>42</sup> Statistics on coal mining fatalities could serve as one demonstrative proxy; in 2009, the number of coal mining deaths in the United States was 18 compared to China's 2,631—a 146-fold difference.<sup>43</sup> Although no regulatory system is perfect, encouraging production of critical minerals in the United States will foster better environmental and worker safety outcomes than continuing our reliance on foreign sources.

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<sup>41</sup> Alex Scott, *Challenging China's Dominance in the Lithium Market*, CHEM. & ENG'G NEWS (Oct. 29, 2022), <https://cen.acs.org/energy/energy-storage-/Challenging-Chinas-dominance-lithium-market/100/i38>.

<sup>42</sup> See Zhongxue Li et al., *Comparison of Typical Regulatory Mechanisms for Improving Global Mine Safety and Health*, 3 INT'L J. MINING & MINERAL ENG'G 251, 253–54 (2011) (discussing the development of U.S. mining laws, including “one of the most effective occupational safety statutes ever enacted”).

<sup>43</sup> See Guo Wei-ci & Wu Chao a, *Comparative Study on Coal Mine Safety Between China and the US from a Safety Sociology Perspective*, 26 PROCEDIA ENG'G 2003, 2006 (2011).



**IV. The District Court’s remedy was appropriate and should be affirmed.**

The District Court identified one minor deficiency in BLM’s review of the Thacker Pass Project, but decided that vacating the agency’s decision would be improper under the circumstances. The correctness of that decision is bolstered by the economic, national security, and environmental implications of the Thacker Pass Project outlined above.

Appellants ask this Court to declare BLM’s decision unlawful based on principles set forth in *Center for Biological Diversity v. U.S. Fish & Wildlife Service*, 33 F.4th 1202 (9th Cir. 2022) (“*Rosemont*”), and then to take the further step of *vacating* the project approval decision.<sup>44</sup> But the extension of *Rosemont* to this new context is not properly before this Court, as no party appealed that aspect of the District Court’s holding.<sup>45</sup> In any event, *Rosemont* does not apply for the many reasons explained by BLM and Lithium Nevada.<sup>46</sup> Indeed, by its own terms, *Rosemont* was limited to land with no valid mining claims.<sup>47</sup>

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<sup>44</sup> See Bartell Ranch LLC & Edward Bartell’s Opening Br. 56, ECF No. 46; Western Watersheds Project et al.’s Opening Br. 62, ECF No. 48.

<sup>45</sup> See Federal Appellee’s Answering Br. 27–30, ECF No. 65; Intervenor-Defendant Appellee’s Answering Br. 34, ECF No. 62.

<sup>46</sup> See, e.g., Federal Appellee’s Answering Br. 30–35, ECF No. 65; Intervenor-Defendant Appellee’s Answering Br. 78–82, ECF No. 62.

<sup>47</sup> Compare 33 F.4th at 1218, 1221–22 (explaining that “neither Section 612 [of the Surface Resources and Multiple Use Act of 1955] nor the Mining Law [of 1872]

Forcing BLM to conduct full-blown determinations as to mining claim validity in these contexts would contradict federal mining laws and impose new barriers to critical mineral projects on federal lands. Validity determinations, which are comprehensive, costly, and time-consuming endeavors, are generally confined to a few specific contexts not applicable here.

And for the reasons explained by the District Court and the parties defending its judgment, remand without vacatur was the appropriate remedy under this Court’s case law. This Court should affirm the District Court’s narrowly tailored relief, and keep the Thacker Pass Project and other critical mineral projects moving forward. Extending *Rosemont* to this context, much less going even further and vacating the agency approval decision here, would throw the process off the proper regulatory tracks and would severely undermine prospects for critical mineral production and processing on federal lands, to the detriment of national security, the economy, and the environment overall.

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provides *Rosemont* with the right to dump its waste rock on . . . land on which it has no valid mining claims,” and that there was “[u]ndisputed evidence in the record that no valuable minerals have been found on *Rosemont*’s claims [underlying the proposed waste rock facility]”), *with Intervenor-Pl.-Appellant Burns Paiute Tribe’s Excerpts of R. vol. 1* at 47–48, ECF No. 42-2 (District Court order acknowledging “sufficient lithium mineralization” in the land underlying the proposed waste rock and tailings facility).

## CONCLUSION

For the foregoing reasons, this Court should affirm the District Court's judgment.

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UNITED STATES COURT OF APPEALS  
FOR THE NINTH CIRCUIT

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I hereby certify that on May 5, 2023, I electronically filed the foregoing brief with the Clerk of the United States Court of Appeals for the Ninth Circuit by using the Court's CM/ECF system, through which counsel for all parties will be served.

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