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Testimony of Dr. Dave Cooke, Senior Vehicles Analyst, Union of Concerned Scientists, before the House Energy and Commerce Committee, at the Subcommittee on Environment and the Subcommittee on Digital Commerce and Consumer Protection joint hearing entitled “Update on the Corporate Average Fuel Economy Program (CAFE) and Greenhouse Gas Emissions Standards for Motor Vehicles”

SUMMARY

The Union of Concerned Scientists appreciates the opportunity to comment on the current fuel economy and emissions standards. Transportation is now the leading source of carbon dioxide emissions in the United States, and the 2012-2025 light-duty vehicle standards represent the largest single step towards reducing greenhouse gas emissions and oil use in the United States.

Not only does this policy reduce the adverse impacts of fossil fuel use on our climate and our national security, but these cost-effective standards help put money back into the hands of consumers by saving them money at the gas pump. Improving the efficiency of new vehicles is especially critical for lower- and middle-class families, who spend a greater share of their income on fuel, and these standards disproportionately benefit those individuals by making both the new and used car market more fuel-efficient.

The efficiency of cars and trucks continues to improve as result of these standards, with SUVs showing some of the greatest levels of improvement year-over-year precisely because these size-based standards encourage manufacturers to offer more fuel-efficient options in all vehicle classes. And even as the fleet is becoming more efficient, automakers are setting sales records.

At the same time, the success of these standards cannot be taken for granted. Suppliers have invested nearly $50 billion building and expanding factories around the U.S. as a result of the certainty these standards provide, growing manufacturing jobs by more than 20 percent. Anything done to weaken the standards and undermine those investments could have drastic consequences for a supplier base with a broad national footprint, and in turn the U.S. economy.

This technology investment is part of why we are confident that manufacturers can achieve the 2025 standards. Automakers have barely begun deploying many off-the-shelf technologies that can improve the efficiency of conventional gasoline-powered vehicles, and new, unanticipated developments continue to emerge that can reduce fuel use even further. As a result of this progress, NHTSA and EPA were able to jointly show in the Technical Assessment Report (TAR) that costs to comply with fuel economy and greenhouse gas emissions standards had declined.

As required under the mid-term evaluation process agreed to by all parties to the One National Program, EPA reviewed the comments on the TAR and moved forward with a determination on whether its standards for 2022-2025 remained appropriate. Based on best available economic and technical data, including data provided by manufacturers, EPA concluded that the 2025 standards remained appropriate. In fact, EPA agreed with our assessment that the data showed that manufacturers could meet even stronger standards in 2025, but the agency chose instead to leave the standards as-is to provide the certainty needed for continued investment in efficiency.

By seeking to renegotiate the terms of the One National Program, automakers are injecting uncertainty into the process, stymying progress and forestalling investment. This directly harms consumers and risks long-term impacts for the industry. Ceding leadership as the rest of the world moves forward signals a repeat of the failings that required American taxpayers to bailout the industry in 2008, and suppliers could exit to China or Europe in response.

One National Program is working now to provide fuel savings for Americans, improve national security, and reduce emissions, but this progress is in jeopardy as a direct result of automakers' recent actions to undermine these standards. It is critical to continue to hold automakers accountable for the promises they've made to the American people.

TESTIMONY

Good morning, Mr. Chairmen and Ranking Members. My name is Dr. Dave Cooke and I am a Senior Vehicles Analyst with the Union of Concerned Scientists, a non-profit advocacy organization whose primary mission is to ensure that policy is crafted based on the best available science, without political interference.

I appreciate the opportunity to speak with the Members of these subcommittees about the current fuel economy and emissions standards. Transportation is now the leading source of carbon dioxide emissions in the United States, and addressing the emissions from this sector is a critical piece in moving towards a more sustainable economy and way of life not for just the United States, but worldwide.

The 2012 through 2025 fuel economy and greenhouse gas emissions standards for passenger vehicles represent the largest single policy step towards reducing greenhouse gas emissions and oil use in the United States. Not only does this policy reduce the adverse impacts of fossil fuel use on our climate and our national security, but these cost-effective standards help put money back into the hands of consumers for the things they want and need thanks to money saved at the gas pump. To date, American new car buyers have saved over $50 billion in fuel thanks to these standards,[1] and putting these savings back to work in the local economy helps drive economic progress around the country.

