

CLEAN GETAWAY

Toward Safe and Efficient Vehicles

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NATURAL RESOURCES DEFENSE COUNCIL

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ABOUT NRDC

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EXECUTIVE SUMMARY

Americans should be able to buy a family vehicle that meets all their needs—a vehicle that is safe, comfortable, extremely fuel efficient and a responsible choice for our environment and the public's health. The good news is that the technology exists today to make this possible. The federal government and the world's automakers can achieve this goal, and provide great benefits to every American who buys gasoline, drives a car, and breathes the air.

RECOMMENDATIONS

Our recommendations are clear and achievable. In sum, we urge Congress and the Bush administration to do the following:

- ▶ Immediately close the "SUV Loophole" in the nation's corporate average fuel economy (CAFE) standards that allows pickup trucks, minivans, and sport-utility vehicles (collectively, "light trucks") to average only 20.7 miles-per-gallon (mpg), while the nation's cars are required to average 27.5 mpg. Instead, all passenger vehicles should be covered by the same standard, starting at an average of 27.5 mpg.
- ▶ Increase overall fuel economy of new passenger vehicles to 40 mpg by 2012. Using a single overall fuel economy standard will give the auto makers the greatest flexibility in meeting the new standards, and provide the greatest consumer choice.
- ▶ Pass the CLEAR Act, a bill that would provide tax incentives to consumers who buy fuel-efficient hybrid vehicles and other advanced technology or alternative-fuel vehicles.
- ▶ Focus the nation's research and development activities on enhancing the efficiency of gasoline engines, rather than health-harming diesel engines.

Decades of inaction on federal fuel economy standards, combined with the huge influx into the national fleet of SUVs and minivans, have dropped the average fuel economy of cars and light trucks to their lowest point in almost 20 years. As a result of this decrease (and the steady increase in overall driving), American drivers spent \$186 billion on fuel last year and will spend an estimated \$260 billion in 2020.

The environmental and public health consequences of this trend are enormous. Our tailpipes pump out hundreds of millions of tons of toxic emissions and smog and global warming-causing gases. Highway vehicles emit roughly 30 percent of the nation's smog-forming gases, and approximately 20 percent of our heat-trapping gases. In fact, vehicles are the fastest growing source of the pollution linked to global warming and climate change. In congested cities like New York, they emit more than half the soot particles that can trigger asthma attacks and cancer.

Increasing fuel economy standards to 40 mpg would dramatically reduce pollution and reduce pressure to drill for oil in environmentally sensitive areas. Emissions of heat-trapping carbon dioxide would be reduced by more than one billion tons per year and emissions of smog-forming nitrogen oxides and hydrocarbons would be reduced by more than 500,000 tons per year by the time the full fleet of vehicles on

the road has benefited from higher standards. Oil savings would amount to more than 50 billion barrels over the next 50 years, more than 15 times the likely yield if drilling were allowed in the Arctic National Wildlife Refuge.

THE BENEFITS OF RAISING FUEL ECONOMY

In the pages that follow, NRDC summarizes why we should reduce emissions by significantly raising the fuel economy of our vehicle fleet. Congress and the administration will soon consider several measures to increase fuel economy, and the National Academy of Sciences will shortly present a report that addresses the issue. We hope that our recommendations and supporting facts add to the debate that will undoubtedly follow.

NRDC's key findings are:

Consumers and the Economy

Raising CAFE standards can save Americans money. At the dealership, efficient vehicles will cost more, but increasing standards to 40 mpg would save car owners from \$3,000 to more than \$5,000 at the gas pump over the life of an efficiency-enhanced vehicle. In addition, focusing America's engineering and manufacturing prowess on raising fuel economy will provide jobs and aid the economy. Higher fuel economy standards will result in a net increase of over 100,000 motor vehicle-related jobs and a \$5.7 billion boost in GDP by 2020.

Consumers and Choice

Contrary to what Detroit and the Bush administration would have us believe, Americans do care about fuel efficiency. Nearly half of the people surveyed in a June Gallup poll said rising gas prices posed a hardship for them, and 85 percent supported the government mandating more energy-efficient vehicles. Furthermore, raising fuel economy standards won't limit the choices of vehicles that are available to consumers. In fact, technological advances continue to make efficient vehicles bigger and more diverse than ever before.

