

America Tales



**How President Bush's
Inaction Will Cost Americans
Billions at the Pump in 2006**

December 2005

U.S. PIRG Education Fund

America Idles:

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

America is too dependent on oil, and consumers are paying the price. For the last two years, gasoline prices have been creeping upward. In 2003, a gallon of regular gasoline averaged \$1.56; so far in 2005, the same gallon has averaged \$2.29, with prices in some areas spiking close to \$4.00 in August and September after Hurricane Katrina disrupted supply from the Gulf Coast.

America uses more oil for transportation than for anything else. About two-thirds of the oil America uses is to move people or goods from place to place, and the vast majority of that is used in personal vehicles such as cars, light trucks and SUVs. Transportation has been the main driver of America's increased oil use, responsible for 79 percent of the growth in oil consumption in the U.S. between 1985 and 2003.

The best way to reduce our dependence on oil and save consumers money at the pump is to make cars go farther on a gallon of gasoline. Today, the average fuel economy of light-duty cars and SUVs is just 21 miles per gallon (mpg), five percent less than what it was in 1987. The National Academy of Sciences has stated that we already have the technology to make cars get 40 mpg. The big oil companies and automakers continue to fight this technological progress; in fact, while consumers are paying more at the pump, oil companies are recording huge profits. In 2004, the top ten oil companies enjoyed net profits of \$100 billion, an increase of more than 30 percent from 2003.

Congress and the Bush administration have failed to take meaningful action to reduce America's oil dependence. In August 2005, the president signed into law an energy bill that gives new tax breaks to the oil and gas industry while

doing nothing to make cars go farther on a gallon of gasoline or protect consumers at the pump. In the same month, the Bush administration proposed changes to federal fuel economy standards that could actually encourage manufacturers to make bigger, heavier, and less fuel-efficient SUVs and light trucks.

In May 2001, when announcing his national energy strategy, President Bush had the opportunity to take a bold step forward and increase the fuel economy of cars and SUVs to 40 mpg by 2012. If he had, consumers and the U.S. economy already would be reaping the benefits as more efficient cars entered the market. In 2006 alone:

- The U.S. would consume 500,000 barrels of oil less per day. This is more than three-fourths of our current imports from Iraq.
- Consumers would save more than \$8.7 billion at the gas pump, about \$500 per new vehicle on the road.
- The U.S. would offset 34.2 million tons of carbon dioxide, the primary global warming gas. This is the equivalent of removing almost six million average vehicles from the road.

After 2006, as more cars meeting the new standards replaced older, less efficient cars, the benefits would grow even larger.

President Bush should not wait any longer. In order to curtail America's oil dependence and save consumers money, President Bush should pick up a pen and increase fuel economy standards to 40 miles per gallon.

THE PROBLEM: WE ARE TOO DEPENDENT ON OIL

The United States is simply too dependent on oil. Holding only two percent of the world's oil reserves, the U.S. is far and away the world's number one consumer of oil. With less than five percent of the world's population, the U.S. consumes a quarter of the world's petroleum.¹ On a per-capita basis, the average American consumes two-thirds more oil than the average resident of Japan, twice as much as the average German, and 14 times more than the average resident of China.²

Our heavy reliance on oil products to fuel transportation vehicles takes a heavy toll on the environment. Oil pollutes the environment from the point of extraction to combustion, leaving a trail of oil spills, smog-forming air pollution, and global warming in its wake.

Consumers pay a price too in the form of unpredictably high gasoline prices at the pump. Gasoline prices are sensitive to crude oil supply disruptions; moreover, as oil demand increases, so does the price of a gallon of gasoline. Gasoline prices have been steadily on the rise for the last two years. In 2003, a gallon of regular gasoline averaged \$1.56; by 2004, it averaged \$1.85; so far in 2005, a gallon of regular gasoline has averaged \$2.29.³ After Hurricane Katrina hit the U.S. Gulf Coast in August 2005, damaging refineries and offshore rigs, oil jumped to more than \$70 per barrel, sending gasoline prices soaring to close to \$4 a gallon in some places. This price spike in the wake of a natural disaster is only symptomatic of larger underlying problems that need long term solutions.

