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CONGRESSIONAL TESTIMONY

The Administration's Rollback of Fuel Economy and Clean Car Standards

Subcommittee on Consumer Protection and Commerce and the Subcommittee on Environment and Climate Change of the Committee on Energy and Commerce

June 20, 2019

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My name is Nicolas Loris and I am the Herbert & Joyce Morgan Fellow in the Roe Institute for Economic Freedom at The Heritage Foundation. The views I express in this testimony are my own and should not be construed as representing any official position of The Heritage Foundation. Thank you for this opportunity to appear before the subcommittees to discuss the Environmental Protection Agency's (EPA's) proposal to maintain the Corporate Average Fuel Economy (CAFE) mandates at their 2020 levels. I would like to briefly discuss CAFE's adverse impacts on Americans and the broader market distortions caused when the federal government intervenes in activities best left for producers and consumers.

The Energy Policy and Conservation Act of 1975 charged the National Highway Traffic Safety Administration (NHTSA) to establish CAFE standards for cars and light trucks. Policymakers endorsed fuel-economy mandates under the false notion of resource scarcity; however, CAFE makes no sense now that we have an abundance of oil. Nevertheless, even if the world were running out of oil, fuel-economy mandates were not a good policy then and are not a good policy now.

CAFE regulations are not just a relic of the past, but a systemic problem of the way policymakers and regulators view energy markets. Although policymakers and regulators may be well-intentioned when designing fuel-economy mandates, a level of hubris exists that disregards how markets function and disregards why consumers make the choices they do. The market does a far better job of meeting consumers' needs, and each iteration of more stringent fuel-efficiency standards takes America's automobile market further in the wrong direction. The Obama Administration tightened fuel-economy mandates several times. In spring 2010, the EPA and NHTSA finalized standards for light-duty vehicles for model years (MY) 2012–2016. Two and a half years later, the agencies finalized fleet-wide mandates for MY 2017–2025. The regulations required automakers to meet a fleet-wide average of 54.5 miles per gallon (mpg) for MY 2025.[1] The Obama-era CAFE standards were the first of their kind in that they regulated both fuel economy and greenhouse gas emissions to address climate change.

In August 2018, the EPA and NHTSA proposed the Safer Affordable Fuel Efficient (SAFE) Vehicles rule for MY 2021–2026. The rule's "preferred" change would maintain the existing fuel-economy mandate through MY 2020 (increasing to 37 mpg) and keep the level at 37 mpg through 2025.[2] The SAFE rule is a much needed course correction.

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[1]Environmental Protection Agency and Department of Transportation, 2017, and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62624, October 15, 2012, https://www.govinfo.gov/content/pkg/FR-2012-10-15/pdf/2012-21972.pdf (accessed June 19, 2019).
[2]Environmental Protection Agency and National Highway Traffic Safety Administration, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42986, August 24, 2018, https://www.federalregister.gov/documents/2018/08/24/2018-18418/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and (accessed June 19, 2019).

Rather than imposing regulations and gifting subsidies to nudge consumers in a specific direction, policymakers should eliminate preferential treatment for all fuels and technologies. When it comes to car and light truck purchases, consumers should be in the driver's seat.

CAFE Mandates Override Consumer Choice

Consumers, not policymakers or regulators, should control what type of cars they drive. If consumers value saving money on gasoline over other vehicle characteristics, they will choose to purchase more fuel-efficient cars. Automakers will meet that demand without a federal mandate.

When consumers do not buy the most fuel-efficient car (or appliance), many policymakers argue that consumers, as former Department of Energy Secretary Steven Chu put it, "aren't acting in a way that they should act."[3] The paternalistic view of federal intervention in energy efficiency ignores the trade-offs and budget constraints that families face and the preferences they hold. Consumers value other attributes such as vehicle weight, engine power, size, or safety. Out of all of the cars, trucks, and SUVs sold 2018, the top three selling vehicles were all trucks (Ford F-series, the Chevrolet Silverado, and the Ram Pickup).[4]

Academic research suggests that consumers appropriately value fuel economy. A 2016 study in the *Journal of Public Economics* examined consumers' willingness to pay for fuel economy. The study found, "By seeing how price differences across high and low mileage vehicles of different fuel economies change in response to shocks to the price of gasoline, we estimate the relationship between vehicle prices and future fuel costs. Our data suggest that used automobile prices move one for one with changes in present discounted future fuel costs, which implies that consumers fully value fuel economy."[5]

