Introduction

The American Consumer Institute (ACI) opposes the National Highway Traffic Safety Administration’s (NHTSA) proposed Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks for model years (MY) 2027-31, as well as fuel efficiency standards for heavy trucks and vans for MY 2030-35.1 Under this rule, CAFE standards for passenger cars would increase at a nominal rate of 2 percent per year and 4 percent per year for light trucks, while the latter would grow at 10 percent per year. The predicted result would be an industry fleet-wide average for passenger cars and light trucks of roughly 58 mpg by MY 2032 and an industry fleet-wide average for heavy-duty vehicles of approximately 2.6 gallons per 100 miles by MY 2038.

As an advocate for consumers through evidence-based analysis and data insights, ACI believes this new rule is not in consumers’ best interests. To reach the proposal’s implausible goals of 58 mpg for passenger cars and 38 mpg for heavier vehicles, many internal combustion engines (ICE) would have to be replaced with electric vehicles (EV). This shift perfectly aligns with the Administration’s larger goal of electrifying the vehicle fleet.2 We believe this is the purpose behind the rule.

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The Energy Policy and Conservation Act (EPCA) of 1975 states that any standard must result in significant energy conservation and be technologically feasible and economically justified. A new standard cannot sacrifice products on the market and must preserve consumer choice. While environmental concerns can and should be considered with regard to any proposed rule, they would be superseded by the consumer protections in the statute.

The NHTSA’s rule would sacrifice ICE vehicles, predominantly used and preferred by American consumers. The estimated climate change benefits included in the proposed rule are inappropriate, given EPCA’s primary focus on direct consumer benefits. EPCA ensures that the best interests of consumers take precedence over the pursuit of any environmental agenda.

The 2007 Energy Independence and Security Act (EISA) amended EPCA to prohibit NHTSA from considering the fuel economy of alternative vehicles (including EVs) when setting CAFE standards. That ensures CAFE standards never become so stringent that automakers must sell EVs to comply.

If forcing automakers to sell EVs is the ultimate goal, such a move will overhaul one of the largest sectors of the U.S. economy and strip Americans of their right to purchase the type of car that suits their purpose and budget. An all-electric, or nearly all-electric, fleet is not a viable option. As discussed below, EVs are not a realistic or practical choice for most Americans, and neither are they economically sound nor a suitable environmental alternative.

The Electric Vehicle: Expense and Limitations

There are a number of obstacles to a sudden and immediate electrification of the vehicle fleet in the United States. The impracticality and financial burdens of this transition cannot be ignored.

The price differential between an EV and an ICE vehicle still exceeds $10,000, which poses a staggering disparity in upfront costs alone. A U.S. Department of Energy report found that, when factoring in the long-term ownership expenses, a small electric SUV costs $0.4508 per mile

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compared to $0.4727 per mile for a comparable gas car. The report concludes that the average EV would take 15 years to make up for its higher purchase price. Most Americans don’t hold on to a vehicle for that long.

Insuring an EV costs up to 28% more than an ICE vehicle. They are more expensive to replace, have costlier parts and longer repair times, and they sustain more damage in an accident. An EV is more likely to be deemed irreparable and totaled, forcing the insurance company to replace the vehicle entirely.

Those fortunate to own homes must install a level 2 charging station to facilitate quicker charging. This can cost a few thousand dollars. Those living in apartment complexes often do not have the luxury of charging at home and must depend on public charging stations. One third of Americans do not own their own home.

Since an EV’s battery loses 2% of its efficiency each year, most estimates have it lasting 10-20 years. If a replacement is needed, it is estimated to cost between $5,000 and $20,000, plus labor.

The average EV buyer makes well over six figures and far exceeds the 2022 real median income of $74,580. Generally, only the financially privileged are buying electric vehicles; this will remain so for the foreseeable future.

Low-income and minority households will be unfairly impacted to a greater degree. Black households are the least likely to own any vehicles. Studies show that car ownership can help individuals climb out of poverty and narrow the gap between wage disparities, providing them with the necessary transportation to seek better employment. Mandating an all-electric fleet will further drive a wedge of income inequality, pricing many minorities out of the market.

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entirely. Low homeownership among Blacks additionally makes owning an electric vehicle more complicated; they will not be able to charge it at their residence.

The United States lacks the infrastructure necessary to adequately charge electric vehicles and is unprepared to handle a rapid increase in EVs on the road. The number of charging stations is minuscule and is commonly plagued with one or more malfunctioning ports. Charging one’s car still proves to be a challenge, not only in time spent waiting for an available charging post but waiting for the vehicle to charge.

The energy secretary’s September EV road trip put the all-electric struggle on full display. Charging stations were in short supply and one location saw a staffer driving an ICE vehicle choose to inconvenience other patrons by holding a charging post for the secretary.

Those who live in cold climates, which is a large portion of the United States, will see an EV’s range drop significantly as the time needed to recharge it increases considerably.

There is also a documented and growing risk to electric reliability across much of the nation, especially as baseload generation sources like coal and natural gas are being retired and replaced by wind and other intermittent renewable sources. Several regions have already experienced rolling blackouts and/or been asked to conserve electricity. An outdated and overburdened energy grid is not in a position to increase its output, and excessive demand on the current system puts Americans at risk.

**Critical Minerals**

EVs still leave a toxic footprint; the pollution simply occurs at different stages. The largest amount of emissions occur before the first mile is driven, during the production stage. The EV battery, typically weighing 1,000 lbs., is the most labor-intensive aspect of the vehicle and requires mining and processing roughly 500,000 lbs. of earth. The lithium alone requires 20,000 lbs of brines to yield the 30 lbs necessary for each EV battery. Cobalt, nickel, graphite, and

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copper are the other significant components of an EV battery and require substantial amounts of ore to produce the quantities necessary.