Rising U.S. and Global Demand

As demand for a commodity increases, its price tends to increase as well. The rising demand for oil in rapidly industrializing and developed countries has helped trigger the recent jump in world oil prices.

America's consumption has been growing by leaps and bounds. In fact, American oil consumption has been increasing rapidly for the last 20 years. Between 1978 and 1983, Americans slashed their consumption of oil by nearly 20 percent, as energy efficiency and fuel economy measures implemented during the 1970s energy crisis took hold. Since 1983, however, petroleum consumption has increased by nearly one-third and is now well above seven billion barrels per year.⁴

Increasing oil consumption in the U.S. is a key driver of the jump in world oil demand that has triggered the recent oil price spike. Between 2000 and 2004, the U.S. was responsible for one-sixth of the increase in world demand for oil, ranking second behind only China in oil demand growth.⁵

Oil Consumption and the Transportation Sector

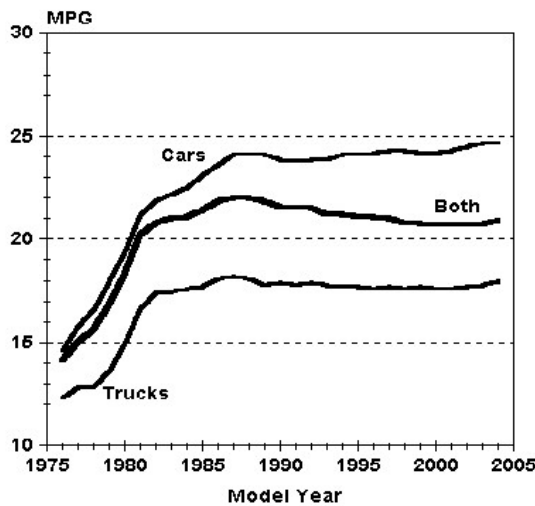
Where is all this oil going? Increasingly into the fuel tanks of America's cars, trucks and SUVs.

America uses more oil for transportation than for anything else. About two-thirds of the oil America uses is to move people or goods from place to place, and the vast majority of that is used in personal vehicles like cars, trucks and SUVs.⁶ Transportation has been the main driver of increased oil use, responsible for 79 percent of the growth in oil consumption in the U.S. between 1985 and 2003.⁷

There has been a dramatic shift in the American vehicle fleet, with increasing sales of less-efficient vehicles, such as SUVs. By 2004, SUVs accounted for more than one-quarter of all light-duty vehicle sales, while the share held by cars had shrunk to less than half.⁸ The average American now drives one-third more miles each year than he or she did two decades ago and uses on average an equally inefficient vehicle.⁹

At the same time, the average fuel economy of both cars and SUVs has stagnated, as Congress and the Bush administration have refused to increase federal fuel economy standards (except for a minor increase in SUV fuel economy). Despite advances in technology, average fuel economy is just 21.0 miles per gallon (mpg) for model year 2005 cars and light trucks, five percent below the 1987-1988 peak of 22.1 mpg (Figure A).¹⁰

Figure A. Adjusted Fuel Economy by Model Year (Three-Year Moving Average), 1975-2005



Source: U.S. EPA, *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2005*, July 2005.

For model year 2005, cars are estimated to average 24.7 mpg, vans 20.4 mpg, SUVs 18.1 mpg, and pickups 17.1 mpg. The growing market share of light trucks accounted for much of the decline in fuel economy of the overall new light-duty vehicle fleet from the peak that occurred in 1987-1988.¹¹ Even these figures are somewhat deceiving as more and more driving now takes place under conditions – higher speeds and in urban areas – that erode the fuel economy performance of vehicles once they are on the road.

In short, our increased driving plus lower fuel economy equals higher oil consumption, deepening our dependence on oil. Higher oil consumption in the U.S. (along with increasing consumption in other nations) has played a significant role in the recent run-up in oil prices.

America’s current transportation and land-use policies – which encourage dependence on automobiles for most travel and do little to make those automobiles fuel efficient – may have appeared to be sustainable during the era of cheap oil. But with the world beginning to brush up against natural and technological limits in its ability to produce oil, the sustainability of those policies is now in serious jeopardy.