When the federal government imposes more stringent fuel-economy standards, regulators override consumers' preferences and skew decisions made by automakers in order to comply with the standards. A 2011 Massachusetts Institute of Technology study analyzed the trade-offs automakers must make as a result of the different qualities in a vehicle consumers desire. The article found that if vehicle weight, horsepower, and torque were held constant at 1980 levels, fuel efficiency would have increased 60 percent from 1980 to 2006 instead of the 15 percent increase that did occur.[6] The reason fuel efficiency increased at 15 percent instead of 60 percent

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[3]Ian Talley, "Steven Chu: Americans Are Like 'Teenage Kids' When It Comes to Energy," *The Wall Street Journal*, September 21, 2009, https://blogs.wsj.com/environmentalcapital/2009/09/21/steven-chu-americans-are-like-teenage-kids-when-it-comes-to-energy/ (accessed June 19, 2019).
[4]Joey Capparella, "The Best-Selling Cars, Trucks, and SUVs of 2018," *Car and Driver*, January 3, 2019, https://www.caranddriver.com/news/g25558401/best-selling-cars-suv-trucks-2018/?slide=23 (accessed June 19, 2019).
[5]James M. Sallee, Sarah E. West, and Wei Fan, "Do Consumers Recognize the Value of Fuel Economy? Evidence from Used Car Prices and Gasoline Price Fluctuations?" *The Journal of Public Economics*, Vol. 135 (March 2016), pp. 61–73, https://www.sciencedirect.com/science/article/abs/pii/S0047272716000049 (accessed June 18, 2019).
[6]Christopher R. Knittel, "Automobiles on Steroids: Product Attribute Trade-Offs and Technological Progress in the Automobile Sector," *The American Economic Review*, Vol. 101, No. 7 (December 2011), pp. 3368–3399, http://web.mit.edu/knittel/www/papers/steroids_latest.pdf (accessed June 18, 2019).

is because auto manufacturers met buyers' demands for heavier vehicles with more torque and horsepower.

Fuel-Economy Mandates Hurt Middle America

New cars are a significant investment for American families. According to an analyst at Kelley Blue Book, the average transaction price for a new light vehicle in February 2019 was $36,590.[7] Forcing automakers to install various fuel-saving technologies is costly. Consequently, fuel-economy mandates increase the up-front price of new vehicles, which sets off a chain of decisions by potential car buyers and car owners in the new and used vehicle market. Mandates that drive up the sticker price by thousands of dollars will price buyers out of the market. Higher prices for new vehicles increases demand for used vehicles, causing the price of used vehicles to increase, as well. These higher prices ripple throughout the vehicle market, which affects vehicle fleet turnover for car owners and, consequently, affects fuel savings and emissions reductions.

The National Automobile Dealers Association projects that the Obama-era regulations would increase the average price of a new vehicle by $3,000 in 2025.[8] A 2016 Heritage Foundation analysis estimates the Obama fuel-economy mandates increased new-car prices $6,800 more than the pre-2009 baseline trend, and that eliminating the more aggressive standards would save 2025 car buyers at least $7,200 per vehicle.[9] As my Heritage colleagues detail, "Economists and engineers accurately predicted that the [model year] 2016 standards would hurt consumers by at least $3,800 per car."[10] While it is impossible to say exactly what automobile prices would have been if the Obama Administration had not implemented CAFE standards, direction of the price impact from the regulations is clear.

Proponents of CAFE mandates argue that families save money over time through fuel savings. However, even when factoring monetary savings from greater fuel economy, economists have shown that there is a net cost to consumers.[11] Several economists examined the consumer welfare impact from CAFE's effect on the new car market and factored in reasonable fuel-saving estimates. They all found net costs.[12] University of California at San Diego economist Mark Jacobsen modeled the economic effects CAFE standards increase and the effect on consumers as

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[7]Kelley Blue Book, "Average New-Car Prices Up Nearly 3 Percent Year-Over-Year for February 2019 on Full-Size Pickup Strength, According to Kelley Blue Book," March 1, 2019, https://www.prnewswire.com/news-releases/average-new-car-prices-up-nearly-3-percent-year-over-year-for-february-2019-on-full-size-pickup-strength-according-to-kelley-blue-book-300804859.html (accessed June 18, 2019).
[8]National Automobile Dealers Association, "NADA Fuel Economy Issue Brief," April 2016, https://www.nada.org/CustomTemplates/GeneralPage.aspx?id=21474838142 (accessed June 18, 2019).
[9]Salim Furth and David Kreutzer, "Fuel Economy Standards Are a Costly Mistake," Heritage Foundation *Backgrounder* No. 3096, March 4, 2016, https://www.heritage.org/government-regulation/report/fuel-economy-standards-are-costly-mistake.
[10]Ibid.
[11]Thomas Klier and Joshua Linn, "New-vehicle Characteristics and the Cost of the Corporate Average Fuel Economy Standard," *The RAND Journal of Economics*, Vol. 43, No. 1 (Spring 2012), pp. 186–213, http://www.jstor.org/stable/23209303 (accessed June 18, 2019).
[12]Salim Furth and David Kreutzer, "Fuel Economy Standards Are a Costly Mistake," Heritage Foundation *Backgrounder* No. 3096, March 4, 2016, https://www.heritage.org/government-regulation/report/fuel-economy-standards-are-costly-mistake.

