October 26, 2021

The Honorable Steven Cliff
Acting Administrator
National Highway Traffic Safety Administration
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington DC 20590

Re: Comments of Lucid USA, Inc. Regarding "Corporate Average Fuel Economy Standards for Model Years 2024–2026 Passenger Cars and Light Trucks" Docket No. NHTSA-2021-0053

Dear Acting Administrator Cliff:

On behalf of Lucid USA, Inc. (Lucid), we are pleased to have the opportunity to provide the following comments in response to the National Highway Traffic Safety Administration's (NHTSA) Notice of Proposed Rulemaking for Corporate Average Fuel Economy Standards for Model Years 2024–2026 Passenger Cars and Light Trucks Docket No. NHTSA-2021-0053 (the NPRM).

Specifically, we ask the Administration to consider:

1. Further strengthening the proposed corporate average fuel economy (CAFE) standards for model years 2024–2026 to a 10% year-over-year increase to push the industry away from internal combustion engine (ICE) vehicles and towards electrification.

2. Limiting certain flexibilities under the CAFE regulatory program as they apply to hybrid and ICE vehicles, and providing new incentives for manufacturers producing full electric vehicles (EVs) in the United States.

3. Acknowledging the complementary goals of California's zero-emission vehicle (ZEV) standards and the CAFE standards, and the fact that the two programs are designed to work together towards greater vehicle efficiency.

4. Using a more appropriate value for the rebound effect analysis in the final rule, such as between 5% and 15%.

I. INTRODUCTION

Our Mission

Lucid's mission is to inspire the adoption of sustainable energy by creating the most captivating EVs, centered around the human experience. The company's first car, the Lucid Air, is a state-of-the-art luxury

sedan with a California design underpinned by race-proven technology. The Lucid Air features luxurious full-size interior space in a mid-size exterior footprint. Customer deliveries of the Lucid Air, which is produced at Lucid's new factory in Casa Grande, Arizona, are planned to begin this year. The facility is the first greenfield — or purpose-built — EV factory in North America.

We want to ensure that the most innovative automobiles in the world are produced here in the United States. As a U.S. company that employs over 3,000 people in the United States, we're doing our part to create good-paying, high-skilled jobs, to fight climate change, and to help the United States regain its competitive edge in the automotive industry.

Our proprietary electric powertrain technology, which was developed and perfected in-house, allows Lucid to deliver EV battery efficiency that is far ahead of all competitors on the market today. The Lucid Air achieves more than 4.6 miles per kilowatt-hour (kWh), better than any comparable EVs. As a result of this efficiency, the Lucid Air is leading the industry in fastest charging times and in miles of range per charge. The Environmental Protection Agency (EPA) has confirmed that the Lucid Air (Dream R edition) has a range of 520 miles on a single charge, and all versions of the Air so far have been rated by EPA for range that far exceeds that of any EV produced by other automakers. Unlike other EV makers, Lucid began life in 2007 as a battery company — then called Atieva — and has been working ever since to perfect its core battery system technology, accumulating over 50 patents (granted and pending) in the United States alone. Lucid's exclusive miniaturized EV powertrain, a breakthrough achieved through meticulous engineering and a ground-up rethinking of the way an EV is designed, results in more interior space for the driver, passengers, and storage with a more compact, sporty, and aerodynamic exterior.

We aim to create sustainable mobility without compromise in cars that are intuitive, liberating, and designed for all the ways people get around. At Lucid, we place an exceptionally high priority on efficiency — our cars must make the best possible use of the world's resources. So, every Lucid vehicle delivers exceptional range without sacrificing high performance or sublime comfort. We're not simply building zero-emission cars that can be powered by renewable energy sources — we have an unwavering commitment to making the best use of those resources. As we develop our vehicles and their powertrains, they must be as efficient as possible in every possible way. We strive to achieve the highest efficiency per mile of any EV on the market. This priority isn't the industry norm. With every extra mile we can extract from a kWh of energy, we're actively helping to reduce the human footprint on our planet with fewer total emissions during a vehicle's lifetime.