THE SOLUTION: MAKE CARS AND SUVS MORE FUEL EFFICIENT

In response to the Arab oil embargo of the early 1970s, Congress implemented the first miles per gallon standards in 1975 to protect consumers from high gasoline prices and supply vulnerability resulting from U.S. dependence on foreign oil. The drafters of the successful oil savings law recognized that the only way to reduce dependence on foreign oil was to reduce oil demand, requiring cars and light trucks to nearly double miles per gallon averages to 27.5 and 20.7 miles, respectively.^a As a result, consumers were able to go farther on a gallon of gasoline; these standards also had the benefit of reducing tailpipe emissions, including emissions of global warming gases. Cars today use 2.8 million barrels of oil per day less than they would have under the old fuel economy standards.¹²

The 1975 oil savings law also requires that the National Highway Traffic Safety Administration (NHTSA) continuously review and increase miles per gallon standards as technologically feasible.¹³ A 1996 Department of Transportation appropriations bill rider prevented NHTSA from even studying the need and the technological feasibility of new fuel economy standards. In 2001, the Senate retracted this rider and agreed to study fuel economy standards. Congress ordered the National Academy of Sciences (NAS) to determine the effectiveness federal fuel economy program and make recommendations for moving forward with new standards.

In 2001, NAS identified ranges of fuel economy improvements for both cars and trucks while holding acceleration, performance, size, accessories, amenities, mix of vehicle types, makes, and models sold constant. The result was a 2002 NAS report, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, which concluded that automakers could use existing technology to increase the fuel economy of their fleets to 40 mpg over the next decade while improving safety and maintaining performance.¹⁴ Furthermore, the NAS study was conducted when gasoline prices were significantly lower; with higher gasoline prices, many more efficiency measures may become more cost-effective.

The technology is available today to make cars and light trucks go farther on a gallon of gasoline. The Toyota Prius, which gets an estimated 60 mpg in the city, and the Ford SUV Escape, which gets about 35 mpg in the city, demonstrate that foreign and domestic manufacturers can produce smarter engines, more efficient transmissions, and other design improvements to make substantial gains in fuel economy.

^a Light truck fuel economy standards have since been increased to 22.2 mpg for model year 2007.

BUSH ADMINISTRATION PROPOSALS WOULD NOT SOLVE THE PROBLEM

The Bush-Cheney Energy Plan

In May 2001, the Bush administration released its national energy policy, the product of Vice President Cheney's energy task force, which outlined a plan heavily focused on oil, other fossil fuels, and nuclear power to meet our energy needs. Moreover, the Bush-Cheney energy policy offered no plan for increasing the fuel economy of America's cars and trucks to reduce oil demand. For four years, the Bush administration pushed its energy plan through Congress while actively opposing proposals to significantly increase the fuel economy of cars and light trucks.¹⁵

In August 2005, the president signed its energy plan into law, even though it does not include provisions to increase fuel economy or otherwise reduce oil demand. Instead, the energy bill the president signed provides the oil and gas industry with \$4 billion in new tax breaks and subsidies while doing nothing to protect consumers from price spikes at the pump. The president himself admitted that the bill "wouldn't change the price at the pump today."¹⁶

Similarly, the Bush administration's proposal to drill in the Arctic National Wildlife Refuge would do nothing to reduce our dependence on oil. The U.S. Geological Survey assessment of the coastal plain estimates that the oil found in the Arctic Refuge would meet the energy needs of the United States for less than a year.¹⁷ The amount of oil likely to be recovered from the Arctic Refuge would be no more than one-third of one percent (0.3%) of the world's oil reserves.¹⁸

Drilling in the Arctic Refuge also will not provide consumers relief at the gas pump. The Bush administration's own Energy Information Administration (EIA) determined that drilling in

the Arctic Refuge would not have any impact on world oil prices, noting that "[a]ssuming that world oil markets continue to work as they do today, the Organization of Petroleum Exporting Countries could countermand any potential price impact of ANWR coastal plain production by reducing its exports by an equal amount."¹⁹ Over the long-term, drilling in the Arctic Refuge would reduce gasoline prices by less than a penny-and-a-half a gallon and not until 2025.²⁰

