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UNITED STATES OF AMERICA

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September 27, 2021

VIA ELECTRONIC FILING

Tad Wysor
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105

Re: Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards, 86 Fed. Reg. 43726, August 10, 2021, [Docket No. EPA-HQ-OAR-2021-0208]

Dear Mr. Wysor:

Thank you for the opportunity to provide comment on the U.S. Environmental Protection Agency's (EPA) proposed rule, "Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards." The U.S. Chamber of Commerce ("the Chamber") submits the following recommendations for your consideration as the agency considers more ambitious standards.

- **Bolster U.S. supply chains for strategic minerals to ensure affordability and implementation feasibility**
- **Pursue permitting reforms across the federal government to speed up investment in needed infrastructure**
- **Advance government research and development to support and accelerate vehicle technology innovation**
- **Durable, harmonized standards that prioritize regulatory certainty and technical achievability are needed to accelerate progress on emissions reductions while providing stability for long-term business planning and investment**

Overview

The President's Executive Order, "Strengthening American Leadership in Clean Cars and Trucks,"¹ not only set an ambitious goal that 50 percent of light duty sales be zero-emissions vehicles, but it also recognized the need to resolve other important variables needed to achieve this goal. The Executive Order references the need for expanding key charging infrastructure and spurring innovation. These efforts are all needed and more.

¹ Executive Order 14037, Strengthening American Leadership in Clean Cars and Trucks, 86 Fed. Reg. 43583 (August 10, 2021).

In the Chamber's view, effective development and implementation of light-duty vehicle standards requires a comprehensive approach that considers factors well beyond the standards themselves. Facilitating programs and policies are necessary in order to advance a cleaner, stronger transportation system—not just the roads and bridges that are the foundation of America's infrastructure, but the vehicles and enabling systems that are necessary to modernize transportation in America.

With respect to greenhouse gas emissions, the transportation sector is of growing interest and importance. While immense technological progress has been made—passenger vehicle fuel economy has improved almost every year since 2005—challenges remain, as the transportation sector now represents the largest source of greenhouse gas emissions since surpassing the power sector in 2016, according to the Energy Information Administration.

Tackling this challenge will not be easy. The tremendous success that the industry has had incorporating catalytic and other post-combustion emissions treatment technologies onto the existing internal combustion engine platform led to 98-99% reductions in tailpipe emissions compared to the 1960s. However, doing the same for greenhouse gas emissions from light-duty vehicles is complex due to the platform changes, but also the ancillary infrastructure, supply chains, and consumer preferences that must be navigated. In addition, fleet turnover is generally slow, and balancing unpredictable technological and market factors is difficult. Because of this, regulatory certainty is paramount, particularly in the light-duty passenger vehicle sector.

The Chamber's Global Energy Institute examined these challenges facing the light-duty passenger vehicle sector in a 2019 report, *Divided Highway*, the findings of which remain just as relevant today.² The report highlights the importance of a workable path forward on vehicle fuel economy and greenhouse gas standards that provide regulatory certainty, continued progress on mileage and emissions reductions, and preserving the unified national program for vehicle sales.

At the time of this comment filing, Congress is considering bipartisan infrastructure legislation that would provide an important foundation for enabling achievement of these goals. Passage of the bill is important to overcoming challenges associated with adoption of higher efficiency vehicles. For example, while more than 40 models of zero emissions vehicles (ZEVs) are currently available in the U.S., sales represent less than two percent of the light-duty market, illustrating the necessity in understanding technological, market, and policy factors that could improve adoption.

The Chamber believes that our clean energy future is dependent on a vibrant, healthy auto sector that can plan for and invest in the technologies necessary to accelerate progress on emissions reductions and continue building safe and affordable vehicles for American consumers. As manufacturers continue to address ongoing challenges related to supply chain disruptions and pandemic-driven market uncertainties, the need to advance a harmonized, flexible, and achievable rulemaking that preserves a unified national auto market is more important than ever.

As the EPA considers finalization of this proposal and development of associated follow-on rulemakings, the Chamber urges careful consideration of the broad spectrum of factors likely to influence progress toward the aforementioned goals. Ultimately, this broader perspective is critical to settling on a balanced approach that considers market and technological realities,

² Divided Highway, U.S. Chamber of Commerce, 2019. <https://www.globalenergyinstitute.org/divided-highway>

provides regulatory certainty for auto manufacturers and the supply chain, and accelerates both emissions reductions and vehicle electrification.