Improving the efficiency of new vehicles is especially critical for lower- and middle-class families, who spend a greater share of their income on transportation.[2] These Americans are more likely to purchase used vehicles and wind up spending much more money on fuel than on

[1] Fuel savings ticker, www.ucsusa.org/clean-vehicles/fuel-economy-ticker.
[2] Fuel efficiency, consumers, and income, www.ucsusa.org/fuel-economy-low-income.

the vehicles themselves. Rural drivers facing long commutes, particularly in areas of the country more likely to own larger vehicles, face a similar challenge. This means that these standards disproportionately benefit the lowest income individuals—the standards not only make new cars more efficient across all vehicle classes, they are also in turn making our used car market more efficient, saving used car buyers on gasoline costs now and serving as a hedge against future rising gas prices for the people who would be most vulnerable to any price spikes.[3]

It is clear that these critical standards are working—the latest data shows that the efficiency of cars and trucks on average continues to improve, even though consumers are continuing to buy more and more SUVs and trucks. In fact, SUVs are showing some of the greatest levels of individual improvement year-over-year, directly as a result of these size-based standards, which encourage manufacturers to offer not just more fuel-efficient compact cars and sedans but also more efficient SUVs and crossover vehicles. This is all happening, of course, as automakers have set back-to-back sales records and are on pace to hit over 17 million in new vehicle sales for the third consecutive year, a feat which would be an historic first for the industry.

At the same time, the success of these standards cannot be taken for granted—now is not the time to let our foot off the gas pedal. These standards have helped drive American investment by providing certainty for the industry out through 2025—suppliers have invested nearly $50 billion building and expanding factories in the U.S. over the past decade,[4] and that's a direct result of the certainty these standards provide. Supplier manufacturing jobs outnumber automaker jobs by

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[3] D. Greene and J. Welch, *The impact of increased fuel economy for light-duty vehicles on the distribution of income in the U.S.: A retrospective and prospective analysis*, http://bakercenter.utk.edu/white-paper-on-the-impact-of-increased-fuel-economy-for-light-duty-vehicles.

[4] D. Sedgwich, "Suppliers' $48 billion spending spree," *Automotive News*, www.autonews.com/article/20160801/OEM10/308019948/suppliers-%2448-billion-spending-spree.

3 to 1 and have been a tremendous source of job growth for the manufacturing sector. These jobs have grown by 20 percent since these standards were finalized,[5] and 288,000 (about half) of the supplier manufacturing jobs are directly related to the manufacture of parts to improve fuel efficiency,[6] not to mention the indirect jobs impacted by this local investment. Anything done to weaken the standards and undermine that investment could have drastic consequences for a supplier base with a broad national footprint, with facilities in 48 states and at least 335 Congressional districts.[7]

This strong investment is part of the reason why we are confident that manufacturers can achieve the 2025 standards. Even as we have seen cars and light trucks get more efficient in the past few years, it is important to note that many technologies are barely in their infancy or have not yet been widely deployed. For example, while Ford led the way with its Ecoboost turbocharged engines a decade ago, just 20 percent of vehicles being sold today have this technology. Similarly, stop-start technology has been available for nearly 2 decades, but only recently are we starting to see it applied more broadly to conventional vehicles like the Chevy Cruze—stop-start technology is in just 10 percent of vehicles sold today. Those are just two of the technologies already available which could be deployed to the other 80 to 90 percent of the fleet and provide tremendous savings across the board.

Beyond the "off the shelf" technologies that are ready for widespread deployment right now, we've also seen innovative new technology developments over the past few years that virtually

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[5] Bureau of Labor Statistics. https://www.bls.gov/iag/tgs/iagauto.htm. Bureau of Labor Statistics. https://www.bls.gov/iag/tgs/iagauto.htm.

[6] Blue-Green Alliance and the Natural Resources Defense Council, *Supplying Ingenuity II: U.S. suppliers of key clean, fuel-efficient vehicle technologies*, www.bluegreenalliance.org/wp-content/uploads/2017/05/Supplying-Ingenuity-vFINAL-low-res.pdf.