Failure to Increase Fuel Economy Standards

On December 22, 2003, NHTSA issued an advanced notice of a proposal to overhaul the entire federal fuel economy system, noting that the current standards apply to vehicle classes created in 1972 that bear "little resemblance to today's motor vehicle market or the current and emerging vehicle fleet."²¹ Although the proposal sought public input on the structure of the automobile fuel economy program, it specifically requested that the public not suggest a specific number for future miles per gallon standards.²²

In August 2005, the Bush administration announced its proposed rulemaking for changing federal fuel economy standards for light trucks.²³ The proposal, however, would increase miles-per-gallon standards by less than six percent over four years; the heaviest vehicles only would have to increase their gasoline mileage from 20.4 mpg in model year 2008 to just 21.3 mpg in model year 2011, an increase of not even one mile per gallon. Moreover, the proposal would create more truck weight classes, with different fuel economy standards for each classification. This could encourage automakers to add weight to their vehicles to allow them to qualify for weaker standards. As a result, manufacturers could make vehicles that get fewer miles per gallon than they do now.

OIL INDUSTRY PROFITS FROM HIGH GASOLINE PRICES

Although consumers continue to suffer at the pump, oil companies are enjoying huge profits. In 2004, the top 10 oil companies enjoyed net profits of \$100 billion, an increase of more than 30 percent from 2003.²⁴

ExxonMobil's profits have been particularly high. According to its 2004 annual report, ExxonMobil earned a record-breaking \$25.3 billion in net income in 2004, a \$3.8 billion increase over 2003 and a \$13.9 billion increase over 2002.²⁵ During the year ending December 31, 2003, CEO Lee Raymond earned \$27.8 million in salary and bonuses and exercised \$15.9 million in options.

In 2004, Raymond received a 37 percent pay increase to \$38 million—about half a day's profits at the company.²⁶

ExxonMobil is on pace to break its own profit record, earning \$25 billion in the first nine months of 2005, including \$9.9 billion in the third quarter, when Hurricane Katrina forced gasoline prices up past \$3 per gallon. The other major oil companies also reported huge third quarter profits; Royal Dutch/Shell reported third quarter profits of \$9 billion, ConocoPhillips \$3.8 billion, Chevron \$3.6 billion, and BP \$6.5 billion.²⁷

FINDINGS: BUSH ADMINISTRATIONS'S DELAY WILL COST CONSUMERS BILLIONS IN 2006

The Bush administration has failed to apply our technological know-how to improve the fuel economy of America's cars and SUVs, which has led to higher prices at the pump, increased dependence on foreign oil, and a host of environmental problems stemming from oil exploration and combustion.

In May 2001, when releasing his national energy policy, President Bush had the opportunity to pick up a pen and increase the fuel economy of cars and light trucks to 40 mpg by 2012. If he had done so, consumers and the U.S. economy already would be reaping the benefits. Even though we would still be phasing in the fuel economy standards, more efficient cars would already be entering the market. By 2006, new fleets of cars and light trucks would average about 31.4 mpg, or 10 mpg more than they average today.²⁸

If President Bush had raised fuel economy standards in May 2001 to 40 mpg by 2012, in 2006 alone we would see the following benefits:

- The U.S. would consume 500,000 barrels of oil less per day in 2006. This is more than three-fourths of our current imports from Iraq.²⁹
- Consumers would save more than \$8.7 billion at the gas pump in 2006, or about \$500 per new vehicle.³⁰
- The U.S. would offset 34.2 million tons of carbon dioxide, the primary gas responsible for global warming, in 2006. This is the equivalent of removing almost six million average vehicles from the roads.

After 2006, as more cars meeting the new standards replaced older, less efficient cars, the benefits would grow even larger.

Table 1 highlights the money and oil we would be saving in 2006 alone, state by state, if President Bush had raised fuel economy standards to 40 mpg by 2012 when he first came into office.