I. Bolster U.S. supply chains for strategic minerals to ensure affordability and implementation feasibility

The COVID-19 pandemic has led to disruptions of supply chains for U.S. businesses across a broad range of sectors, products, and services. The supply chains in multiple sectors, including the automotive sector, continue to be severely impacted, illustrating the need for a holistic and coordinated government response to ensure the affordability and feasibility of implementing ambitious climate policy.

Nowhere is this need more evident than in the growing challenges associated with securing reliable and affordable resources necessary for the manufacture of electric vehicle batteries. The automotive sector is not the only industry sector that relies on high-capacity batteries – other sectors do as well, including cloud computing and data centers, renewable energy storage systems (RESS), telecommunications and aerospace, and consumer devices. Lithium-ion batteries are deployed in both the stationary storage and transportation markets and are the major source of power in consumer electronics and telecom applications.³ High-capacity batteries are also used in a variety of aerospace applications in order to ensure safety, reliability, and performance. The cumulative demand, plus the surge forecasted to meet demand for these strategic minerals from ambitious climate policies, is expected to increase by five times⁴ for some minerals over the coming decades due to strong demand in the U.S. marketplace and around the world.

Ensuring a secure and resilient supply chain for strategic minerals and other battery components will be particularly important in the years ahead to ensure affordability and to avoid bottlenecks that could potentially disrupt any dramatic increase in the sale of electric vehicles (EV). For example, because batteries are metal-rich products that comprise approximately 30 percent or more of the cost of an electric vehicle, the cost and availability of those metal inputs are key to accelerating the manufacture and sale of EVs in the years ahead.

As it stands today, however, the U.S. is highly dependent for such inputs on a handful of foreign countries, including China, where the production and processing of strategic minerals used in high-capacity batteries is concentrated.⁵ As outlined in China's 13th Five-Year Plan, China has pursued aggressive investments in high-capacity battery development, temperature adaptability, recovery and disposal.⁶ According to a recent DOE report, China currently has nearly 80 percent of the world's lithium-ion battery manufacturing capacity,⁷ and as shown in the graphics below from Benchmark Mineral Intelligence, this manufacturing dominance is accompanied by similar

³ "Energy Storage Grand Challenge: Energy Storage Market Report", U.S. Department of Energy, December 2020. https://www.energy.gov/sites/prod/files/2020/12/f81/Energy%20Storage%20Market%20Report%202020_0.pdf