Diesel

Diesel-fueled cars and SUVs should not be used to increase fuel economy. Today's diesel vehicles continue to emit unacceptable levels of cancer-causing soot particles and smog-forming gases. In addition, the promise of "green" diesel technology remains extremely uncertain. America should not look to Europe for leadership: diesel fuel is popular there not because of any environmental benefits, but because tax breaks make it cheaper than gasoline. Instead we should look to Asia, where nations are moving to phase out this dirty fuel.

Safety

All vehicles should be designed to be as safe as possible, no matter what their size. Although automakers claim that heavy, gas-guzzling SUVs are the safest vehicles on

Diesel fuel is popular in Europe not because of any environmental benefits, but because tax breaks make it cheaper than gasoline.

the road, evidence shows this isn't necessarily the case. Detroit doesn't have a good record of telling the truth when it comes to safety, having lobbied against seatbelts, airbags, and rollover prevention standards. Fortunately, fuel-efficient vehicles will not force consumers to sacrifice safety for fuel efficiency. If done properly, higher CAFE standards can improve safety by taking the mass out of the heaviest vehicles. In addition, today's smaller cars are often safer than larger ones, and the technology exists to make smaller cars even safer.

In summary, taking immediate and significant steps to improve the efficiency of gasoline engines is the best choice for America and Americans. Failing to do so will needlessly harm the health and lighten the wallets of everyone who breathes and everyone who drives. Therefore we urge Congress and the Bush administration to take responsible action to raise fuel efficiency.

INVESTING IN FUEL EFFICIENCY IS GOOD FOR CONSUMERS AND THE ECONOMY



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Investing in fuel efficiency will be good for anyone who drives because it will save them money at the gas station. In turn, the overall savings that drivers will see at the fuel pump and the investments that automakers could make in improving vehicle technology will provide a boost to the nation's economy.

EXPERTS AGREE: RAISING FUEL ECONOMY STANDARDS WILL SAVE DRIVERS MONEY

Besides the environment and public health, the big winners from raising overall fuel economy standards will be drivers. Analyses by the Union of Concerned Scientists and the American Council for an Energy Efficient Economy conclude that raising fuel economy standards to 40 mpg over a ten-year period would result in large savings to drivers. Those savings will offset the increased costs of a fuel-efficient vehicle.

► Raising fuel economy standards to 40 mpg will save drivers from \$3,000 to over \$5,000. If the nation's vehicles averaged 40 mpg, both car and SUV drivers would benefit. The typical mid-size passenger car (e.g., Ford Taurus, Toyota Camry, Honda Accord) could reach 46 mpg using improved engines, transmissions, and lighter materials. While a driver would pay about \$1,300 more for this highly efficient vehicle, the 77 percent improvement in fuel economy would save the driver 4,600 gallons of gasoline and about \$4,700 in fuel costs. A typical driver could save about \$3,400 over the life of the vehicle.¹ A typical SUV would reach 40 mpg and save the driver over \$3,200 over the life of the SUV.

► Total savings in 2010 would be about \$9.8 billion. If fuel economy were raised to 40 mpg over 10 years, the incremental purchase cost of higher fuel efficiency would be recouped in 5 years in fuel savings for the average driver. By 2010, drivers would save a total of \$9.8 billion.

► Likely savings could be much higher. Environmental history has taught us a consistent lesson: compliance costs are almost always cheaper than originally predicted. There are countless examples of industry forecasts of high costs that did not occur once laws or regulations were implemented. The costs of the Environmental Protection Agency’s acid rain program have been only 10 percent of the industry predictions; complying with California’s current anti-air pollution standards (Low Emission Vehicle, or LEV) is costing the auto industry 10 percent of what they had initially predicted.² This happens logically—before the law or regulation is enacted, companies fear the worst and advocate accordingly, but after the policy is set, businesses invest in new technologies, find innovative ways to comply, and meet their customers’ needs and the governments’ requirements at the lowest costs.

According to the *New York Times*, the draft report of the National Academy of Sciences (NAS) panel on fuel economy also concludes that consumers can save money through fuel efficiency:

Higher fuel economy standards would result in a net increase of over 100,000 motor vehicle-related jobs and a \$5.7 billion boost in gross domestic product by 2020.