The emissions breakeven point between an EV and an ICE vehicle varies with the number of miles driven each year. One third of all EVs are driven 10,000 miles a year, taking five years to break even. Another one-third, moved 5,000 miles a year, will take up to 24 years. The last third will not be driven enough to justify being electric. Many EVs, therefore, could potentially be more pollutant than ICE vehicles.

But most EV options are SUVs with big batteries so the breakeven point will take longer to occur. Bigger batteries with longer ranges require additional critical minerals, creating a heavier product. Such vehicles necessitate extra aluminum for the frame to carry the heavier load, demanding even further energy-intensive work.

Mineral extraction and production are severely lacking in the United States. There is only one active lithium mine, which barely produces enough to power 80,000 EVs annually. Other lithium-rich areas in the country are tied up in legal battles, further preventing citizens from tapping into the vast amounts potentially available. For example, the Thacker Pass project in Humboldt County, Nevada, which would develop the largest known lithium resource in the U.S., faces staunch opposition from state environmental groups, Native American communities, and local ranchers.

Only one nickel mine is up and running. The only cobalt mine on our soil opened its doors last fall, only to suspend activities earlier this year. There is zero graphite and manganese mining.

On top of a rigorous and sluggish permitting process to open mining facilities, the workforce is in peril. More than half of the current workers in the industry will retire by 2029, which equates to 221,000 workers. Enrollment numbers for mining and mineral engineering programs at universities are down nearly 50%, and graduations have seen a net drop of 39% since 2016. 

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12 Jodi Banta, Isabel Barton, and Lynnette Hutson, “Where have all the mining engineering students gone?
The number of university mining programs has nearly been cut in half over the last four decades. There are currently only 15. The United States is nowhere near prepared to meet the critical mineral demand that will “skyrocket to 400-600%” as the White House predicts.\textsuperscript{13}

Our allies face similar dilemmas. Canada, which hosts over 75% of the world’s mining companies, is estimated to see a shortage of 80,000 to 120,000 mining workers by 2030. Australia, which has the 5\textsuperscript{th} largest lithium reserves and is the top-producing country supplying 53% of the world’s annual lithium, will also fall short by 8,000 workers.\textsuperscript{14}

The Involvement of Foreign Adversaries and Unstable Governments

China is the undisputed leader in critical minerals production. They account for 63% of the world’s rare earth mining, 85% of rare earth processing, and 92% of rare earth magnet production.\textsuperscript{15} They hold 78% of the world’s cell manufacturing capacity for EV batteries, which are assembled into modules to form a battery pack.\textsuperscript{16} The country also hosts three-fourths of the world’s lithium-ion battery mega-factories. Most rare earths extracted in the U.S. go to China for refining before being shipped back to the U.S.

China’s robust mining workforce continues an upward trajectory. They currently have over 38 mineral processing schools and nearly 44 mining engineering programs. Central South University, China’s largest mineral processing program, has 1,000 undergraduates and 500 graduate students ready to further China’s mineral ambitions.\textsuperscript{17}

\begin{itemize}
\item New study seeks insights to improve enrollment,” \textit{Mining Engineering}, February 2021, \url{https://mining.arizona.edu/sites/default/files/2022-03/mining_journal_enrollment.pdf}.
\item Thomas Hale, 2023.
\item Thomas Hale, 2023.
\end{itemize}
Relying on China to supply critical earth minerals makes the United States completely vulnerable to supply chain disruptions, which would have disastrous economic consequences and put our national security at risk. As it stands now, we are beholden to an adversarial and volatile nation that could exploit its dominance, use these minerals as a bargaining chip, and choose to limit or cut off our supply. They did so with Japan in 2010.

Seventy percent of the world’s cobalt comes from The Democratic Republic of Congo, whose extraction and manufacturing processes are linked to human rights violations. These abuses range from extremely poor working conditions, unreported deaths, cancers, respiratory illnesses, and sexual assault. Fifteen percent of their workforce are children, some as young as six years old.

**Recommendation**

Forcing a major shift in one of the United States’ most significant economic sectors is not in our best interests and will hurt the American consumer.

EVs currently comprise a very small percentage of new car sales nationally, and only one in five Americans is “very” or “extremely” likely to consider an EV for their next vehicle purchase. Dealer lots are facing 90-day supplies of EVs, nearly double that of conventional vehicles. Therefore, EVs are not the top choice among consumers and should not be forced upon them by eliminating their options.

Car companies losing money on their EV divisions is a testament to their unpopularity among the public. Several automakers are losing tens of thousands of dollars for every unit sold. One of the “Big Three” automobile manufacturers is projected to lose billions on its electric vehicles division this year, twice what it lost last year. Such losses are not sustainable.

There are too many barriers and roadblocks to the widespread adoption of EV technology, and such a transition could potentially harm economic growth and prosperity. Consumer choice is

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18 Ibid.
19 “Many Americans aren’t yet sold on going electric for their next car, poll shows,” PBS, April 11, 2023, https://www.pbs.org/newshour/nation/many-americans-arent-yet-sold-on-going-electric-for-their-next-car-poll-shows.
critical to functioning markets and serves as the catalyst that drives innovation. Government overreach hinders real progress, disallowing the market to regulate itself. This proposed rule pushes manufacturing and selling one type of vehicle while demonizing another, all at the expense of consumer welfare. Such rulemaking and regulation are outside the purview of government scope.

We request that the NHTSA withdraw the proposed CAFE standards.

Thank you for your consideration.

Respectfully,

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