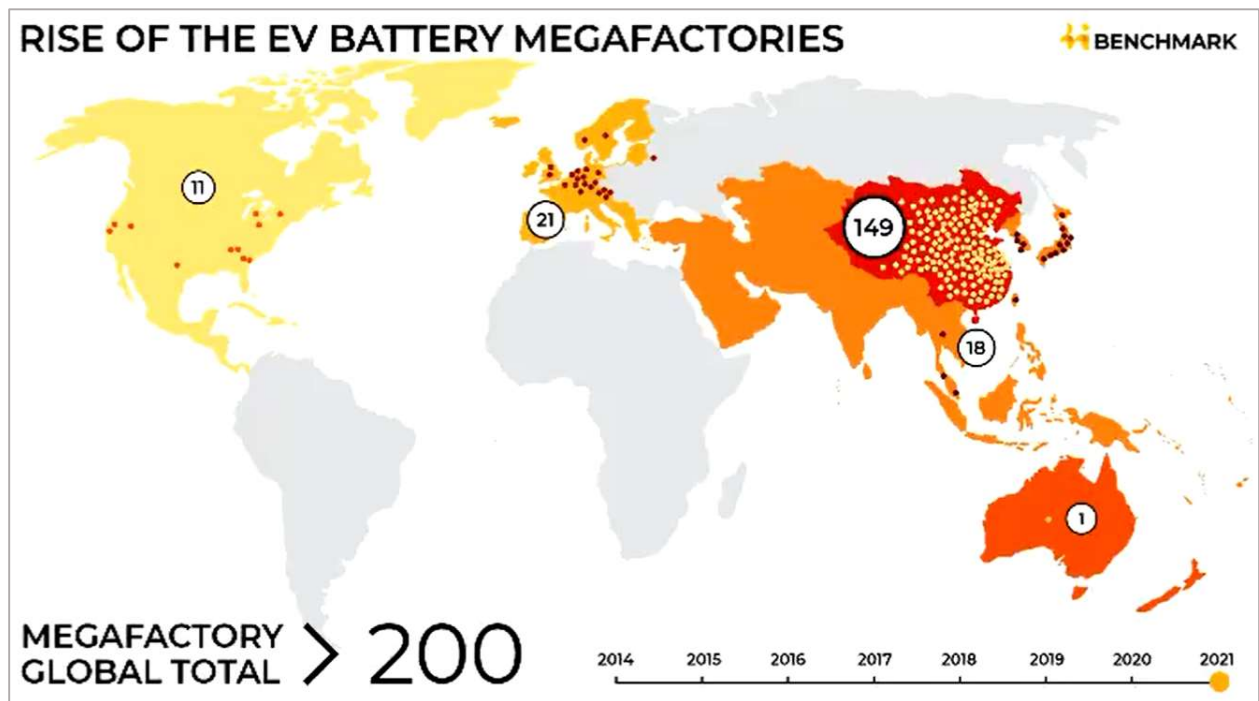
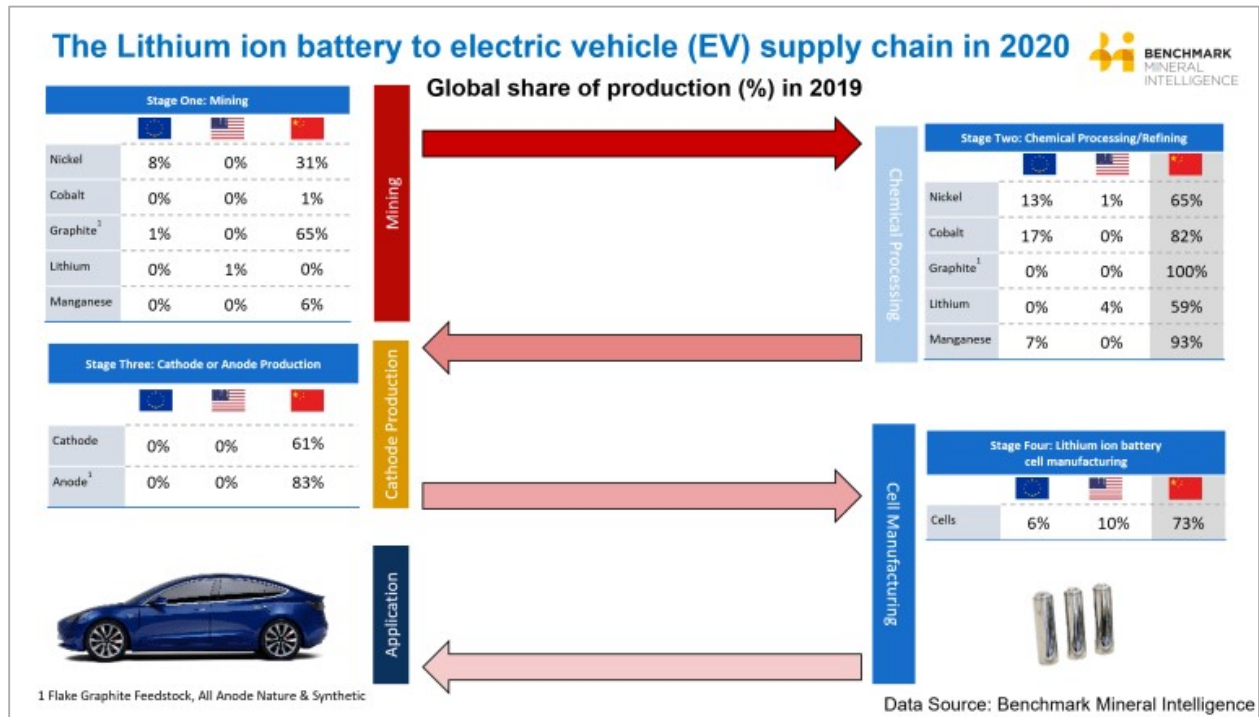
⁴ Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition, The World Bank Group, 2020. <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

⁵ The Role of Critical Minerals in Clean Energy Transitions, World Energy Outlook, International Energy Administration, May 5, 2021. <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>

⁶ https://en.ndrc.gov.cn/newsrelease_8232/201612/P020191101481868235378.pdf

⁷ Energy Storage Grand Challenge: Energy Storage Market Report, December 2020. https://www.energy.gov/sites/prod/files/2020/12/f81/Energy%20Storage%20Market%20Report%202020_0.pdf

dominance in mining, processing, and refining of key inputs such as lithium, cobalt, nickel, and graphite. Moreover, BMI recently reported that of the more than 200 lithium-ion “megafactories” planned between now and 2030, 149 will be in China, while only 11 are planned for North America.⁸



