

EXECUTIVE SUMMARY

In 1987, the fuel economy of the new U.S. car and truck fleet reached a peak of nearly 26 miles per gallon. By 2004, it had fallen to 24.4 miles per gallon, hovering around a 20-year low. This backsliding occurred because fuel economy standards have remained essentially unchanged over the past 20 years and automakers have increasingly exploited loopholes in Congressional and regulatory language. In addition, a flawed U.S. tax code actually provides financial incentives for consumers to switch to gas guzzlers. While most of these loopholes have been around for decades, government has either turned a blind eye to them or made them larger.

This report documents three major loopholes in fuel economy standards and two major cracks in the tax code, and highlights the possibility that a whole new set of loopholes could be created as the Bush administration considers radical changes to the federal fuel economy standards program. Finally, we suggest solutions for closing or modifying these loopholes. The six loopholes considered are:

- **The non-passenger loophole** (or “truck” loophole)—allows automakers to misclassify minivans, SUVs, station wagons, and even some cars as non-passenger vehicles, thereby qualifying them to meet a lower fuel economy standard. Congress or the National Highway Traffic Safety Administration (NHTSA) must modernize the definition of non-passenger vehicles to end this gaming.
- **The 8,500-pound loophole**—exempts the largest pickups, vans, and SUVs from fuel economy standards altogether and denies consumers any fuel economy information on these vehicles. NHTSA must move to include these vehicles in the fuel economy program, since standards for them are both practical and necessary.
- **The dual-fuel loophole** (recently extended by the 2005 energy bill)—gives automakers extra credit toward meeting fuel economy standards in exchange for manufacturing vehicles that can run on alternative fuels but almost never do. Congress should either eliminate this failed program or fix it by tying credits more directly to actual alternative fuel use.
- **The luxury SUV tax loophole**—provides small-business owners with significantly higher tax breaks for large luxury trucks than smaller trucks or cars, regardless of the owner’s needs. Congress must create a reasonable limit on tax breaks for larger trucks and update the amounts for smaller vehicles.
- **The gas guzzler loophole**—excludes SUVs, minivans, and pickups from paying a tax on excessive fuel use despite the fact that tax applied to gas-guzzling cars has effectively reduced their numbers. Congress should require trucks that get less than 17.5 mpg on the CAFE test to pay progressively higher taxes based on the amount of gas they guzzle.
- **The next loophole?—attribute-based standards**—a potential new set of loopholes that could be created if the government imposes new fuel economy standards based on vehicle attributes without also introducing an oil savings “backstop.” NHTSA must include a backstop in any attribute-based system.

Based on government fuel economy data and consumer travel projections, our solutions could cut U.S. oil dependence by 1.5 million barrels per day in 2025 if they are phased in over the next five years (Table ES-1). In addition, consumers would save more than \$30 billion, even after paying for off-the-shelf technologies that would help close the loopholes.³

Table ES-1: Savings from Closing Loopholes in Current Fuel Economy Standards

| | 2010 | 2015 | 2025 |
|---|-------------|-------------|-------------|
| Oil savings (million barrels per day) | 0.3 | 0.8 | 1.5 |
| Net consumer savings (billions)* | \$3.5 | \$14.2 | \$33 |
| Reduction in global warming pollution (million metric tons CO ₂ -equivalent) | 50 | 150 | 240 |

*Assumes a gasoline price of \$2 per gallon.

While the most effective step that could be taken to cut U.S. oil dependence is higher fuel economy standards for every car and truck on the road, closing regulatory and tax loopholes is an important first step. Not only would this save oil in the near term, but it would also avoid the erosion of any future fuel economy increases and ensure that the planned benefits are realized.

Below are summaries of each of the five loopholes investigated in this report. A potential new loophole, attribute-based standards, is also discussed. The full body of the report contains additional details on each.

1. The Non-Passenger Vehicle Loophole

When Congress created the Corporate Average Fuel Economy (CAFE) program in the 1970s, it distinguished between passenger and non-passenger automobiles. Passenger automobiles were defined as any vehicle manufactured primarily for transporting 10 or fewer people and excluded vehicles capable of off-highway operation. This was done in an attempt to increase the fuel economy of all cars and light trucks while accommodating the extreme cargo-hauling requirements of commercial operators such as farmers and contractors.

This definition backfired, however, as automakers exploited it to replace station wagons with more profitable minivans and SUVs. Because millions of these vehicles are misclassified as non-passenger vehicles (which are only required to meet a fuel economy standard 25 percent lower than the passenger vehicle standard), an extra 16 billion gallons of gasoline was consumed in 2004 while consumers were stuck with an extra \$30 billion in gasoline costs. This loophole is often called the SUV or light-truck loophole as a result.