► According to the *New York Times*, the NAS study says, “significant improvements [in fuel economy] can be made using new engine technologies inexpensive enough to pay for themselves through savings on gasoline over the typical life of a vehicle.”³

► The *Times* review of the NAS draft report also stated, “considerably greater improvements can be made without penalizing drivers financially, if the savings on gasoline are counted.”⁴

► A recent *Washington Post* article reported that Big Three (Ford, GM, and DaimlerChrysler) “industry officials said they could easily double and possibly triple the average number of miles-per-gallon obtained by conventional internal combustion engines for cars and light trucks. As a result, any federally mandated increase would have only a minimal impact on the auto industry.”⁵ A minimum impact on the industry means less of a price increase for consumers at the dealership.

INVESTING IN FUEL EFFICIENCY WILL BOOST THE ECONOMY

America imports half its oil and sent \$106 billion overseas last year to buy oil. Passenger vehicles burn 40 percent of all the oil consumed in the United States. With OPEC’s market power on the rise again, America can expect to pay even more to feed its appetite for oil in the future. Our high oil dependency leaves the United States vulnerable to global price shocks. Focusing America’s engineering and manufacturing prowess on increasing fuel economy would benefit not only drivers, but also increase jobs and benefit the economy.

► Higher fuel economy standards would result in a net increase of over 100,000 motor vehicle-related jobs and a \$5.7 billion boost in gross domestic product by 2020, according to a recent study by the Union of Concerned Scientists. Higher fuel economy standards would benefit the auto industry by stimulating investments and improving wages and salaries.

Other benefits of lower petroleum consumption would be protection against the potentially crippling effects of global oil price shocks, and reduced emissions of smog-forming and heat-trapping pollution.

► The Department of Energy estimates the costs to the U.S. economy of the oil market upheavals of the last 30 years to be in the vicinity of \$7 trillion (present value 1998 dollars).⁶ This cost estimate would be even higher if it included military, strategic, or political costs associated with U.S. and world dependence on imports.

AMERICAN AUTOMAKERS CAN LEAD HIGH-TECH, FUEL-EFFICIENCY DEVELOPMENTS

Today's auto companies are global businesses that must meet the needs of markets around the world. In Europe and Japan, fuel prices are much higher, and therefore more fuel-efficient vehicles are sold there. Without an across-the-board focus on efficiency, Detroit automakers are running the risk of falling behind in the race to dominate the future global auto markets that will increasingly demand clean and efficient vehicles.

But American companies have the opportunity to become the leaders in the high-tech automobile revolution. Detroit has taken some baby steps in that direction: Ford plans to sell a hybrid version of its popular Escape SUV in 2003 (a "hybrid" vehicle combines the old and the new: it uses a combination of a traditional internal combustion engine and stored electric battery power to operate the vehicle in the most efficient manner). That move comes on the heels of Ford's commitment to increase the general fuel economy of its SUVs by 25 percent by 2005. General Motors plans to make a hybrid powertrain, dubbed the ParadiGM, in 2004. GM has also announced it will match Ford's SUV commitments.

While these are laudable announcements, the Big Three must move more aggressively if they wish to be big players in the auto market of tomorrow, and they must outsmart savvy competitors who are moving more quickly. For example, Toyota announced recently it would increase its global production of hybrids to 300,000 units by 2005, as a result of the successful introduction of its hybrid Prius model last year. Honda already sells a hybrid Insight model and will add a hybrid version of its highly popular Civic next year in the United States. If American automakers wish to increase market share in tomorrow's global economy, they must embrace and rapidly deploy hybrid and other fuel-efficiency technologies. Otherwise, more forward-thinking rivals will pass them at the pump.



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CHAPTER TWO

CONSUMERS CAN HAVE CHOICE AMONG EFFICIENT VEHICLES

No consumer chooses a vehicle because it gets poor gas mileage. Rather, we buy our cars and trucks to get to work, to school, and to play. And everybody wants to get there safely. Given a choice, most people would prefer to meet these needs without needlessly wasting fuel or spewing pollution. Using proven automotive technologies, it is possible today to substantially improve the fuel economy of cars and light trucks without compromising these other goals. Indeed, performance may even improve in many respects. That means consumers can choose an efficient and safe vehicle that meets their needs.