Our Perspective on the Current State of the Automotive World

America is in a technological race with the rest of the world. To win that race, the U.S. needs more ambitious policy innovation from the federal government, including NHTSA, to push industry towards faster technological innovation. The U.S. needs policies that push manufacturers to provide a comparable level of range, utility, and better-quality experience than traditional ICE vehicles. Lucid's technology enables greater efficiency and longer range, as well as better performance, that is truly superior to its ICE counterparts.

Our Vehicles

Lucid is producing the most efficient and longest-range vehicles in the industry. Customer deliveries of the Lucid Air will begin before the end of October – in less than a week from today..

The Lucid Air is underpinned by LEAP, the Lucid Electric Advanced Platform, which is designed to support other vehicle variants to enable greater capital deployment efficiency and speed to market. Over the next decade, Lucid will offer a portfolio of products with varying body styles and price points, all powered by Lucid's powertrain technology. Ultimately, Lucid plans to leverage its technological and manufacturing advancements to develop and manufacture progressively more affordable vehicles in higher volumes.

Lucid's technology, developed in-house, is designed for mass production and is suitable for use in other transportation applications, including aircraft, electric vertical take-off and landing (eVTOL), heavy machinery, agriculture, and marine applications, and also for energy storage.

Lucid's Commitment to Manufacturing EVs in the United States

Lucid's EVs are designed and manufactured right here in the United States, not outsourced overseas. From developing and manufacturing Lucid's core technology to designing and building its vehicles, Lucid is committed to creating good-paying, high-skilled jobs in the United States.

Lucid's state-of-the-art AMP-1 (Advanced Manufacturing Plant) factory in Casa Grande, Arizona recently started production and is already setting the standard for EV manufacturing in the United States. The facility is proof of the type of new economy that can be created out of investing in transportation electrification. It is the first greenfield dedicated electric-vehicle factory ever built in North America.

The AMP-1 facility already employs over 1,000 people, and every Lucid employee receives stock in the company and receives competitive compensation. For example, the average Lucid employee at the Casa Grande, Arizona facility earns 160% of the median income in the Casa Grande area.

In addition to manufacturing EVs, Lucid has been and will continue innovating across all phases of EV research and development in the United States. Our research and design work is based at the company's headquarters in Newark, California, where we employ over 2,000 people. Our company is growing and over the coming year we will be hiring a significant number of additional employees across design and manufacturing, as well as service technicians and support personnel, in California, Arizona, and other locations across the nation.

II. LUCID SUPPORTS THE BIDEN ADMINISTRATION'S FUEL EFFICIENCY AND ELECTRIFICATION GOALS

The Biden Administration made its commitment to electrification clear when President Biden held the White House event announcing Executive Order 14037, Strengthening American Leadership in Clean Cars and Trucks, which set an ambitious new goal that 50% of all new cars and trucks sold in the United States be EVs or PHEVs by 2030 and directed NHTSA and EPA to revise Trump-era CAFE and greenhouse gas (GHG) standards. Lucid supports this overall electrification goal, as well as NHTSA's proposal to increase year-over-year CAFE standard stringency above the standards set by the Trump Administration. These steps will help push the U.S. automobile market to be a leader in electrification and fuel efficiency.