Table 1. State-by-State Savings in 2006 with a 40 mpg Fleet-Wide Fuel Economy Standard (Phased in by 2012)

State	Oil Savings in 2006 (barrels per day)	Consumer Savings in 2006	Annual Carbon Dioxide Emissions Avoided in 2006 (tons)	Emissions Equivalent (Average Cars)
Alabama	9,032	\$157,807,472	616,943	107,763
Alaska	1,065	\$18,614,656	72,773	12,712
Arizona	9,504	\$166,066,036	649,229	113,403
Arkansas	5,301	\$92,622,143	362,103	63,249
California	54,949	\$960,125,566	3,753,577	655,647
Colorado	7,479	\$130,683,472	510,902	89,241
Connecticut	5,912	\$103,304,611	403,866	70,544
Delaware	1,518	\$26,530,833	103,721	18,117
Dist. of Columbia	567	\$9,909,600	38,741	6,767
Florida	29,397	\$513,650,903	2,008,100	350,760
Georgia	18,121	\$316,622,454	1,237,824	216,214
Hawaii	1,632	\$28,513,833	111,474	19,471
Idaho	2,262	\$39,516,776	154,489	26,985
Illinois	18,679	\$326,380,042	1,275,971	222,877
Indiana	11,996	\$209,604,631	819,442	143,134
Iowa	5,871	\$102,579,274	401,030	70,049
Kansas	5,022	\$87,752,359	343,065	59,924
Kentucky	8,324	\$145,446,530	568,618	99,322
Louisiana	8,897	\$155,449,622	607,725	106,153
Maine	2,808	\$49,062,514	191,808	33,504
Maryland	9,494	\$165,891,923	648,549	113,284
Massachusetts	10,264	\$179,336,790	701,111	122,465
Michigan	18,238	\$318,666,736	1,245,816	217,610
Minnesota	9,909	\$173,134,374	676,863	118,229
Mississippi	5,931	\$103,635,697	405,160	70,770
Missouri	11,685	\$204,163,657	798,171	139,418
Montana	1,831	\$31,997,928	125,095	21,851
Nebraska	3,179	\$55,539,254	217,129	37,926
Nevada	3,818	\$66,716,939	260,828	45,559
New Hampshire	2,607	\$45,555,438	178,097	31,109
New Jersey	16,165	\$282,444,307	1,104,206	192,874
New Mexico	3,489	\$60,964,029	238,337	41,631
New York	21,133	\$369,248,365	1,443,564	252,151
North Carolina	15,758	\$275,339,614	1,076,431	188,023
North Dakota	1,341	\$23,438,729	91,633	16,006
Ohio	19,053	\$332,918,567	1,301,533	227,342
Oklahoma	6,655	\$116,281,701	454,599	79,406
Oregon	5,615	\$98,104,181	383,535	66,993
Pennsylvania	18,803	\$328,551,785	1,284,462	224,360
Rhode Island	1,451	\$25,356,115	99,129	17,315
South Carolina	8,586	\$150,022,084	586,506	102,446

State	Oil Savings in 2006 (barrels per day)	Consumer Savings in 2006	Annual Carbon Dioxide Emissions Avoided in 2006 (tons)	Emissions Equivalent (Average Cars)
South Dakota	1,584	\$27,670,578	108,177	18,896
Tennessee	11,127	\$194,415,739	760,062	132,762
Texas	41,147	\$718,953,425	2,810,723	490,956
Utah	3,760	\$65,690,905	256,816	44,859
Vermont	1,270	\$22,198,334	86,784	15,159
Virginia	14,274	\$249,409,294	975,057	170,316
Washington	9,896	\$172,906,953	675,974	118,074
West Virginia	3,007	\$52,538,257	205,396	35,877
Wisconsin	9,330	\$163,017,697	637,312	111,321
Wyoming	1,265	\$22,104,779	86,418	15,095
National	500,000	\$8,736,457,500	34,154,875	5,965,917