CONSUMERS DO CARE ABOUT GAS MILEAGE

Contrary to what the Big Three automakers and the Bush administration would have us believe, Americans do care about fuel efficiency. They know that the vehicle model they choose can make a difference to their wallet when they get to the fuel pump. And, more importantly, they know it will make a big difference to the environment and our national energy balance if all vehicles are held to a higher efficiency standard. Recent surveys support these conclusions:

- ▶ A Gallup poll in June showed that nearly half of those surveyed said gas prices posed a financial hardship for them, and 85 percent supported the government mandating more energy-efficient vehicles.⁷
- ▶ A June *Christian Science Monitor* poll showed that Americans supported increases in car and truck fuel efficiency by a margin of 5 to 1, and that Republicans backed the move by a margin of 2 to 1.⁸

TECHNOLOGY EXISTS TO DRAMATICALLY IMPROVE FUEL ECONOMY

The good news is that not only do technologies exist today to dramatically improve the fuel economy of America's cars and light trucks, but also these technologies would more than pay for themselves in fuel cost savings. Conventional gasoline vehicles can get up to 40 mpg through the use of "off-the-shelf" technologies, and emerging

hybrid electric vehicles demonstrate that it is possible to make automobiles even more fuel efficient.

► Off-the-shelf technologies can improve today's gasoline vehicles. Using state-of-the-art computer simulation models, the American Council for An Energy Efficient Economy estimates that using off-the-shelf technologies could improve fuel economy by 50 percent.⁹ Examples of these technologies include lower rolling-resistance tires, lighter weight materials, smoother transmissions, and more efficient engines. Three of the most promising are advanced aerodynamics, variable engine valve timing, and extension of four-valve-per-cylinder technology to six-cylinder engines, each of which would provide between 7 and 10 percent greater fuel economy.¹⁰ Advanced drag reduction reduces air resistance over the vehicle; variable valve timing optimizes the timing of air intake into the cylinder with the spark ignition during combustion; and increasing the number of valves per cylinder improves efficiency through more complete fuel burning.

► High-tech, hybrid electric vehicles are rapidly coming to market. Toyota and Honda already sell highly advanced, highly fuel-efficient vehicles that run on gasoline and electricity, so-called hybrids. These vehicles run on one-third less fuel than their conventional counterparts, yet are very affordable at about \$20,000. Spurred by high gasoline prices this past summer, Honda and Toyota have easily sold out their first-year production runs. Ford, General Motors, and DaimlerChrysler have announced plans to sell a hybrid-electric car or light truck in the next few years.

WE CAN HAVE FUEL EFFICIENCY AND PERFORMANCE.

By engineering standards, automotive motors perform more efficiently than they did 20 years ago. Unfortunately, these efficiency enhancements have largely been funneled into heavier weight and punchier acceleration. But by adding new technologies to our vehicles while also reducing their weight, we can continue to create a fleet that meets all of drivers' needs.

► According to the Environmental Protection Agency (EPA), fleet horsepower has increased 79 percent since 1981 and 0–60 mph times have sharpened 26 percent in the same period. Meanwhile, the fleet has grown 21 percent heavier since 1981.¹¹

► EPA's report notes, "This year's light vehicles will have about the same average fuel economy as those built in model year 1981. Based on accepted engineering relationships, however, had the new 2000 light-vehicle fleet had the same average weight and performance as in 1981, it could have achieved 25 percent higher fuel economy."¹²

► According to EPA, enhancements such as doubling the number of valves per cylinder, varying both the timing and the extent to which each of those valves opens, and replacing side-mounted camshafts with overhead ones can substantially increase engine efficiency and performance.¹³ Other improvements can be achieved by

replacing hydraulically controlled automatic transmissions with electronically controlled versions, and adding integrated starter/generators.

► If implemented, existing technologies (including light-weight safety enhancements) would allow a Ford Explorer to shave 1.7 seconds off its 0–60 time (from 12.4 seconds to 10.7) while increasing fuel economy by nearly 10 mpg, according to another Union of Concerned Scientists report, “Greener SUVs.”¹⁴ The efficient Explorer also has more brawn than it’s showroom floor competitor, tackling a 16.4 percent grade at 55 mph compared to a 13.8 percent incline for the stock vehicle.