However, more can be done to meet President Biden's stated goals. We believe that the planned production of new EV models by nearly all major automobile manufacturers in the coming years means that NHTSA and EPA can and should be ambitious in setting their standards, both now and as the agencies look forward for model years 2027 and beyond. As such, Lucid supports the adoption of more stringent standards than the 8% year-over-year increase proposed in the NPRM's Alternative 2. Specifically, Lucid recommends adopting the standards presented in Alternative 3 (i.e., a 10% increase year-over-year for model years 2024–2026). Alternative 3 would meet the statutory requirement to set fuel efficiency standards at the maximum feasible level, push the automobile industry away from continued reliance on ICE vehicles, and ensure its focus remains on increasing electrification. The NPRM itself acknowledges that Alternative 3 is likely to create the greatest fuel cost savings, the biggest reduction in CO_2 emissions and fuel consumption, and the best insulation against fluctuations in the international oil market, and to result in the most energy conserved— the overarching purpose of the Energy Policy and Conservation Act (EPCA) and the Energy Independence and Security Act (EISA). Moreover, the rapidly decreasing costs of battery production, the commitments already made by many automakers to increase electrification and technology in their vehicles, and the incentives for EV purchases in place in several states suggest that Alternative 3 is economically practicable. Indeed, given the devastating impacts of climate change we are already seeing throughout the U.S. and around the world, the cost of not setting CAFE standards as high as technologically feasible may ultimately be greater for the U.S. and global economies in the long-term unless Alternative 3 is adopted.

The U.S. automobile market needs a transition period from its current state to a more efficient vehicle mix, and the proposed CAFE standards for model years 2024–2026 — particularly those in Alternative 3 — could facilitate that transition. After the transition period of model years 2024–2026, the federal agencies must consider the next stage: a National ZEV standard. In the United States, the transportation sector is one of the largest contributors to GHG emissions and in 2019 accounted for 29% of total U.S. GHG emissions. Of those transportation sector GHG emissions, light-duty automobiles accounted for 58% of U.S. GHG emissions in 2019, by far outproducing any other mobile source. A National ZEV standard, put in place under the authority of the Clean Air Act, is the natural next step to respond to the climate crisis. In the next CAFE rulemaking, NHTSA can focus on achieving the maximum feasible improvements in the fuel economy of the internal combustion engines that will remain on our Nation's roads until the transition to ZEVs is complete.

III. LUCID RECOMMENDS THAT THE FINAL RULEMAKING EMPHASIZE THE CRITICAL ROLE OF CALIFORNIA IN IMPROVING CORPORATE AVERAGE FUEL ECONOMY

California has served as a laboratory for emissions regulation mechanisms for the entire Nation, setting the pace for nationwide change by establishing emissions standards applicable to the Section 177 States, which account for roughly 40% of nationwide light-duty vehicle sales. The California standards have been more stringent than the federal standards and are largely responsible for the gains that the United States has made in fuel economy, especially through electrification. Lucid notes that California's ability to set GHG emissions standards that exceed the stringency of federal standards has clear benefits for the future of the Nation's climate policy.

Given California's role in pushing the United States towards achieving its stated electrification and zero emission goals, Lucid encourages NHTSA to acknowledge in its final rulemaking the important relationship between the CAFE program and California's standards — in particular its ZEV mandate.

Specifically, Lucid urges NHTSA to further explain that California's ZEV mandate is crucial to achieving the stated goals of EPCA, EISA, and the CAFE regulations, and that the CAFE standards put in place by the rulemaking are designed to work cooperatively with these ZEV standards. Moreover, Lucid agrees that NHTSA should account for California's GHG program in developing the baseline for the CAFE standards in the final rule for model years 2024–2026.

IV. LUCID RECOMMENDS RETHINKING COMPLIANCE FLEXIBILITIES AND INCENTIVES TO FURTHER PROMOTE TRANSITION TO ELECTRIFICATION

To promote a faster path towards President Biden's electrification and fuel efficiency goals, Lucid supports limiting and/or phasing out certain flexibilities available to manufacturers for the production of ICE and hybrid vehicles under the CAFE program. Lucid understands that certain aspects of the CAFE credit program are provided for in statute and are not within NHTSA's authority to change. The non-statutory flexibilities provided by the program and proposed in the NPRM, however, will weaken the planned increase in stringency and delay the transition to the net-zero emission future promised by President Biden.

