

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
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**MEMORANDUM**

**September 20, 2016**

**To: Subcommittee on Commerce, Manufacturing, and Trade and Subcommittee on Energy and Power Democratic Members and Staff**

**Fr: Committee on Energy and Commerce Democratic Staff**

**Re: Hearing on “Midterm Review and Update on the Corporate Average Fuel Economy Program and Greenhouse Gas Emissions Standards For Motor Vehicles”**

On **Thursday, September 22, 2016, at 10:00 a.m. in HVC-210**, the Subcommittee on Commerce, Manufacturing, and Trade and the Subcommittee on Energy and Power will hold a joint hearing titled “Midterm Review and Update on the Corporate Average Fuel Economy Program and Greenhouse Gas Emissions Standards For Motor Vehicles.”

**I. BACKGROUND**

**A. Origin of CAFE Standards**

Congress enacted Corporate Average Fuel Economy (CAFE) standards in 1975 to reduce energy consumption by increasing the fuel economy of the nation’s passenger cars and light trucks.<sup>1</sup> Before 2007, the law required every manufacturer to meet the same sales-weighted average for all of its cars in a given model year. The Energy Independence and Security Act of 2007 (EISA) changed the CAFE program to allow for differences in the size and attributes of the vehicles within a manufacturer’s fleet. CAFE standards now are based on the size of a vehicle’s “footprint,” the product of a vehicle’s wheelbase (the distance between the centers of the front and rear wheels on a two-axle vehicle) multiplied by its track width (the distance between the

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<sup>1</sup> U.S. Department of Transportation, *Corporate Average Fuel Economy (CAFE) Standards* (Aug. 27, 2014) (online at [transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards](http://transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards)).

center of the left and right tires on the same axle).<sup>2</sup> Generally, the larger a vehicle's footprint, the lower the target level of fuel economy that must be achieved by the manufacturer. Instead of a uniform CAFE standard, each manufacturer now has a unique CAFE standard. A manufacturer must meet its unique fleet-wide average based on the vehicles it chooses to produce and volume of sales of each vehicle model.<sup>3</sup> The National Highway Traffic and Safety Administration (NHTSA), under authority granted by the Energy Policy and Conservation Act (EPCA), sets and enforces CAFE standards for passenger cars and light trucks. In addition, the Environmental Protection Agency (EPA) sets standards for greenhouse gas (GHG) emissions for those same vehicles under the Clean Air Act.<sup>4</sup>

## **B. Recent Developments**

Following a period of relatively little improvement in the CAFE standards, in early 2009, the Obama Administration brokered an agreement to provide the auto industry with one National Program for fuel economy and GHG emissions. Under that agreement, NHTSA and EPA committed to promulgate 2012-2016 model year (MY) CAFE and GHG standards that align with one another. Under those new standards, if an automaker meets the GHG standards, then it is deemed to have met the CAFE standards (but not the other way around). Additionally, California—which is able to set its own carbon standards under the Clean Air Act—agreed that all auto manufacturers complying with the National Program during this period would be deemed to be in compliance with the GHG emission standards for vehicles adopted by California and 13 other states.<sup>5</sup> The National Program for fuel economy and GHG emissions was supported by the automobile industry, the states, and environmental advocacy groups.<sup>6</sup>

The first integrated EPA and NHTSA standards for MYs 2012-2016 projected that passenger cars and light trucks would meet an estimated combined average GHG emissions level of 250 grams of CO<sub>2</sub> per mile in MY 2016. This GHG emission requirement is equivalent to the auto manufacturers achieving a fleet-wide average of 35.5 miles per gallon (mpg) if the automotive industry were to meet this CO<sub>2</sub> emission level entirely through fuel economy improvements. Manufacturers can meet a portion of the GHG emission reduction requirements

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<sup>2</sup> U.S. Environmental Protection Agency, *Fact Sheet: EPA and NHTSA Finalize Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks* (Apr. 2010) (online at [www3.epa.gov/otaq/climate/regulations/420f10014.pdf](http://www3.epa.gov/otaq/climate/regulations/420f10014.pdf)).

<sup>3</sup> *Id.*

<sup>4</sup> Brent D. Yacobucci, et al., *Automobile and Truck Fuel Economy (CAFE) and Greenhouse Gas Standards*, Congressional Research Service (Sept. 11, 2012) (R42721).