► Carmakers have already used advanced technologies to remarkable effect: the Subaru Impreza WRX gets 27 mpg and goes from 0–60 in 5.8 seconds, while Volkswagen’s Turbo Bug gets 31 mpg and does 0–60 in under 7.5 seconds.

Thanks to technological advances, efficient vehicles are bigger and more diverse than ever before.

EFFICIENT DOESN’T NECESSARILY MEAN SMALL

Raising fuel economy standards should not limit consumers’ choices. In fact, thanks to technological advances, efficient vehicles are bigger and more diverse than ever before. Thus people should be able to choose a vehicle that meets their needs and requirements without sacrificing fuel-efficiency or safety.

► If used, technology that exists today could boost SUV fuel efficiency dramatically. As mentioned above, a modernized Explorer could achieve 28.4 mpg compared to its current 19.3. SUVs are based on older, less efficient technology than cars, like rear-wheel drive and unnecessarily heavy engines.

► More efficient SUVs already exist. Ford’s 4WD Escape currently gets 26 mpg, the Pontiac Aztec 26 mpg, and the Mazda Tribute 28 mpg.

► Ford has already committed to increasing average fuel economy of its SUVs by 25 percent by 2005. GM and DaimlerChrysler have made similar pledges.

DIESEL FUEL IS NOT THE ANSWER

Diesel-fueled cars and SUVs should not be relied upon to increase fuel economy because today's diesel vehicles continue to emit unacceptable levels of cancer-causing soot particles and smog-forming gases. Auto companies like Volkswagen, General Motors and DaimlerChrysler say America could improve its fuel economy by switching to diesel and point to increasing diesel sales in Europe as an example. But the European approach is the wrong one. Today's diesel cars produce emissions that harm the environment and the public's health, and Americans should not be forced to accept toxic diesel pollution in exchange for fuel savings at the pump.

DIESEL ENGINES ARE STILL DIRTY AND HARMFUL TO HUMAN HEALTH

Despite recent progress in diesel emission control technology, today's diesel engines still emit huge quantities of toxic-soot particles and smog-forming gases. Recent reports indicate that diesel soot is likely to trigger asthma attacks, bronchitis, heart ailments and up to 125,000 potential lifetime cancers nationally.¹⁵

- ▶ Typical diesel exhaust contains more than 40 different toxic substances including arsenic, dioxins, formaldehyde, inorganic lead, and mercury compounds.
- ▶ New data shows that the cancer risks of air toxics from diesel exhaust are even higher than previously assumed, reaching anywhere from 78 percent to 90 percent of the total risk from hazardous air pollutants in the United States.¹⁶
- ▶ Roughly one-third of the transportation-related, smog-forming nitrogen oxides (NOx) come from diesel tailpipes.

Diesels also spit out much higher levels of nitrogen oxides than gasoline. Throughout the United States, lifetime average nitrogen oxides emissions from diesel vehicles are roughly twice that of gasoline cars sold in 2001 and diesels emit an average of 10 times more lung-damaging particulates.¹⁷



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AUTOMAKERS' CLAIMS OF "GREEN" DIESEL ARE UNFOUNDED

Despite automakers' claims, the potential for "green" diesel technology remains extremely uncertain, and today's diesels are certainly not "green."

- ▶ Diesel cars on the roads today can legally emit unlimited amounts of soot, since there is no soot standard for these vehicles. Soot standards for diesel cars are being implemented now, and will be fully in place by 2008.
- ▶ The diesel engine industry has a long record of selling engines that were designed to meet EPA's emission standards in laboratory conditions, but that emit much higher levels on the open road.
- ▶ In 1999, the seven biggest diesel engine makers paid the largest air pollution fines in history, rather than face trial on charges related to their decade-long practice of selling engines that emitted up to three times the legal limits on the nation's highways.¹⁸
- ▶ So-called "green" diesels are designed to run on ultra-low sulfur diesel fuel (i.e., 15 parts-per-million, rather than the legal limit of 300 parts-per-million), which is not widely available in the United States. This ultra-low sulfur fuel will be required nationally, beginning in mid-2006. The most common low-sulfur diesel fuel currently available has double the recommended maximum sulfur content for the best diesel-pollution control equipment.