When CAFE was created, less than 20 percent of automobile sales were classified as non-passenger vehicles, and more than two-thirds of those were pickups with a seating capacity of no more than three persons. By 2004, the non-passenger class had swelled to nearly 50 percent of sales, despite the fact that pickups and cargo vans—the original non-passenger automobiles—had dwindled to less than 15 percent. This dramatic growth was propelled by the rise of the minivan in the 1980s and the SUV in the 1990s.

These vehicles provided significant profits to automakers because they were basically modifications of relatively inexpensive cargo vans and pickup trucks. This profitability, however, would have been reduced if these vehicles had to meet the stronger safety and fuel economy standards of passenger vehicles, so automakers took advantage of, and even helped expand, loopholes in the fuel economy law to ensure these vehicles were classified as non-passenger autos despite their clear passenger-carrying duties.

The non-passenger loophole can be fixed if three key problems are addressed. First, the non-passenger fuel economy standard has been set too low. The technology exists today to increase

the fuel economy of every automobile currently classified as a non-passenger vehicle to well over the passenger vehicle standard of 27.5 mpg.

The simplest solution for Congress would be to eliminate the non-passenger category entirely, since it has outlived its usefulness and has been so badly abused. The simplest approach for the National Highway Traffic Safety Administration (NHTSA) would be to raise the fuel economy of the non-passenger category to the same level as the passenger standard. If done by 2011, this would cut oil demand 1.2 million barrels per day by 2025 and would save consumers nearly \$30 billion in that year alone (Table ES-2). All of this could be done while retaining the same vehicle size and acceleration available to consumers today, and with improved safety.

Table ES-2: Savings from Increasing Light-Truck Fuel Economy to 27.5 mpg by 2011

| | 2010 | 2015 | 2025 |
|---|-------|--------|--------|
| Oil savings (million barrels per day) | 0.16 | 0.62 | 1.18 |
| Net consumer savings (billions) | \$2.9 | \$12.1 | \$28.9 |
| Reduction in global warming pollution (million metric tons CO ₂ -equivalent) | 28 | 106 | 201 |

The second problem is that Congress assumed vehicles capable of off-highway operation would not be used primarily for transporting people, as is the case with today's SUVs. In fact, SUVs are rarely used off-highway; their four-wheel drive merely represents an added safety and utility feature. The simplest and safest solution would be to eliminate off-highway capability as a qualification for non-passenger vehicles. Until Congress is willing to make this change, NHTSA (which is responsible for defining the specific vehicle features that qualify for off-road classification) must tighten the off-highway definition to limit the number of vehicles that qualify.

The third contributor to the non-passenger loophole is the fact that NHTSA oversimplified the passenger and non-passenger categories into passenger cars and light trucks. Because cargo vans and pickups once accounted for the vast majority of non-passenger vehicles, it probably seemed logical to simplify the classifications by applying the term "truck." That same logic would suggest that a vehicle derived from a truck must also be a non-passenger vehicle, but this is not true of minivans and most SUVs. Nevertheless, vehicles whose rear seats can be removed to make room for cargo—including minivans, smaller two-wheel drive SUVs, and even cars such as the Chrysler PT Cruiser, Dodge Magnum, Ford Freestyle, and Subaru Outback—qualify as non-passenger vehicles. If NHTSA eliminates this provision, and Congress eliminates the off-highway provision, only pickups and cargo vans would be classified as non-passenger vehicles.

2. The 8,500-pound Loophole

The non-passenger loophole may be the worst of the flaws in CAFE regulations, but it is not alone. Congress defined automobiles as all four-wheeled vehicles with a gross vehicle weight rating (GVWR, a measure of how much weight a vehicle can carry) of up to 10,000 pounds, but allowed NHTSA to use its discretion and ignore those above 6,000 pounds unless fuel economy standards for such vehicles were feasible and would save a significant amount of energy. While NHTSA did apply the standards to vehicles up to 8,500 pounds, trucks with a GVWR between 8,500 and 10,000 pounds—known as commercial light-duty trucks (CLDTs) or Class 2b trucks—do not have to meet any fuel economy requirements. Today, these vehicles include a number of

large pickups, vans, and SUVs such as the Ford Excursion, GMC Yukon XL, and Hummer H2, many of which conveniently exceed the 8,500-pound limit by no more than 100 pounds.¹

Despite the fact that most off-the-shelf technologies that can be used to improve light-truck fuel economy can also be used on CLDTs, the 8,500-pound barrier has never been lifted. This has left a loophole responsible for an estimated 900 million gallons of excess gasoline and diesel consumption in 2005, costing consumers another two billion dollars. Adding insult to injury, Congress also exempted CLDTs from fuel economy labeling requirements, denying purchasers of these vehicles the information necessary to even consider fuel costs in their decision.

