The Road Ahead

The Benefits of Strong Fuel Efficiency and Pollution Standards for New Cars and Trucks

The technology exists today to boost the fuel efficiency of our new cars and trucks. This is a tremendous opportunity to lower fuel costs, reduce carbon pollution, and cut America's dangerous dependence on oil. Whether it is more efficient engines, smarter transmissions, advanced materials, sleek aerodynamics, or electric-drive technologies, smart engineering can make any vehicle—from a family sedan to an SUV to a long-haul tractor trailer—get more miles to the gallon.

History has shown that when we set strong standards and tap American ingenuity we can revitalize our economy, protect our environment, save money at the gas pump, and enhance America's security by reducing our need for imported oil and technology. The country's first fuel efficiency standards went into effect in 1978 as a response to the 1973–1974 OPEC oil embargo. These standards roughly doubled the fuel efficiency of new cars in the 10 years following the embargo. Unfortunately, standards largely stagnated over the subsequent two decades, leading to very little improvement in fuel efficiency.

Today, the country is beginning to get back on track by requiring automakers to build vehicles that average approxi-

Fuel Saving and Pollution Reduction Technology Available for Passenger Vehicles by 2025

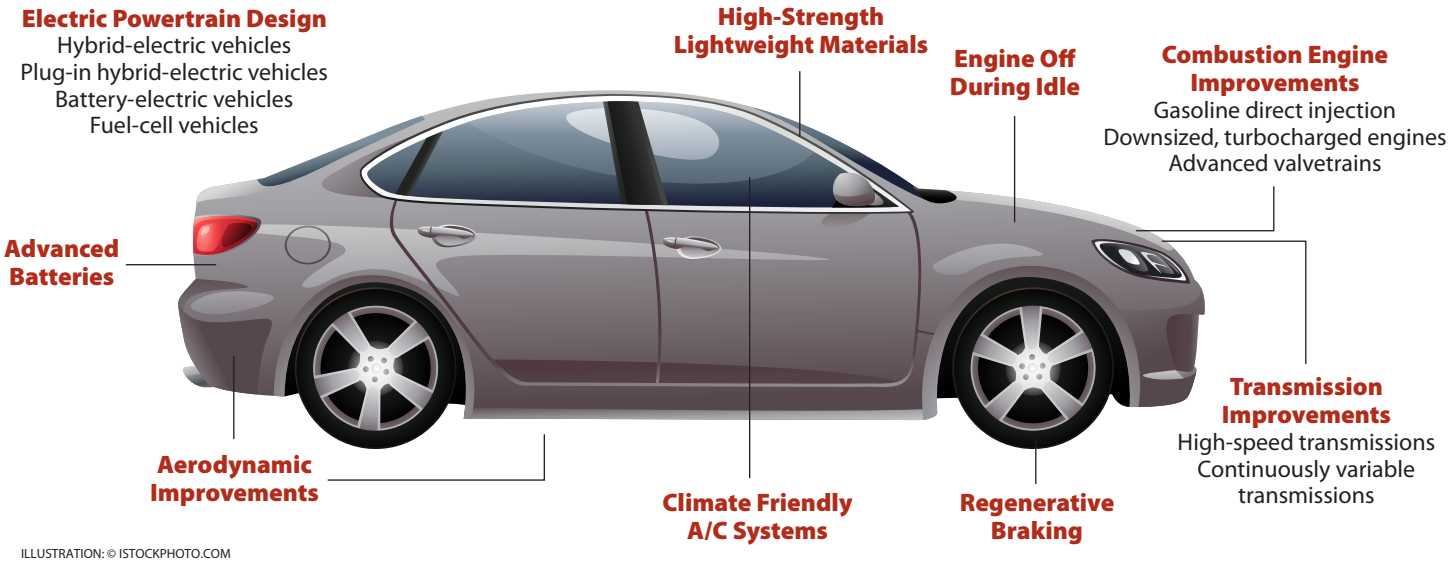
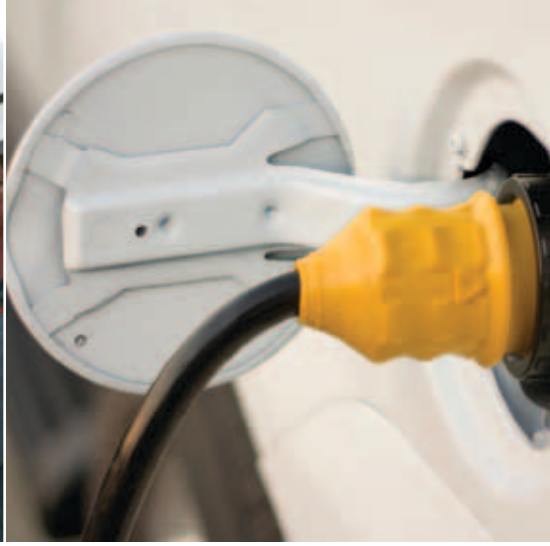