The good news is that, thanks to EPA regulations that will reduce sulfur and emission levels over the course of the decade, technologies are being developed to dramatically clean up diesel engines in years to come. Some, like particulate filters and traps, are already entering the market. However, these technologies don't offer a complete or permanent solution. For example, particulate traps don't reduce NOx—and catalysts that yield comparable NOx reductions are not widely available yet. Plus, it is not clear that technologies like traps and filters will operate effectively for the life of a motor vehicle. If not effectively maintained, the traps or filters can get blocked and malfunction, resulting in emissions that may return to pre-filter levels.

EUROPEAN CAR MAKERS PROMOTE DIESEL BECAUSE OF FUEL TAX ADVANTAGES

Europeans have increasingly turned to diesel cars because of the immense tax advantages handed to diesel fuel. But these tax policies are the result of heavy lobbying by the trucking companies, not the result of environmentally sound policy-making.

- ▶ Western European gasoline taxes have kept costs artificially elevated by 68 to 86 percent.¹⁹ Because of a 72.7 percent tax, a gallon of unleaded gasoline in France costs an average of \$3.66 as opposed to \$2.75 for a gallon of diesel. In Germany, a gallon of gas costs \$3.42 compared to \$2.25 for diesel as a result of higher taxes.²⁰
- ▶ Diesel vehicles in the European Community continue to get preferential treatment on emission standards. Diesel cars there are allowed to emit more than three times as much smog-forming nitrogen oxides as gasoline-powered cars.²¹

► Europe’s diesel cars are dirtier than American cars thanks to weaker European Union emission standards. Upcoming European diesel standards (effective in 2008) will still allow five times more particulate soot emissions—and eight times more NO_x—than the average American car will emit at that time.

OTHER COUNTRIES ARE MOVING AGGRESSIVELY AGAINST DIESEL

Asian countries are making great efforts to remove diesel vehicles from the roads. Korea and India are shifting from diesel to natural-gas buses, and Japan and India are attempting to ban new diesel vehicles altogether. Although diesel vehicles account for only 10 percent of passenger cars in Japan, they generate more than 30 percent of all nitrogen oxide emissions. The Tokyo “Diesel No” proposal calls for a ban on diesel passenger cars and severe restrictions on diesel commercial vehicles.²² Japan plans to set strict diesel-emissions standards by September 2001 for its six largest cities. Under the plan, diesel vehicles already in use will be de-registered after a grace period of seven to nine years if they cannot reduce emissions to 2001 levels.²³ Hong Kong has also installed a tax incentive to reduce the sulfur content of diesel fuel, and taxis are shifting from diesel to propane-powered engines.

The bottom line is that people don’t drive diesel cars to clean the air in Europe, or anywhere else. Diesel cars are prevalent in places because of preferential tax treatments and looser emissions standards. Alternative technologies exist to improve our fuel economy without retreating on our air quality or health protections (see Chapter Two). The United States does not need to follow the European model and shouldn’t do so. America does not need to accept toxic diesel emissions in order to save money at the fuel pump.

Korea and India are shifting from diesel to natural-gas buses, and Japan and India are attempting to ban new diesel vehicles altogether.



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CHAPTER FOUR

CONSUMERS AND SAFETY: EFFICIENCY WITHOUT SACRIFICE

Nothing is more important than the safety of drivers and the cars they drive. To be sure, all vehicles should be designed to be as safe as possible, no matter what their size. The good news is that upgrading CAFE standards to 40 mpg for cars and light trucks won't stop them from meeting the litmus test of safety and marketability.

HEAVIER IS NOT NECESSARILY SAFER

Although automakers would have us believe that heavy, gas-guzzling sport utility vehicles are the safest vehicles on the road, evidence shows that this isn't necessarily the case. Safety is a question of design, not weight.