Farms and other businesses that require these bigger vehicles deserve to save money on gasoline and reduce their operating costs, especially with gasoline prices at their all-time high. With current technology, the fuel economy of CLDTs could be raised from an estimated CAFE value of 17 mpg to at least 27.5 mpg. NHTSA should therefore close this loophole by simply including these vehicles in the existing fuel economy regulations that apply to light trucks. At a minimum, this would eventually erase the current excess gasoline and diesel demand created by these vehicles.

Further, if NHTSA were to increase the light-truck fuel economy standard to match the passenger auto standard, we could save another 177,000 barrels of oil per day and cut consumer fuel costs by nearly four billion dollars (Table ES-3). Congress should also step in and require that all automobiles have posted fuel economy values; until that happens, NHTSA should develop a voluntary fuel economy reporting system.

Table ES-3: Savings from Increasing Commercial Light-Truck Fuel Economy to 27.5 mpg by 2011

| | 2010 | 2015 | 2025 |
|---|-------------|-------------|-------------|
| Oil savings (barrels per day) | 33,000 | 114,000 | 177,000 |
| Net consumer savings (billions) | \$0.6 | \$2.1 | \$ 3.8 |
| Reduction in global warming pollution (million metric tons CO ₂ -equivalent) | 6 | 19 | 30 |

3. The Dual-Fuel Loophole

The dual-fuel loophole allows manufacturers to produce, without penalty, fleets of cars and trucks that average as much as 1.2 mpg below the required CAFE standards. In return, they must sell dual-fuel vehicles—cars and trucks that can run on either gasoline or an alternative fuel. While this sounds good in theory, most of these vehicles never actually run on alternative fuel. As a result, this loophole will increase U.S. oil dependence by about 80,000 barrels per day in 2005 alone, while enabling automakers to avoid as much as \$1.6 billion in CAFE fines to date. And now that this loophole has been extended through 2010 and possibly 2014, the total increase in oil dependence could reach 200,000 barrels per day in 2015.

The problem with the program that created the dual-fuel loophole, the Alternative Motor Fuels Act, was the assumption that if vehicles were capable of running on an alternative fuel, a market would develop for that fuel. More than a decade after the program began, government data show that dual-fuel vehicles use an alternative fuel less than one percent of the time

¹The original congressional language also excludes the Hummer H1, which has a GVWR of 10,200 pounds.

(automakers get credit for an alternative fuel being used half the time). This is hardly surprising considering that only about 400 of the nearly 200,000 gas stations in the United States carry the fuel that most dual-fuel vehicles could use: E85 (a blend of 85 percent ethanol and 15 percent gasoline)—and one-third of those are in Minnesota.

Because of this loophole, a dual-fuel vehicle that gets 20 mpg running on gasoline receives credit as if it were achieving better than 30 mpg. The biggest abusers of this loophole—DaimlerChrysler, Ford, and GM—thereby save money they would otherwise have to spend on improvements to their vehicles' actual fuel efficiency, and avoid paying fines even though their fleets actually fall short of federal fuel economy targets. Ultimately, consumers foot the bill by paying more at the pump.

There are two ways to fix the dual-fuel loophole. The first is to simply eliminate it. NHTSA had the opportunity to end this failed program, but instead opted to extend it through 2008 despite data indicating the Alternative Motor Fuels Act had actually increased oil dependence. The 2005 energy bill took things a step further and extended the loophole through 2010—with an option for NHTSA to extend it yet again, through 2014.

Since Congress is unlikely to retreat on this issue, an alternative solution is to reform the system so it is more closely tied to the actual use of alternative fuels. First, dual-fuel credits could be based on the assumption that alternative fuels are used 20 percent of the time instead of 50 percent. Even with this reduction in credits, the loophole would remain a profitable incentive for automakers to produce dual-fuel vehicles. At the same time, the current 1.2 mpg credit toward an automaker's overall fleet fuel economy could be split in half: the first 0.6 mpg could still be applied regardless of the actual use of alternative fuels, but the remaining 0.6 mpg would be tied to increased use of alternative fuels. The full 1.2 mpg credit would only be available once the actual use of alternative fuels reaches 20 percent.