RECOMMENDATIONS

In order to curtail America’s oil dependence and save consumers money at the gas pump, the Bush administration should ask the Secretary of Transportation to use his authority to increase Corporate Average Fuel Economy standards to 40 miles per gallon. His authority enables any increase that represents the “maximum

feasible” standard consistent with technological feasibility, economic practicability, the effect of other government regulations on fuel economy, and the nation’s need to conserve energy. A 40 mpg fleet wide standard is consistent with the criteria.³¹

METHODOLOGY

Fuel Efficiency Assumptions

The American Council for and Energy Efficient Economy (ACEEE) estimates that new car fleets would be averaging about 31.4 mpg in 2006, assuming implementation of a 40 miles per gallon fleet average by 2012 with 2002 as the first year the standards begin to take effect.³²

Oil Savings

ACEEE estimates that we would be saving 500,000 barrels of oil each day in 2006, assuming implementation of a 40 miles per gallon fleet average by 2012 with 2002 as the first year the standards begin to take effect.³³ We assumed that each state’s gasoline use

would remain constant as a percentage of national use, as determined from gasoline use data for 2003 from the U.S. Department of Transportation’s Federal Highway Administration.³⁴ To obtain oil savings by state, we multiplied the state’s percentage of gasoline use by 500,000 barrels of oil.

Consumer Savings

Each barrel of oil contains 42 gallons, which yields 19.7 gallons of gasoline.³⁵ EIA projects that retail regular gasoline prices will average \$2.43 per gallon in 2006.³⁶ To calculate the consumer savings by state, we multiplied each state’s oil savings (in barrels per day) by 19.7 to

determine the gallons of gasoline saved per day. We then multiplied that number by \$2.43 and then 365 to determine annual consumer savings.

Carbon Dioxide Reductions

The Argonne National Laboratory assumes that consuming one gallon of gasoline releases 19 pounds of carbon dioxide into the atmosphere directly from the tailpipe.³⁷ We multiplied the estimated oil savings (in barrels per day) by 19.7 gallons to determine gasoline savings and then

by 19 pounds to determine the carbon dioxide offsets each day.

Emissions Equivalency

EPA estimates that the average passenger car on the road in 2000 emitted 11,450 pounds of carbon dioxide annually.³⁸ To determine the emissions equivalency, we divided the estimated carbon savings in pounds by 11,450 pounds per car.

NOTES

¹ “Less than 5 percent” based on U.S. Census Bureau, U.S. and World Population Clocks, downloaded from www.census.gov/main/www/popclock.html, 30 June 2005; petroleum consumption figure obtained from Energy Information Administration (EIA), International Petroleum Consumption (Demand) Monthly and Quarterly Data, “Selected Countries, Total OECD, Total Non-OECD, and World Total, Most Recent Quarters,” downloaded December 2, 2005 at <http://www.eia.doe.gov/emeu/ipsr/t24.xls>.

² Based on BP, *BP Statistical Review of World Energy 2005*, 14 June 2005 and population estimates from U.S. Central Intelligence Agency, CIA World Factbook, downloaded from www.cia.gov/cia/publications/factbook/, 24 June 2005.

³ EIA, Short-Term Energy Outlook, November 8th, 2005 Release, Table 4 (U.S. Energy Prices), available at <http://www.eia.doe.gov/emeu/steo/pub/4tab.pdf>; EIA, U.S. Retail Gasoline Historical Prices, Regular Grade, accessed December 2, 2005 at <http://tonto.eia.doe.gov/oog/ftparea/wogirs/xls/pswrgvwreg.xls>.

⁴ EIA, *Annual Energy Review 2003*, 7 September 2004.

⁵ BP, *BP Statistical Review of World Energy 2005*, 14 June 2005.

⁶ EIA, *Petroleum Quick Stats, Data for 2003*, downloaded from www.eia.doe.gov/neic/quickfacts/quickoil.html, 5 May 2005.

⁷ EIA, *Annual Energy Review 2003*, September 7, 2003.

⁸ U.S. Environmental Protection Agency (EPA), *Light-Duty Automotive Technology and Fuel Economy Trends, 1975 Through 2004*, April 2004.