[7] Interactive map available at www.bgafoundation.org/programs/visualizing-the-clean-economy-autos/.

no one anticipated. For example, Mazda is getting ready to deploy a spark-assisted charge-compression engine, which has the efficiency of a diesel engine but runs on gasoline. Just two years ago, this was seen as "pie in the sky"—engineers had been working on it for decades, and a panel of technology experts put together by the National Academies of Science, Engineering, and Medicine expressed total skepticism about the feasibility of this technology by 2025.[8] Yet Mazda is putting this engine in its high-volume Mazda3, redesigned for 2019. There are similar advancements around dynamic cylinder deactivation from Delphi, variable-compression ratio engines from Nissan, BMW's extensive use of carbon fiber in its i-Series…I could go on and on about the unanticipated levels of research and development occurring right now which indicate how much farther we can push the envelope when it comes to improving conventional, combustion engine-powered vehicles. But instead I will just note that regulators have historically underestimated how fast technology can be developed and deployed, which is why agency predictions for the cost of compliance are almost always overestimated.[9] Our own analysis of the costs of compliance with One National Program thus far confirm this to be the case with this program as well.[10]

EPA and NHTSA took all of these technical advancements into consideration as they worked on the mid-term evaluation. The first step of the mid-term evaluation was drafting the joint Technical Assessment Report (TAR), in which both agencies agreed that the estimated costs to

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[8] Committee on the Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles, Phase 2, National Research Council. *Cost, Effectiveness and Deployment of Fuel Economy Technologies for Light-Duty Vehicles*, National Academies Press: Washington, DC, 2015. p. 2-63.

[9] E.g., see Carey, M.P. 2016. Methods of estimating the total cost of federal regulation. Congressional Research Service report R44348. January 21; Harrington, W., R.D. Morganstern, and P. Nelson. 1999. On the accuracy of regulatory cost estimates. Resources for the Future discussion paper 99-18, January; and Hwang, R., and M. Peak. 2006. Innovation and regulation in the automobile sector: Lessons learned and implications for California's CO2 standards. April. Online at www.nrdc.org/ sites/ default/ files/ air_08030301a.pdf.

[10] EPA-HQ-OAR-2015-0827-9200, pp. 10-13.

comply had come down since the rules were first crafted. Then, after reviewing the comments on the TAR, EPA moved forward with its required next step in the evaluation process, determining whether its standards for 2022-2025 remained appropriate. Based on the overwhelming amount of economic and technical data available since 2011, including data provided by manufacturers,[11] EPA concluded that the 2025 standards remained appropriate. In fact, EPA agreed with our assessment that the data showed that manufacturers could meet even stronger standards in 2025, but the agency chose instead to leave the standards as-is to provide the certainty needed for continued investment in efficiency.

This is in part why I have been so surprised to see the automakers trying to undermine the standards at every turn, each new maneuver injecting uncertainty into the process, stymying progress and forestalling investment in improving the efficiency of the fleet. Manufacturers already have a number of flexibilities and incentives which they can use to comply with the programs, including earning extra credits for alternative-fueled vehicles, the ability to purchase credits from other manufacturers, and average/banking provisions which help manufacturers balance year-to-year compliance with vehicle design cycles. However, in 2016 automakers petitioned the agencies to alter a number of the provisions to the program which they had signed up for back in 2010—in fact, many of the requests were things that automakers had already previously requested and been denied,[12] as clear a case as it gets of trying to renegotiate a deal. Similarly, they have asked many members of this committee for some of these same fixes,

[11] https://blog.ucsusa.org/dave-cooke/epa-correctly-affirms-vehicle-standards-despite-automaker-misinformation

[12] For example, NHTSA was quite clear that off-cycle credits applied to the 2012-2016 model years would violate its requirement for "maximum feasible" standards (Federal Register 75 (88), p. 25663), and NHTSA twice repudiated industry's request to circumvent the transfer cap by redefining how credits were banked and transferred (Federal Register 75 (88), p. 25666 and interpretation letter 10-004142 to Tom Stricker, Toyota from Kevin Vincent, NHTSA, dated July 6, 2011).

clearly looking to wriggle out of their commitment. In fact, they've now requested that the agencies consider revising the model year 2021 standard, solely as a way of reducing their requirements, seeking relief as Mr. Bainwol's colleague Chris Nevers put it, "any way we can get it."[13]

There is a lot that can be said about the merits of these requests, or lack there-of, and I am happy to speak to those issues or anything else of which is of interest to the committee. I appreciate your time and thank you for the opportunity to share UCS' perspective.

[13] Response from Chris Nevers, Alliance of Automobile Manufacturers, to Bill Charmley, EPA, at the public hearing for reconsideration of the final determination. www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-10088.