a result of the regulation's impact on the new and used car market. As the price impacts affect new cars and trickle down through the used car market, the aggregate consumer costs are significant. For the 9-mpg regulatory change through MY 2016, the total consumer cost was $186.1 billion per year.[13] As with other energy regulations that drive prices higher, the costs are borne disproportionately by the poor. Jacobson estimates that households with incomes below $25,000 will be among the hardest hit.[14]

Americans incur additional costs associated with more stringent fuel-economy mandates as well. Government intervention to promote specific vehicles harms Americans as consumers, taxpayers, and ratepayers. Since the fuel-economy mandates per manufacturer are fleet-wide, automakers can increase the price of gas-guzzlers and keep the price of gas sippers low to encourage consumers to buy the more fuel-efficient vehicles an automaker must produce. Even so, car sales indicate that buyers are shunning smaller, cheaper cars and sedans for SUVs and trucks.[15] In fact, light-truck sales captured a record 69 percent of the U.S. market in 2018 while car sales fell to 31 percent, down from 50 percent in 2013.[16] Higher priced SUVs and light trucks consumers want to buy (in spite of the higher prices) are covering the costs of cars consumers do not want to buy. Manufacturers may have to tinker with prices more to shift vehicle-purchasing habits. Alternatively, auto companies may be stuck with cars that consumers do not want to buy.

Furthermore, the Obama-era mandates set fleet-wide targets to encourage the production and sale of electric vehicles. To comply with the Obama-era standards, manufacturers could receive additional credits to meet CAFE mandates by producing hybrid, electric, and other alternative vehicles. CAFE is far from the only way the federal government advances the production and consumption of electric vehicles (EVs). The federal tax credit for purchasing EVs extends up to $7,500. Adding in state subsidies and that figure can easily surpass $10,000. Furthermore, utilities that stand to benefit from drivers plugging in for fuel are spending tens of millions of dollars on EV charging stations and billing the costs back to all ratepayers.

EV drivers not pay any gas tax, which is literally highway robbery since the federal gas tax is supposed to pay for the Interstate Highway System. In aggregate, these policies aid states in meeting their Zero-Emission Vehicle programs. It should come as no surprise that nearly half of all EV sales occur in California, and the benefits accrue to the richest Americans. The federal government should not use its regulatory influence to nudge automakers to make a certain vehicle and then use taxpayer dollars to subsidize the consumption of that vehicle. If EVs or any other alternative fuel technology is an economically viable product, car buyers will readily purchase them without any intervention from federal or state governments.

Overly Generous Savings Estimates

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[13]Mark R. Jacobsen, "Evaluating U.S. Fuel Economy Standards in a Model with Producer and Household Heterogeneity," *American Economic Journal: Economic Policy*, Vol. 5, No. 2 (May 2013), pp. 148–87.
[14]Ibid.
[15]David Muller, "Light Trucks Take a Record 69% of U.S. Market," Automotive News, January 7, 2019, https://www.autonews.com/sales/light-trucks-take-record-69-us-market (accessed June 19, 2019).
[16]Ibid.

The EPA and NHTSA not only underestimate the up-front cost increase from CAFE mandates,[17] the agencies also very likely overestimate the fuel savings. Changes in gas prices change the value of fuel economy and more fuel-efficient cars to consumers. Understandably, high gas prices increase the value of more fuel-efficient vehicles while decreases in gas prices increase the value of gas-guzzlers.[18] When designing the Obama-era standards, the EPA and NHTSA estimated that gas prices would be $3.87 per gallon in 2025, increasing to $4.24 per gallon by 2040.[19] They used these price projections to project how much money consumers would save on fuel costs. However, through increased domestic oil production, Americans are saving a lot of money at the pump, meaning there is less value to higher fuel economy. While those price scenarios are still plausible, increases in supply and changes in consumer behavior could also drive prices down even more, and consumers would save less money than projected.