ILLUSTRATION: © ISTOCKPHOTO.COM


© ISTOCKPHOTO.COM


© ISTOCKPHOTO.COM


© ISTOCKPHOTO.COM

mately 35 miles per gallon by 2016 and emit roughly 30 percent less global warming pollution. When fully implemented, these new standards will save more oil and reduce more tailpipe pollution than any other existing government program.

Building on a History of Success: Setting Strong New Standards for Cars and Trucks

It is now time to build on this success by extending fuel efficiency and pollution standards for passenger vehicles and setting the first-ever standards for work trucks. President Obama is rising to this challenge by announcing plans to move forward with new fuel efficiency and pollution standards for these vehicles. This is an unparalleled opportunity to harness innovation, ingenuity, and technology to transform the cars and trucks we drive. Building a new generation of vehicles will cut America's oil dependence, reduce heat trapping carbon pollution, save money at the gas pump, and foster a competitive American auto industry.

The U.S. Department of Transportation (DOT) and Environmental Protection Agency (E PA) have been directed to establish joint fuel efficiency and pollution standards for new cars and trucks. Specifically, the agencies will establish new Corporate Average Fuel Economy and global warming pollution standards, respectively, for light-duty vehicles—a category that includes cars, SUVs, minivans, and most pickup trucks—through model year 2025. In addition, the agencies will set the first-ever fuel efficiency and global warming standards for medium-and heavy-duty trucks—categories of work trucks that include delivery vans, city buses, and long-haul tractor-trailers—through model year 2017.

In order to maximize the benefits of better fuel efficiency, the Obama administration should set standards that cut America's oil dependence by at least 49 billion gallons of fuel and at least 535 million metric tons of heat trapping carbon pollution in the year 2030. These benefits can be achieved through the following steps:

FIGURE 1: **Stronger Fuel Efficiency Standards Save Fuel and Cut Pollution**

Fuel Efficiency and Carbon Pollution Standards by Vehicle Class		Oil Savings in 2030	Carbon Pollution Reductions in 2030 (CO_2e)
Passenger Cars and Light Trucks	Standards achieving 60 mpg and 143 g/mi of CO_2-equivlant in model year 2025	**44 billion gallons**	**465 million metric tons**
Medium- and Heavy-Duty Trucks	Standards reducing fuel consumption: 35 percent for long-haul tractors with van trailers; 20 percent reduction for other trucks in model year 2017	**5.6 billion gallons**	**70 million metric tons**

© ISTOCKPHOTO.COM

© THINKSTOCK.CM

© CORBIS IMAGES

© THINKSTOCK.COM

© ISTOCKPHOTO.COM

© THINKSTOCK.COM

© THINKSTOCK.COM

The Obama administration should set standards that cut America's dependence by at least 49 billion gallons of fuel and at least 535 million metric tons of heat-trapping carbon pullution in the year 2030.