⁸ <https://www.mining.com/chart-chinas-stranglehold-on-electric-car-battery-supply-chain/>
<https://www.benchmarkminerals.com/megafactories/>

Securing stable supplies of cobalt and nickel is a top concern for high-capacity battery development, and is also relevant for smaller lithium-ion batteries used in a range of consumer devices. According to one report, the Clean Energy Ministerial target of 30 million global EV sales by 2030 would require 314 kilotons of cobalt per year—more than three times the current global cobalt demand for *all uses*.⁹ Similarly, nickel mining capacity coming online through 2025 is insufficient to meet battery production needs, leading to further constraints in the nickel supply chain.⁷

Copper is another resource of concern when it comes to the future of electric vehicles as markets simultaneously demand more data centers and consumer devices. Because an electric vehicle requires approximately four times as much copper as a conventional vehicle, total copper demand for the EV sector is expected to increase more than six-fold by 2030 as the pace of deployment accelerates.¹⁰ With copper prices continuing a multi-year rise and now nearing all-time highs, establishing expanded domestic mining and processing capacity is clearly of importance. Batteries used in data centers and for consumer electronics devices have similar dependencies on cobalt, copper, and other critical components.

The significance of securing supplies of these high-capacity battery inputs is extremely important for the success of any significant increase in EV penetration. The Alliance for Automotive Innovation notes that automakers and suppliers will invest \$330 billion by 2025 to expedite the transition to EVs.

As EPA considers revising the greenhouse gas standards for light duty vehicles, the agency and the federal government at large should consider how to address supply chain concerns related to strategic minerals and should incorporate consideration of these supply chains issues in the agency's regulatory benefit-cost analysis and decision-making.

II. Pursue permitting reforms across the federal government to speed up investment in needed infrastructure to support any ambitious standards

It is well understood that the environmental review and permitting process has become hampered by unreasonable costs and delays that stifle investment and economic activity across a broad range of sectors. Though clean energy related projects often enjoy popular support, they too have fallen victim to bureaucratic roadblocks and political opposition that hinder investment and development. As the Bipartisan Policy Center has emphasized,¹¹ even the most well-intended efforts to decarbonize the economy will simply not succeed without stable, well implemented permitting reforms, beginning with the environmental review process established under the National Environmental Policy Act and including the thoughtful reforms to that process that were made in 2020 at the conclusion of a robust and lengthy rulemaking process.

⁹ <https://www.carbonbrief.org/explainer-these-six-metals-are-key-to-a-low-carbon-future>

¹⁰ To Support America's Electrification, We'll Need More Copper than Ever, RealClear Energy, April 1, 2021.

https://www.realclearenergy.org/articles/2021/04/01/to_support_americas_electrification_well_need_more_copper_than_ever_before_770754.html

¹¹ America's National Climate Strategy Starts with NEPA, Bipartisan Policy Center, S. Mackler et al., January 8, 2020.

<https://bipartisanpolicy.org/blog/americas-national-climate-strategy-starts-with-nepa/>

Mining that is necessary to support materials essential to the manufacture of high-capacity batteries and other clean energy resources is no exception. According to the National Mining Association, mine permitting in the U.S. takes on average seven to 10 years, and often longer. In other countries with similarly strong environmental standards, such as Canada and Australia, permitting is typically achieved in just two to three years.

The Chamber recommends that the Administration take steps to ensure timely review and fair consideration of battery-related mining development under NEPA. For mining, this includes supporting and utilizing the recently finalized rule making non-energy mining sector projects eligible for assistance and expedited review under Fixing America's Surface Transportation Act (FAST-41) processes. Supporting implementation of this rule would help project sponsors to better navigate the federal permitting process for mining, consistent with the policy goals of multiple Administrations representing both political parties that have issued executive orders and presidential memoranda directing the government to increase the efficiency of federal permitting for critical infrastructure.

More broadly, we also recommend that any EPA reviews of environmental impact statements under NEPA and federal government updates to the permitting process explicitly consider and account for potential impacts to strategic minerals supply chains during the review process.

III. Advance government research and development to support and accelerate vehicle technology innovation

Finally, over the longer term it is imperative that the federal government fully fund the Energy Act of 2020 and conduct the research and development needed to drive innovation in battery and vehicle technology. The development of processes that would reduce demand for strategic materials through efficiency improvements, recycling, or identification of substitutes holds great promise to contribute to supply chain security. Moreover, the development of new and improved vehicle technologies -- such as increased efficiency, improved component materials, and electric vehicle or hydrogen fuel cell powered drive trains -- is essential to long-term emissions reduction from light duty vehicles.

