



Mr. Michael Safoutin
Assessment and Standards Division (ASD)
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
2000 Traverwood Dr.
Ann Arbor, MI 48105

August 23, 2023

[via electronic mail]

Re: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles (Docket ID No. EPA-HQ-OAR-2022-0829)

Mr. Safoutin,

The Alliance for Automotive Innovation submitted comments to EPA on the subject rulemaking.¹ In those previous comments we noted concerns with the availability of adequate critical mineral supplies to support the market share of electric vehicles that would effectively be required under EPA's proposed light-duty vehicle greenhouse gas and criteria pollutant regulations, particularly given global demand for such materials. We now bring to EPA's attention recently updated analysis from Benchmark Minerals Intelligence (BMI) on lithium supplies in the context of automaker production goals and global regulatory policies. Please consider this a supplemental comment on the proposed rule and update to the section in our comments that compared an earlier BMI study with EPA's projected lithium ion battery cell demand to its proposed standards,² and place this letter in the rulemaking docket.

In an article titled "Lithium industry needs over \$116 billion to meet automaker and policy targets by 2030",³ Benchmark Minerals Intelligence (BMI) describes its analysis of lithium needs to meet its "high case" demand under vehicle electrification targets set by automakers and governments across the world, including a 50% electric vehicle share in the United States by 2030. BMI raises the following points that we feel are potentially informative to the subject rulemaking.

¹ See Alliance for Automotive Innovation Comments, available at Docket Id No. EPA-HQ-OAR-2022-0829-0701.

² *Id.* at pp. 10-16.

³ Benchmark Source, "Lithium industry needs over \$116 billion to meet automaker and policy targets by 2030" (August 4, 2023). Available at <https://source.benchmarkminerals.com/article/lithium-industry-needs-over-116-billion-to-meet-automaker-and-policy-targets-by-2030> by subscription.

- “The lithium industry needs to invest \$116 billion by 2030 if the world is to meet the ambitious targets set by governments and the largest automakers.
- “Even if every asset in the pipeline came online on time and hit their projected lithium production capacities, the world would still need 1.8 million tonnes on top of that to meet the high case demand.”
- “The high case scenario, which encompasses data from Rho Motion on automakers’ passenger EV targets as well as data from the International Energy Agency on enacted country-level policies, would require 5.3 million tonnes of lithium carbonate equivalent (LCE). This is compared to the 915,000 tonnes LCE production in operation today.”
- According to a BMI analyst, “It’s almost impossible, and definitely a race against time . . . The players with skin in the game are the least likely to rush their spending . . . They don’t want to flood the market with lithium too quickly. They want to release it slowly to maximise their return . . . As a carmaker, consumer, or EV policy maker, should I be alarmed? Yes.”

The article described above is available by subscription. Much of the content of that article may also be obtained from Green Car Congress.⁴

EPA projects that its proposed light-duty vehicle greenhouse gas standards will be met with a 60% battery electric vehicle market share in 2030,⁵ 10 percentage points higher than the “high case” demand scenario examined by BMI (which includes PHEVs), and beyond the goals of President Biden’s Executive Order 14037.⁶ EPA’s proposal also projects that BEV sales will continue to grow to 67% by 2032. As detailed in our original comments, the proposed greenhouse gas targets far exceed the capabilities of internal combustion engine vehicles.⁷ Therefore, failing to achieve the EPA-projected BEV market share, whether due to battery material availability or other issues, will have serious consequences for automakers and consumers alike. Data such as that highlighted above casts serious doubts on the feasibility of EPA’s proposed rule and is significantly different from assumptions EPA made in its proposal. EPA should take a deeper look into these supply chain challenges, including on-going efforts by other federal agencies responsible for carrying out President Biden’s Executive Order 14037 pertaining to vulnerabilities in our nation’s critical mineral and battery supply chains. EPA needs to address these significant shortcomings as it develops a final rule, rely on data

⁴ Green Car Congress, “Benchmark: Lithium industry needs more than \$116 billion to meet automaker and policy targets by 2030” (August 5, 2023). Available at <https://www.greencarcongress.com/2023/08/20230805-benchmark.html>.

⁵ 88 Fed. Reg. 29333 (May 5, 2023), Table 99.

⁶ We also note that EPA’s projections are premised on only battery electric vehicles, excluding plug-in hybrids, whereas Executive Order 10437 was inclusive of battery electric, plug-in hybrid electric, and fuel cell electric vehicles.

⁷ See comments of the Alliance for Automotive Innovation at Regulations.gov, Docket ID EPA-HQ-OAR-2022-0829-0701, at 90.

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from respected expert analysts such as Benchmark Minerals Intelligence, and use this data in reassessing the feasibility of the proposed greenhouse gas standards.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Michael Hartrick".

Michael Hartrick
Sr. Director, Energy & Environment
Alliance for Automotive Innovation

Cc.
Robin Moran
U.S. Environmental Protection Agency

Michael Olechiw
U.S. Environmental Protection Agency