Light-Duty Vehicle Standards: Require new light-duty vehicles to meet Corporate Average Fuel Economy (CAFE) standards of at least 60 miles-per-gallon and global warming pollution standards of no more than 143 grams-per-mile of carbon dioxide-equivalent by model year 2025. The pollution standards should be based on accurate accounting, including the upstream emissions from power plants for plug-in hybrid and electric-drive vehicles. Based on recent technology assessments, the 60 mpg standard could be reached with a new vehicle fleet comprised of 30 percent advanced internal combustion engine vehicles, 55 percent hybrids, and 15 percent plug-in electric drive vehicles. By 2030, the standard would result in annual savings of 44 billion gallons of oil and cut global warming pollution by 465 million metric tons.

Medium and Heavy-Duty Vehicle Standards: Reduce fuel consumption from long-haul trucks pulling standard van trailers, the biggest users of fuel among trucks, by at least 35 percent by model year 2017. The standards should require all other medium- and heavy-duty trucks to increase fuel efficiency to the maximum technically-feasible, cost-effective level. These standards should require fuel-efficiency improvements from the entire truck, including trailers. Assuming long-haul tractor and van-trailer rigs met the 35 percent requirement and other trucks cut consumption by 20 percent, truck standards would save 5.6 billion gallons of oil and cut global warming pollution by 70 million metric tons in 2030.

Fostering Innovation: Bringing Advanced, Clean Vehicles to the Mass Market

The key to higher fuel efficiency and lower pollution is using better technology and smarter automotive design. The technology exists today to save fuel while enhancing safety, performance, and consumer amenities. By relying on American ingenuity and innovation, we can start building clean vehicles at a price consumers can afford.

Automakers can reach a fleetwide average of 60 miles per gallon and 143 grams per mile for new light-duty vehicles in model year 2025 by applying a wide range of existing and emerging vehicle technologies. Conventional vehicles, hybrids and plug-in electric vehicles are all expected to be part of the mix, but manufacturers can choose technology packages that appeal to their consumers and fit their business plans. Conventional internal combustion engine vehicles can be made much more efficient by applying, for example, downsized turbocharged engines, six- and seven-speed transmissions, high-strength lightweight materials, enhanced aerodynamic designs, and more climate-friendly air conditioning systems. Some vehicles already on the road use a limited number of these technologies. However, all new vehicles could apply the full range of technology to maximize fuel efficiency.

Strong standards will also help bring more hybrid-electric vehicles into the marketplace. By combining an efficient gasoline engine with an electric motor, these vehicles can get dramatically higher fuel efficiency and lower tailpipe global

© ISTOCKPHOTO.COM

Building and selling clean, fuel-efficient vehicles will encourage greater innovation and put America on the right path to a stronger economy, a safer climate, and less reliance on oil.

warming pollution. Finally, automakers are beginning to introduce more advanced vehicles focused on greater levels of electrification, such as plug-in hybrids and battery electric vehicles. Strong standards will ensure that all of these fuel saving technologies are put to work, saving consumers money at the gas pump, reducing pollution, and cutting the country's dependence on oil.

Existing technology can also improve medium and heavy-duty trucks. A recent report by the National Academy of Sciences identified a wide-range of technologies that could reduce the fuel consumption of long-haul tractor trailers by at least 35 percent by 2017. Several of these cost-effective technologies can also apply to other trucks, such as delivery vans, buses, and heavy-duty pickup trucks. Overall, fuel-saving technology for trucks mirrors the opportunities available in passenger vehicles, such as more efficient engines, better transmissions, improved aerodynamics, and even hybrid-electric drivetrains in some applications.

Moving Forward:
The Need for New Clean Vehicle Standards

Without strong new standards, these fuel-saving and pollution reduction technologies will continue to go under utilized. The auto industry has always been slow to adopt new fuel-saving and safety technology in the absence of strong standards. They opposed mandatory seat belts and air-bags and claimed that the first fuel efficiency standards would prevent Americans from being able to choose the kind of car or truck they want to drive. Today, we know that these standards have made Americans safer, saved them money, cleaned up our air, and lessened the country's dependence on oil.

Setting strong new fuel efficiency and global warming pollution standards provides a unique opportunity to harness American ingenuity and move the country forward. Building and selling clean, fuel-efficient vehicles will encourage greater innovation and put America on the right path to a stronger economy, a safer climate, and less reliance on oil.

© THINKSTOCK.COM