⁹ Based on vehicle travel estimates from U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* series of reports, Summary through 1995 and 2003 edition; and population estimates from U.S. Census Bureau, *Intercensal Estimates of the Total Resident Population of States:1980 to 1990*, August 1996 and U.S. Census Bureau, *Annual Estimates of Population Change for the United States and States and for Puerto Rico and Rankings: July 1, 2002 to July 1, 2003*, January 2005.

¹⁰ U.S. EPA, “Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2005,” EPA420-R-05-001, July 2005, available at <http://www.epa.gov/otaq/fetrends.htm>.

¹¹ U.S. EPA, “Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2005,” EPA420-R-05-001, July 2005, available at <http://www.epa.gov/otaq/fetrends.htm>.

¹² National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards, 2002*.

¹³ The CAFE law recognizes that the only way to reduce our dependence on foreign oil is to reduce oil demand. Thus it mandates that NHTSA continually review and increase CAFE standards to the maximum level technologically feasible:

At least 18 months before the beginning of each model year, the Secretary *shall* prescribe by regulation average fuel economy standards for automobiles (except passenger automobiles) manufactured by a manufacturer in the model year (emphasis added). Each standard *shall* be the maximum feasible average fuel economy level that the Secretary decides the manufacturers can achieve in that model year (emphasis added). (49 U.S.C. 32902)

The statute also permits the Secretary to increase CAFE standards for passenger automobiles above 27.5 miles per gallon subject to disapproval by either House of Congress (49 U.S.C. 32902(2)). The United States Supreme Court has since held that legislative action by one House is invalid. (*Immigration and Naturalization Service v. Chadha*, 103 S.Ct. 2764 (1983)). Any legislative action must be passed by both Houses of Congress and presented to the President for signature in order to be legitimate (*Immigration and Naturalization Service v. Chadha*, 103 S.Ct. 2764 (1983)). Therefore, the section of the statute subjecting an increase in passenger automobile CAFE standards to approval by one House of Congress is invalid. Because the remaining portions of the statute are fully operative, NHTSA can honor the intent and purpose of the law by increasing CAFE to 40 mpg.

¹⁴ National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards, 2002*.

¹⁵ Statement of Administration Policy, Energy Policy Act of 2002 (S. 517), March 5, 2002, <http://www.whitehouse.gov/omb/legislative/sap/107-2/S517-s.html>.

¹⁶ “Bush Concedes Energy Bill Offers No Help on Gas Prices,” *New York Times*, April 21, 2005.

¹⁷ U.S. Geological Survey, *Arctic National Wildlife Refuge, 1002 Area, Petroleum Assessment, 1998*, Fact Sheet 0028-01, available at <http://pubs.usgs.gov/fs/fs-0028-01/>.

¹⁸ The Wilderness Society, fact sheet, “Oil and National Security,” October 2001. Available at <http://www.wilderness.org/Library/Documents/upload/Security-Does-Not-Require-Drilling-for-Oil-in-the-Arctic-National-Wildlife-Refuge.pdf>; U.S. Geological Survey, Fact Sheet 0028-01, “Arctic National Wildlife Refuge, 1002 Area, Petroleum Assessment, 1998, Including Economic Analysis,” April 2001.

¹⁹ EIA, *Analysis of Oil and Gas Production in the Arctic National Wildlife Refuge*, March 2004.

²⁰ EIA, *Impacts of Modeled Provisions of H.R. 6 EH*, July 2005. EIA estimates that allowing drilling in the Arctic Refuge will reduce world oil prices by \$0.57 per barrel in 2025. Assuming a one-to-one impact on gasoline prices, this translates into

\$0.57/42 = \$0.014 per gallon. See also Dan Lashoff, Senior Scientist, Natural Resources Defense Council, testimony before the House Committee on Energy and Commerce, September 7, 2005.

²¹ NHTSA, 49 CFR Part 533, Docket No. 2003-16128. Federal Register, vol. 68, no. 248, pp74908-74913. Available at http://www.nhtsa.gov/cars/rules/CAFE/Rulemaking/ANPRM_Dec-22-2003.pdf.

²² NHTSA, 49 CFR Part 533, Docket No. 2003-16128. Federal Register, vol. 68, no. 248, p74908. Available at http://www.nhtsa.gov/cars/rules/CAFE/Rulemaking/ANPRM_Dec-22-2003.pdf.