<sup>5</sup> U.S. Environmental Protection Agency and National Highway Traffic Safety Administration, *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, 75 Fed. Reg. 25323 (May 7, 2010) (final rule).

<sup>6</sup> U.S. Environmental Protection Agency, *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* (online at [www.epa.gov/oms/climate/regulations.htm](http://www.epa.gov/oms/climate/regulations.htm)) (accessed on Sept. 19, 2016).

by other means than fuel economy improvements, such as improving air conditioning systems. EPA and NHTSA project that, on average, implementation of the standard will save consumers \$3,000 net fuel costs over the life of a MY 2016 vehicle.<sup>7</sup>

In August 2012, EPA and NHTSA finalized joint standards to reduce GHG emissions and improve the fuel economy of passenger cars and light trucks for MYs 2017-2025.<sup>8</sup> The standard projected passenger cars and light trucks would meet a fleet-wide average emissions level of 163 grams of CO<sub>2</sub> per mile in MY 2025. The EPA GHG standard is estimated to be equivalent to a 54.5 mpg fuel economy standard if the automotive industry chose to meet the standard through fuel economy improvements alone.<sup>9</sup> However, as in the case of the previous period's standard, the GHG emission standard is not a CAFE standard, and the GHG reduction target can be met by reducing vehicle GHG emissions through mechanisms other than improved fuel economy.

Combined with the first round of the program, the joint EPA and NHTSA rule will result in MY 2025 vehicles emitting one-half of the GHGs of a MY 2010 vehicle.<sup>10</sup>

## II. MIDTERM EVALUATION OF MY 2022-2025 STANDARDS

The 2012 final rule establishing the MY 2017-2025 National Program standards also instructed EPA, NHTSA, and the California Air Resources Board (CARB) to conduct a midterm evaluation (MTE) of the GHG and CAFE standards established for MY 2022-2025. For EPA, the purpose of the MTE is to determine whether the standards are still appropriate using the latest available information.<sup>11</sup>

EPA, NHTSA, and CARB released for public comment a draft Technical Assessment Report (TAR) on July 18, 2016. The report praised automotive manufacturers' ability to bring new technology to market at a rapid pace since the first round of standards took effect. The report also showed that manufacturers over-complied with the standards for each of the first three years of the joint standards, outperforming by 1.4 mpg in 2014.<sup>12</sup> The TAR evaluates a

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<sup>7</sup> See note 2.

<sup>8</sup> U.S. Environmental Protection Agency, *Fact Sheet: EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks* (Aug. 2012) (online at [www3.epa.gov/otaq/climate/documents/420f12051.pdf](http://www3.epa.gov/otaq/climate/documents/420f12051.pdf)).

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> U.S. Environmental Protection Agency, *Midterm Evaluation of Light-duty Vehicle GHG Emission Standards for Model Years 2022-2025* (online at [www3.epa.gov/otaq/climate/mte.htm](http://www3.epa.gov/otaq/climate/mte.htm)) (accessed Sept. 17, 2016).

<sup>12</sup> National Highway Traffic Safety Administration, *Environmental Protection Agency, U.S. Department of Transportation, and California's Air Resources Board Issue Draft Technical Assessment Report of Greenhouse Gas Emissions and Fuel Economy Standards for Model Year*

wide-range of vehicle technologies for improving fuel economy and reducing GHG emissions. As part of the evaluation, the agencies also assess other factors (e.g., trends in the passenger car and light truck market, consumer behavior; employment impacts, vehicle safety, and alternative fuel infrastructure) that will affect the ability of automakers to meet fleet-wide requirements for improved vehicle environmental performance.

Next, EPA will use the TAR to inform its proposed determination on whether the 2022-2025 standards are appropriate. EPA is required to make a final determination no later than April 1, 2018, on whether to increase, decrease, or maintain the current standards for such model years. The NHTSA Administrator will use the information gathered for the MTE when setting CAFE standards for MYs 2022-2025.<sup>13</sup>

### **III. RESPONSE OF AUTOMAKERS**

Although the automakers entered into an agreement with the Administration and the states to support the new National Program, the companies have expressed concerns about the feasibility of meeting the GHG emission reduction targets and CAFE standards included in the 2012 rule. Their concerns include the costs associated with fuel economy and emission performance improvement technologies and the level of consumer interest in fuel economy relative to other vehicle features.