This set of reforms would continue to encourage the sale of at least as many dual-fuel vehicles as are currently sold, while reducing the program's negative impact on oil dependence. It would also encourage automakers to help ensure the vehicles they sell actually end up using alternative fuels. Automakers could invest in increased use of alternative fuels through direct financial support for new E85 fueling stations, local government efforts to create or expand E85 fueling infrastructure, and customer education. These investments could be recouped by continuing to sell dual-fuel vehicles, and automakers would also avoid having to pay fines.

4. The Luxury SUV Tax Loophole

Small-business owners who purchase heavier light-duty trucks are eligible for generous tax deductions. Because these deductions are so much larger than those for cars or lighter trucks, this has encouraged many self-employed lawyers, realtors, and accountants to purchase gas-guzzling luxury SUVs "for business use," regardless of whether such a vehicle has a valid business purpose.

Ironically, this loophole exists partly because of an attempt to address a similar problem in the 1980s. To stop small-business owners from deducting the cost of luxury vehicles, the tax code was changed to limit how much of a vehicle's cost could be deducted over the first six years of ownership. Since trucks were not part of the problem at the time, the new deduction limits were only applied to vehicles with a GVWR under 6,000 pounds, which exempts many of today's large

vans, pickups, and SUVs. The fact that the deduction limits have failed to keep up with the price of new vehicles exacerbates the situation—if a small-business owner wants to depreciate a car over the standard six-year period, he must buy one costing less than \$14,540 (or a small truck costing less than \$16,250).

This loophole also allows purchasers of luxury SUVs to deduct much of the cost in the first year. Starting in 2003, SUVs costing up to \$100,000 could be fully deducted in the year they were purchased; this became known as the Hummer loophole because it allowed people to write off the full cost of the Hummer H2 and most of the cost of the larger H1. Though this particular loophole was partially closed in 2004, purchasers of luxury SUVs can still deduct more than \$25,000 in the year of purchase, and a Hummer can still be fully depreciated in just six years.

These factors can have a significant impact on a small-business owner's decision-making process. A \$26,000 Ford Freestyle station wagon, for example, could cut a business owner's taxes by about \$4,700 over six years, but a much larger and less fuel-efficient \$26,000 Ford F-150 pickup could increase the tax cut to \$7,800—all of which could be claimed in the first year of ownership. Though the pickup's larger gasoline bills would eventually eat up the additional \$3,100 in tax savings, the business owner might find it hard to reject the bigger vehicle even if the smaller one was a better fit for his or her needs.

Two steps need to be taken to close this loophole. First, the existing deduction limits need to be brought in line with current car prices, so that small-business owners can recover the cost of safe, practical vehicles in a reasonable timeframe. Second, deduction limits need to be introduced for vehicles over 6,000 pounds, thereby eliminating the incentive to pay for size that isn't needed while ensuring that larger vehicles are still available to small-business owners who need them.

5. The Gas Guzzler Loophole

Cars that consume large quantities of gasoline are subject to a "gas guzzler" tax that was intended to encourage automakers to improve particularly inefficient automobiles (or at least require the vehicles' owners to pay a luxury tax for their excessive contribution to U.S. oil dependence). However, this luxury tax does not apply to gas-guzzling vehicles classified as light trucks for fuel economy purposes, such as DaimlerChrysler's Mercedes M-class, Ford's Lincoln Navigator and Land Rover, GM's Cadillac Escalade, and Toyota's Land Cruiser.

According to the Energy Tax Act of 1978, a gas guzzler is a car that gets less than 22.5 mpg, thereby consuming at least 1,500 more gallons of gasoline over its lifetime than one meeting the CAFE standard of 27.5 mpg. To discourage sales of such vehicles and encourage automakers to improve the fuel economy of the worst offenders, gas guzzler taxes ranging from \$1,000 up to \$7,700 for the least fuel-efficient models are applied to today's cars. These taxes have clearly been effective: of all cars sold in the United States during model year (MY) 2003, less than 100,000 (or 1.3%) were gas guzzlers.

Unfortunately, there are no such taxes on light trucks, and the fuel economy of many of these vehicles falls well below the corresponding CAFE standard. Since light trucks now account for half of all vehicle sales, and most are used for the same purposes as cars, a system of gas guzzler taxes could be introduced that would encourage automakers to increase the fuel economy of their least efficient light trucks, just as they did with cars. In Table ES-4 we propose a tax schedule for light trucks whose lifetime fuel consumption will exceed that of a truck meeting the MY2003 CAFE standard by more than 1,500 gallons.