Specifically, increasing the cap on off-cycle fuel consumption improvement values (FCIVs) to correspond with EPA's proposed changes to its off-cycle credit program will allow extra flexibility for ICE vehicle manufacturers in return for measures that offer only questionable improvements in GHG emissions and fuel economy. Flexibilities such as these ultimately slow progress towards a zero-emission future. Similarly, NHTSA should reconsider its decision to reinstate incentives for strong hybrid or overperforming ICE pickup trucks. Reviving the full-size pickup truck incentives allows the highest-emitting vehicles to receive only modestly effective technology updates rather than a true conversion to zero emission. The all-electric full-size pickups soon coming on the market from multiple manufacturers demonstrate that EV pickups are feasible and that NHTSA does not need to reward partial reductions of emissions to make progress in the pickup segment of the market. Each of these proposed flexibilities should be revisited and reduced in the final rule. Finally, Lucid supports NHTSA's proposal to rescind credits for off-cycle technologies that are found to be defective or otherwise impair vehicle safety, as is NHTSA's practice in the heavy-duty context. This proposal recognizes and puts into practice NHTSA's mission of preserving vehicle safety, and ensures that manufacturers are not unduly rewarded for innovations that ultimately make their vehicles less safe.

At the same time, Lucid encourages NHTSA to consider adopting additional incentives for manufacturers that commit to developing and producing electric vehicles and related technology and components in the United States. Incentivizing the domestic innovation, development, and manufacturing of EVs across the entire supply chain is consistent with the Biden Administration's Buy American efforts, which aim to encourage U.S. manufacturing and the purchase of U.S.-made goods.

V. ADDITIONAL COMMENTS IN RESPONSE TO NHTSA'S REQUESTS

If NHTSA adds electrification as an attribute on which fuel economy standards should be based, Lucid recommends that NHTSA consider the battery efficiency of the electric vehicles manufactured by each automaker, as well as the market penetration of EVs in the fleet. NHTSA should also consider battery efficiency in calculating the CAFE credits earned by manufacturers who build EVs. Full credits should only go to the EVs that have the highest battery efficiency; partial credits can be earned through the sale

of less efficient EVs. All EVs are not created equal. Battery efficiency as measured in miles per kilowatt-hour is the best metric for determining how well an EV achieves the goals of EPCA, EISA and the CAFE program.

With respect to NHTSA's proposed revisions to the CAFE Credit Reporting Template, Lucid supports providing additional information to NHTSA on a confidential basis, as applicable, to help inform future rulemakings and to better assess the costs of compliance. Lucid suggests that NHTSA confirm that confidential business information, including the details of individual credit transactions between manufacturers, will continue to be kept confidential and protected from public disclosure by the Government.

In response to NHTSA's request for comment on the appropriate value for the rebound effect analysis, Lucid believes that the most appropriate estimate is the 5% to 15% range, with 10% as the central value. Estimates significantly greater than 15% substantially overestimate the increase in vehicle miles traveled (VMT) in response to increasing fuel efficiency. The most recent (and therefore relevant) studies of the light-duty vehicle rebound effect suggest a magnitude of about 10%, and indicate that number decreases as incomes rise, as they have in recent years and are likely to keep doing in the near future. See the Report of Dr. Kenneth Gillingham dated September 20, 2021 on *The Rebound Effect of Fuel Economy Standards* submitted to the EPA Docket in connection with its recent GHG rulemaking for a summary of the most recent studies. Furthermore, EPA has proposed using a fuel economy rebound effect of 10% in the GHG rulemaking for model years 2023–2026, based on a thorough review of the relevant literature, emphasizing those studies focusing on the U.S. since 2010 with strong statistical analyses. Lucid encourages NHTSA to adopt a similar approach in its final rulemaking.

V. CONCLUSION

Lucid strongly supports the Biden Administration's and NHTSA's goals of ensuring vehicle safety and fighting climate change through full electrification of the transportation industry. We further support the Biden Administration's goal of increasing manufacturing and production of EVs and their component parts in the United States. Lucid has led by example on both fronts with our new Arizona factory and longstanding research and development at our California facilities. We look forward to partnering with NHTSA and to being an engaged and innovative member of the automobile industry as we work to help shape the future of the industry.

Respectfully submitted,

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