- ▶ The National Highway Transportation Safety Administration (NHTSA) tested the Chevy Blazer and GMC Jimmy and gave both vehicles a one star safety rating. The Honda Accord received five stars.
- ▶ According to NHTSA, SUVs are at least twice as likely to roll over as passenger vehicles.²⁵
- ▶ Increased use of light trucks as substitutes for cars has produced at least 2,000 additional rollover fatalities annually.²⁶
- ▶ Light-truck fatality rates in rollover accidents were more than twice as high as passenger car rates in 1999.²⁷
- ▶ A total of 60 percent of all deaths in SUVs and light trucks occur in rollovers.²⁸
- ▶ Federal roof safety standards for SUVs and light trucks are 30 years old and insubstantial, creating an entire class of popular but dangerous vehicles.
- ▶ Many of the deaths and severe head injuries in SUVs may be attributed to the vehicles' flimsy roofs, which tend to crush during a rollover crash, causing deadly or devastating head, neck, and spinal injuries.²⁹
- ▶ Heavy SUVs weighing over 6,000 pounds—like the Ford Excursion—are held to less stringent crash standards than cars.

DON'T TRUST DETROIT: A HISTORY OF LYING TO CONSUMERS

Not surprisingly, one of the loudest voices claiming that raising the CAFE standards will affect safety is that of the Big Three automakers. However, if we look back on Detroit's record of telling the truth when it comes to safety, the evidence shows that Ford, GM, and DaimlerChrysler are not to be trusted.

- ▶ Prior to 1964, American automakers said seatbelts weren't necessary standard safety features, even though evidence existed to the contrary.
- ▶ Even though it was proven that airbags could save lives as early as 1973, the Big Three lobbied vigorously against them. The Supreme Court ruled in 1983 that, "the car companies . . . had waged the regulatory equivalent of war" against airbags, which did not become standard features until more than a decade later.³⁰
- ▶ Internal documents show that Ford knew of rollover design flaws since the days of the Explorer's precursor, the wobbly Bronco II.³¹
- ▶ The Big Three lobbied intensely against new rollover prevention standards and rollover crashworthiness improvements, even though they knew their SUVs had a tendency to roll over.³²

INCREASING CAFE STANDARDS WON'T LIMIT CONSUMER CHOICE

Increasing CAFE standards will not force consumers to sacrifice safety for fuel efficiency. If done properly, higher CAFE standards can improve safety by taking the mass out of the heaviest vehicles. There is no need to reduce the size or utility of vehicles that consumers can choose in order to meet higher efficiency standards. Nevertheless, today's smaller cars are often safer than larger ones, and the technology exists to make smaller cars even safer. Safety is a question of design, not size.

- ▶ The *New York Times* quoted a draft executive summary of the upcoming National Academy of Sciences report on raising CAFE standards as follows: "Significant fuel economy gains in all vehicles can be achieved with minimal . . . negative safety implications."³³
- ▶ A Union of Concerned Scientists/Center for Auto Safety (UCS/CAS) study found that, "increasing the fuel economy of the nation's fleet of new cars and light trucks to 40 mpg by 2012 and 55 mpg by 2020 can yield significant benefits to consumers, the economy and the environment without sacrificing passenger safety during a collision."³⁴
- ▶ Some smaller cars are safer than larger vehicles since technology and design can compensate for lower mass. For example, NHTSA awarded the small Saturn S Series a five-star rating (the highest) in head-on, driver-side collisions, while the Oldsmobile Bravada (an SUV) got only three. Likewise, in side-impact collisions, the Volkswagen Beetle won five stars while the Jeep Cherokee earned only three.
- ▶ Lighter-weight SUVs can save lives, according to a March American Center for an Energy Efficient Economy study. "Many lives would be saved by reducing the

mass differential between cars and light trucks,” the report notes, adding that, “In the interest of fuel economy, this can be done by reducing the masses of the heavier vehicles.” The study also found that “reduction in the mass of heavier cars is a reasonable goal, because ‘overweight’ cars do not appear to offer added protection.”³⁵

► In fact, reducing the weight of SUVs can make them more fuel efficient and less dangerous to other vehicles, the UCS/CAS study found, and that, “the relationship between safety and the weights of vehicles in the fleet is neither direct nor obvious.”³⁶

► Smaller cars can become even safer, with more and better use of airbags, and more sophisticated seat belts—with four anchors, pretensioning devices, and load limits. Safety can also be enhanced in smaller cars by adding more “crush space” and energy-absorbing materials.³⁷

ENDNOTES

- 1 Assumes 5 percent discount rate and \$1.40 per gallon gasoline.
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