EPA should work closely with the Department of Energy in these research and development efforts. Specifically, section 7001 of the FY2021 Omnibus Appropriations Act (which included the Energy Act) authorizes \$23 million for DOE research on recovery of rare earth elements and critical materials from coal and coal byproducts, while section 7002 calls for \$125 million for research on critical materials recycling, innovation, efficiency, and alternatives, including establishment of an innovation hub to coordinate and integrate crosscutting activities. Additionally, the Better Energy Storage Technology (BEST) Act—included in the same legislation— authorizes \$50 million for the Department's Advanced Manufacturing Office and Vehicle Technologies Office to address critical supply chain matters, including enhancement of recycling and reuse capabilities.

In addition, the bipartisan Infrastructure Investment and Jobs Act (IIJA) currently under consideration would provide more than \$7 billion to address vehicle- and battery-related supply chain vulnerabilities. This includes \$3 billion for battery manufacturing and recycling grants, \$3

billion for battery material processing grants, \$125 million for battery recycling R&D, and \$10 million for the lithium-ion battery recycling prize. Passage of this bipartisan legislation is a top priority for the Chamber, and would provide a foundation upon which to ease supply chain security vulnerabilities that threaten implementation of ambitious vehicle electrification goals.

IV. Durable standards are needed to provide stability for long-term business planning and investment

The automobile industry is an enormously important economic sector, historically contributing 3.0 – 3.5 percent of overall U.S. gross domestic product (GDP) and directly employing an estimated 1.5 million people in the design, manufacturing, sales, and service of motor vehicles.¹² Additionally, the industry is a very large consumer of materials and services from other sectors, from machinery and computing to advertising, finance, and more. Together, these direct and indirect activities amount to a net employment contribution in the U.S. economy of more than 7 million jobs, and state and federal tax revenue generation of \$206 billion.¹³

According to the Alliance for Automotive Innovation, the industry is investing \$330 billion on electrification through 2025 alone, with additional significant investment anticipated beyond this timeline. Concomitant with this level of investment is the need for regulatory agencies to work with the industry and other stakeholders to ensure the full and adequate consideration of relevant factors and objectives that is needed to achieve sound and effective regulatory policy.

Maximizing alignment of EPA's greenhouse gas (GHG) and NHTSA's Corporate Average Fuel Economy (CAFE) programs will allow for a more efficient compliance process and reduced costs under which automobile manufacturers can sell new vehicles across every state in U.S. that meets the state and federal standards. This significantly reduces vehicle design, supply chain, and distribution costs.

It is imperative that all sides work together to identify a flexible, achievable path to continued fuel economy gains. As a practical matter, any scenario that results in two sets of standards—whether via continuation of California's waiver authority while NHTSA and EPA modify federal standards, or via some other mechanism—is sure to result in added costs to the industry that will inevitably be passed along to consumers. It also has the potential for increased litigation risk, injecting even more uncertainty into markets and disrupting efforts to plan, invest, and deliver continued fuel economy and emissions gains.

V. Conclusion

It is clear that there are many challenges to developing and implementing ambitious climate policy, such as the EPA GHG and NHTSA CAFE standards, that extend beyond the automotive sector's simply designing more efficient light duty cars and trucks. Across the government, coordination is needed in many areas, such as securing the supply chains for strategic minerals and streamlining permitting processes for needed infrastructure and mining to support any ambitious standards.

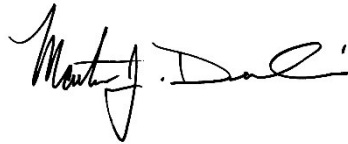
¹² Center for Automotive Research, Contribution of the Automotive Industry to the Economies of All Fifty States and the United States, available at <http://www.cargroup.org/wp-content/uploads/2017/02/Contribution-of-the-Automotive-Industry-to-theEconomies-of-All-Fifty-States-and-the-United-States2015.pdf>

¹³ *ibid*

Not only is coordination needed in areas such as federal permitting and supply chain security, but coordination between government agencies and states is essential to help support the planning and long-term investment needed to implement sound regulatory policy. Without sufficient collaboration among relevant federal agencies and stakeholders, discordant regulatory action will inject more uncertainty into markets and disrupt efforts to plan, invest, and deliver continued fuel economy and emissions gains.

Thank you for consideration of these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty Durbin". The signature is fluid and cursive, with a large initial "M" and a distinct "D".

Marty Durbin
Senior Vice President
U.S. Chamber of Commerce