Table ES-4: Proposed Gas Guzzler Tax Schedule for Non-Passenger Automobiles

| Fuel Economy* (mpg) | Tax |
|---------------------|---------|
| > 17.5 | \$0 |
| 16.5-17.5 | \$1,100 |
| 15.5-16.5 | \$1,800 |
| 14.5-15.5 | \$2,400 |
| 13.5-14.5 | \$3,200 |
| 12.5-13.5 | \$4,200 |
| < 12.5 | \$5,300 |

*Unadjusted fuel economy values used for CAFE compliance.

If this schedule had been applied to MY2003 light-truck sales, the tax revenues would have totaled approximately \$880 million, more than 60 percent of which would have been due to large SUVs such as the Cadillac Escalade, Lexus LX-470, Lincoln Navigator, and Mercedes M-class. More than two-thirds of gas guzzler tax revenues from pickups would have derived from versions of DaimlerChrysler's Dodge Ram, which is woefully inefficient by any standard. Ford and GM's more efficient pickups would have been affected far less.

Under this tax structure, automakers would most likely find it far more cost-effective to use existing technology to increase fuel economy, rather than paying the tax. For example, a modest package of fuel-saving technologies—costing just \$750—could increase the fuel economy of an SUV getting 15.5 mpg by 35 percent (to 20.9 mpg). In addition to avoiding the \$1,800 gas guzzler tax, this improvement would save the vehicle's owner \$4,900 in gasoline costs over the life of the vehicle.

6. The Next Loophole?

As of the writing of this report, NHTSA is considering alternatives for restructuring the light-truck CAFE program. Although this is an ideal opportunity for the agency to close fuel economy loopholes, it may instead create new ones by replacing the single non-passenger fuel economy standard with multiple standards based on vehicle attributes such as weight, interior volume, or size. Such a system would provide lower fuel economy targets for larger or heavier vehicles, and because it is generally less expensive to add weight or size than to improve fuel economy, automakers will have an incentive to modify their vehicles' attributes so they can be categorized in classes with lower standards. This is what has already happened with the shift to increased light-truck sales.

The simplest way to avoid this repeat performance would be for NHTSA to eliminate loopholes altogether and make the non-passenger fuel economy standard the same as the passenger standard. Even if the agency does not choose this straightforward solution, new loopholes can be avoided or at least reduced by taking two critical steps when implementing attribute-based standards.

First, some type of "backstop" must be introduced to prevent fuel economy from drifting downward. One example would be a ratchet mechanism that would automatically increase fuel economy standards for all vehicle classes if the average fuel economy of non-passenger vehicles

falls below a certain trigger point.² This would still provide different standards for automakers with fleets having different attributes, but would guarantee the oil savings promised by increased standards. Without such a trigger, fuel economy would be free to slide backward.³

The second critical step would be to avoid using weight as an attribute. Vehicle weight increases that would occur without a backstop in place would lead to more dangerous highways because that extra weight brings more energy into accidents and causes more severe damage. Even with a backstop in place, a weight-based standard would increase the cost of fuel economy improvements by precluding the use of high-strength lightweight materials, since the resulting weight reduction would only force automakers to meet an even higher fuel economy standard. A weight-based system will also make little sense to consumers, because weight is a byproduct of other consumer-oriented features and does not provide any utility on its own.

The First Steps to Cutting Oil Dependence

This report shows that the current U.S. fuel economy program and tax structure are filled with loopholes that increase our oil dependence, undermine our energy security, and continuously increase the burden our cars and trucks place on the environment. Together, these loopholes cost consumers billions of dollars each year while at the same time sending the message that purchasing gas guzzlers is acceptable—or even worthy of special treatment. If the United States is serious about reducing the harmful impact our oil dependence has on our security, economy, and climate, these loopholes must be closed.

Automakers already have the technology they need to compete and thrive under a fuel economy program that encourages innovation rather than a search for the lowest common denominator. By simultaneously closing loopholes and tapping into automaker ingenuity, we can finally establish fuel economy standards that are easier for manufacturers to meet than manipulate. And we'll no longer have to watch potential oil savings go down the drain.

²To provide continued progress in cutting U.S. oil dependence, this trigger could be increased at a rate of at least 0.8-1.0 mpg each year.

³In one scenario, this report shows that if NHTSA had implemented its proposed weight-based standard in 2003, historical weight trends in the light-truck fleet would have led to a 1.5 mpg decrease in overall fuel economy by 2015.