



Highlights of [GAO-10-336](#), a report to the Chairman, Subcommittee on Energy and the Environment, Committee on Energy and Commerce, House of Representatives

Why GAO Did This Study

In May 2009, the U.S. administration announced plans to increase the Department of Transportation's (DOT) National Highway Traffic Safety Administration's (NHTSA) corporate average fuel economy (CAFE) standards and establish the Environmental Protection Agency's (EPA) greenhouse gas (GHG) emissions standards for vehicles. NHTSA redesigned CAFE standards for light trucks for model years 2008 through 2011, and some experts raised questions about the rigor of the computer modeling NHTSA used to develop these standards.

GAO was asked to review (1) the design of NHTSA and EPA's proposed standards; (2) how they are collaborating to set these standards; (3) improvements compared to a previous rulemaking, if any, NHTSA made to the modeling; and (4) the extent to which NHTSA analyzed the effects of past light truck standards and the accuracy of data used to set them.

GAO reviewed relevant rulemaking and modeling documents, and interviewed agency officials and other experts.

What GAO Recommends

GAO is recommending NHTSA and EPA document their collaborative process, formalize this relationship for the future, and conduct additional research and analyses of past light truck standards.

EPA agreed and DOT generally agreed with our recommendations.

View [GAO-10-336](#) or [key components](#). For more information, contact Susan Fleming at (202) 512-2834 or flemings@gao.gov.

VEHICLE FUEL ECONOMY

NHTSA and EPA's Partnership for Setting Fuel Economy and Greenhouse Gas Emissions Standards Improved Analysis and Should Be Maintained

What GAO Found

NHTSA and EPA have worked to propose CAFE and GHG standards that are generally aligned so manufacturers can build a single fleet of vehicles to comply with both. The standards are based on vehicle size and will cover model years 2012 to 2016. However, differences between the standards still exist because of variation in the legal authorities of each agency. For example, certain flexibility mechanisms designed to reduce compliance costs for manufacturers apply only to GHG standards, which could make aligning them with CAFE standards more difficult. However, potentially stricter penalties for GHG standard noncompliance could improve compliance with CAFE standards. Also, while NHTSA and EPA expect benefits from adopting a standard based on vehicle size, neither standard has a mechanism to ensure that a specific national target will be met.

NHTSA and EPA are collaborating by sharing resources and expertise to jointly set CAFE and GHG standards. From fiscal years 1996 through 2001, NHTSA was barred from using appropriated funds to raise CAFE standards. In contrast, EPA has continually expanded its automotive engineering expertise, including at its vehicle testing lab. As a result, EPA was able to contribute several original research studies to the proposed joint standards. Because this collaboration is not formally required and the agencies are not documenting the processes used—a recognized best practice—they may not be able to replicate them in the future.

To set the proposed standards, NHTSA improved upon the computer model compared to the version used that had been used to set the CAFE standards for 2008 through 2011 light trucks. One improvement was that NHTSA increased the model's transparency by using publicly available, rather than confidential, data to develop a baseline fleet of vehicles. With EPA's input, NHTSA updated several data inputs such as technology costs and the cost of emissions. While experts GAO interviewed had varying critiques of NHTSA's model, there was no consensus on how NHTSA could further improve it. In particular, experts' opinions differed sharply on two studies, which reported opposing findings concerning the relationship between vehicle weight (a key factor in determining fuel consumption) and safety—suggesting that additional research may be warranted.

In part due to resource and data constraints, NHTSA has not yet evaluated its 2008 through 2011 light truck CAFE standards, which have a similar design to the new standards. Retrospective analyses of efforts and data inputs could inform NHTSA on the extent to which the standards met goals and provide means to improve the process of setting standards. Lacking such analysis, NHTSA does not know whether goals of the standards have been met or if changes are needed to the program. NHTSA officials said that while they would like to conduct such analyses, limited resources and time have prevented them from doing so, and they have no definitive plans to conduct them in the future.