²³ NHTSA, 49 CFR Parts 523, 533 and 53, Docket No. 2005-22223, "Average Fuel Economy Standards for Light Trucks Model Years 2008-2011," Notice of proposed rulemaking, available at <http://www.nhtsa.dot.gov/cars/rules/rulings/LightTrucksRuling-2008-2001/ProposedRulemaking/CAFE-LighTrucks-PR-24Aug05.pdf>.

²⁴ Jad Mouawad, "Big Oil's Burden of Too Much Cash," *New York Times*, February 12, 2005.

²⁵ ExxonMobil, 2004 Annual Report, available at http://www.exxonmobil.com/corporate/files/corporate/AR_2004.pdf.

²⁶ Dan Roberts, "ExxonMobil chief's pay hits \$38m," *Financial Times*, April 13, 2005.

²⁷ All profits data obtained directly from company earnings announcements posted on their websites.

²⁸ Based on estimates by Therese Langer from the American Council for and Energy Efficient Economy, November 30, 2005. The calculations are based on a 40 miles per gallon fleet average by 2012 with 2002 as the first year the standards begin to take effect.

²⁹ The U.S. imported 655,000 barrels of crude oil per day on average from Iraq in 2004. Energy Information Administration, Monthly Energy Review, November 2005, available at http://www.eia.doe.gov/emeu/mer/pdf/pages/sec3_8.pdf.

³⁰ The Bureau of National Transportation Statistics estimates that there were 16,865,000 new vehicles sold or leased in 2004. Bureau of National Transportation Statistics, *National Transportation Statistics 2004*, January 2005. Available at http://www.bts.gov/publications/national_transportation_statistics/2004/html/table_01_17.html. Assuming sales in 2006 are about the same, this translates into \$518 per new vehicle.

³¹ 49 CFR §32902.

³² Based on conversation with Therese Langer, ACEEE's Transportation Program Director, on November 30, 2005. For more information on the methodology used to come up with this number, see American Council for an Energy Efficient Economy, *Smart Energy Policies: Saving Money And Reducing Pollutant Emissions Through Greater Energy Efficiency*, September 2001, Report Number E012, available at <http://www.aceee.org/pubs/e012full.pdf>; American Council for an Energy Efficient Economy, *Technical Options for Improving the Fuel Economy of U.S. Cars and Light Trucks by 2010-2015*, June 2001, available at <http://www.aceee.org/pubs/t012.htm>.

³³ Based on conversation with Therese Langer, ACEEE's Transportation Program Director, on November 30, 2005. For more information on the methodology used to come up with this number, see American Council for an Energy Efficient Economy, *Smart Energy Policies: Saving Money And Reducing Pollutant Emissions Through Greater Energy Efficiency*, September 2001, Report Number E012, available at <http://www.aceee.org/pubs/e012full.pdf>; American Council for an Energy Efficient Economy, *Technical Options for Improving the Fuel Economy of U.S. Cars and Light Trucks by 2010-2015*, June 2001 available at <http://www.aceee.org/pubs/t012.htm>.

³⁴ U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2003*, "Monthly Gasoline Reported by States," Table 33GA, <http://www.fhwa.dot.gov/policy/ohim/hs03/htm/mf33ga.htm>.

³⁵ EIA, "Where Does My Gasoline Come From?," October 2004, at www.eia.doe.gov/neic/brochure/gas04/gasoline.htm.

³⁶ EIA, Short-Term Energy Outlook, November 8th, 2005 Release, Table 4 (U.S. Energy Prices), available at www.eia.doe.gov/emeu/steo/pub/4tab.pdf.

³⁷ M.A. Deluchi, *Emissions of Greenhouse Gases from the Use of Transportation Fuels and Electricity*, Report ANL/ESD/TM-22, Argonne National Laboratory, Center for Transportation Research, 1991.

³⁸ U.S. EPA, *Average Annual Emissions and Fuel Consumption for Passenger Cars and Light Trucks*, downloaded 10 January 2005, www.epa.gov/otaq/consumer/f00013.htm.