Changes made in the CAFE program in 2007 were in response to the automakers' concerns. The transition to the footprint-based CAFE system addressed the concern that improved fuel economy could only be addressed by making and selling small cars, something that no longer is required for an automaker to achieve compliance under the CAFE program.

Since smaller vehicles face more stringent targets than their larger counterparts, adding a few inches to the footprint can result in a lower mpg target for a manufacturer. Many cars and light trucks have increased in size since the updated standards took effect in 2012, and EPA has measured an increase of approximately one square foot in vehicle footprint since first tracking the measure in 2008.<sup>14</sup>

Low fuel prices have put pressure on the MY 2025 CAFE projection, which assumed a lower percentage of light trucks, SUVs, and crossover vehicles on the market than today's 50 percent.<sup>15</sup> Despite this higher percentage of larger vehicles, the draft TAR predicts that its updated fleet wide MY 2025 projection can be achieved by relying primarily on advanced gasoline vehicles. Approximately 45 percent of MY 2015 vehicles utilize gasoline direct

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2022-2025 *Cars and Light Trucks* (July 18, 2016) (online at [www3.epa.gov/otaq/climate/documents/mte/420d16900.pdf](http://www3.epa.gov/otaq/climate/documents/mte/420d16900.pdf)).

<sup>13</sup> *Id.*

<sup>14</sup> Automotive News, *MPG Report Sets Stage for Debate* (July 25, 2016) (online at [www.autonews.com/article/20160725/OEM11/307259966/mpg-report-sets-stage-for-debate](http://www.autonews.com/article/20160725/OEM11/307259966/mpg-report-sets-stage-for-debate)).

<sup>15</sup> *Id.*

injection—a fuel saving technology—up from two percent in the baseline 2008 model year.<sup>16</sup> The use of six-speed transmissions—which improves both performance and fuel economy—also increased to 57 percent of MY 2015 vehicles compared to 19 percent in the baseline.<sup>17</sup> Additionally, automakers are focused on using lightweight materials in their fleet of vehicles to achieve the upcoming fuel efficiency standards.<sup>18</sup>

More recent efforts by automakers, however, have sought CAFE credits through means that do not directly address either fuel economy or emissions.<sup>19</sup> For example, some have proposed receiving CAFE credits for safety improvements already planned for upcoming model years.<sup>20</sup>

While the National Program has achieved integration of CAFE and GHG standards as well as similar state GHG standards, the automakers continue to seek “harmonization” with other state vehicle programs that promote the production of zero emission vehicles (ZEV). These state programs have no federal counterpart. The state ZEV requirements are designed to create a market for electric and other zero emission vehicles. While these programs are not CAFE or GHG standard-setting programs, sales of ZEVs help auto manufacturers comply with the federal CAFE and GHG standards.

#### **IV. WITNESSES**

The following witnesses have been invited to testify:

##### **Panel I**

##### **Janet McCabe**

Acting Assistant Administrator, Office of Air and Radiation  
Environmental Protection Agency

##### **Paul Hemmersbaugh**

Chief Counsel  
National Highway Traffic Safety Administration

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<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> WardsAuto, *Automakers Focus on Lightweighting to Meet CAFE Standards* (Aug. 6, 2014) (online at [wardsauto.com/technology/automakers-focus-lightweighting-meet-cafe-standards](http://wardsauto.com/technology/automakers-focus-lightweighting-meet-cafe-standards)).

<sup>19</sup> See House Committee on Energy and Commerce, *Hearing on NHTSA Oversight*, 114<sup>th</sup> Cong. (Apr. 14, 2016); see also Congressional Research Service, *Automakers Seek to Align Fuel Economy and Greenhouse Gas Regulations* (Aug. 8, 2016) (online at [www.fas.org/sgp/crs/misc/IN10550.pdf](http://www.fas.org/sgp/crs/misc/IN10550.pdf)).

<sup>20</sup> *Id.*

**Panel II**

**John Bozzella**

President and CEO  
Global Automakers

**Mitch Bainwol**

President and CEO  
Alliance of Automobile Manufacturers

**Peter Welch**

President  
National Automobile Dealers Association

**John D. Graham, Ph.D.**

Dean, School of Public and Environmental Affairs  
Indiana University Bloomington

**John German**

Senior Fellow and US Co-Lead  
The International Council on Clean Transportation

**Mark Cooper, Ph.D.**

Director of Research  
Consumer Federation of America