Of course, gas prices could increase even more than the EPA's projections, and consumers could save even more money from mandated fuel efficiency. The reality is, it is very difficult to project gas prices 22 weeks into the future, let alone for the next 22 years. Regardless, when proponents of CAFE mandates use topline savings estimates, they misinform the public.

Importantly, many economic analyses of CAFE disregard the fact that households purchase more than one car. These cost-benefit analyses treat each purchase as independent. However, three-quarters of American families are multi-car households, and the purchase of their second or third vehicles have less to do with fuel economy and value other attributes more such as size, storage, power and other features car buyers desire.

According to a joint paper from the University of California, Berkeley, the Center for Energy and Environmental Policy Research (CEEPR) at the Massachusetts Institute of Technology, and the Energy Policy Institute at Chicago, University of Chicago, "two car households exhibit strong substitution of attributes across vehicles when faced with an exogenous change to fuel intensity of a kept vehicle. Beyond calling into question a near ubiquitous assumption in durable goods demand models in the context of multi-car households, we demonstrate that attribute substitution exerts a strong force that likely erodes a substantial portion of the gasoline savings from fuel economy standards."[20]

The well-known "rebound effect" and less-known "scrapping effect" also negate some of the fuel savings. The rebound effect (approximately a 10 percent increase in driving) occurs when people drive more because their vehicles are more fuel-efficient. The scrapping effect occurs

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[17]Salim Furth, "Fuel Economy Standards Hurt the Middle Class," Heritage Foundation *Commentary*, March 14, 2016, https://www.heritage.org/government-regulation/commentary/fuel-economy-standards-hurt-the-middle-class.
[18]Mark R. Jacobsen and Arthur A. van Benthem, "Vehicle Scrappage and Gasoline Policy," *American Economic Review*, Vol. 105, No. 3 (2015), pp. 1312–1338, https://www.aeaweb.org/articles?id=10.1257/aer.20130935 (accessed June 19, 2019).
[19]Environmental Protection Agency and Department of Transportation, 2017, and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards.
[20]James Archsmith, Kenneth Gillingham, Christopher R. Knittel, and David S. Rapson, "Attribute Substitution in Household Vehicle Portfolios," E2e Working Paper 040, September 2018, http://e2e.haas.berkeley.edu/pdf/workingpapers/WP040.pdf (accessed June 18, 2019).

because CAFE mandates change prices in the new and used car market. Changes in gas prices and used vehicle prices impact when people scrap their vehicles. The changes affect both the composition of the vehicles scrapped and the rate at which consumers scrap them. In a 2015 *American Economic Review* article, Wharton economics and public policy professor Arthur van Benthem and Mark Jacobsen note that car owners scrap more fuel-efficient vehicles at a higher rate and hold onto the least fuel-efficient vehicles. Consequently, they estimate that "13-16% of the expected fuel savings will leak away through the used vehicle market."[21]

Negligible Climate Benefits

No matter where one stands on the urgency to combat climate change, CAFE mandates are not an ineffective policy instrument. Even ignoring the negated emissions savings from the rebounding and scrapping effect, the global temperature impact would be practically immeasurable.

By the Obama Administration's own account, the 2012–2025 standards would abate less than two-hundredths of a degree Celsius of warming by 2100.[22] In fact, the U.S. could cut its carbon-dioxide emissions 100 percent and it would not avert much warming. According to the Model for the Assessment of Greenhouse Gas Induced Climate Change, using a climate sensitivity of 4.5 degrees Celsius (the warming effect of a doubling of carbon-dioxide emissions and an estimate exceeding some recent peer-reviewed research on the topic), the world would be less than two-tenths of a degree Celsius cooler by the turn of the century. The rise of sea levels would be reduced by less than 2 centimeters.

Markets, not Washington, Should Drive Consumer Choice and Innovation

Consumers should have the freedom to buy the vehicle of their choice. Neither Washington nor Sacramento should exclusively dictate those decisions. Rather than rely on regulations to tell producers and consumers what to do, price signals will guide these choices. Higher gas prices communicate information to energy producers to drill for more oil. They communicate information to entrepreneurs to invest in alternative vehicle technologies, or more fuel-efficient cars. Prices also communicate information to energy users to buy more fuel-efficient cars, to carpool, or to find other modes of transportation. The SAFE rule is an important step in the right direction for new and used car buyers and for consumer choice.

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[21]Jacobsen and van Benthem, "Vehicle Scrappage and Gasoline Policy," pp. 1312–1338.
[22]Environmental Protection Agency and Department of Transportation, 2017, and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards.

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