



Summer Gas Prices: Beating the Heat with Clean Cars



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Executive Summary

Rapidly rising gas prices across the country are shining a spotlight on the dire consequences of America's dependence on oil. Our continued use of oil puts our environment, our health, and our national security at risk, and with prices across the country exceeding \$4 per gallon, it is putting an incredible burden on our economy and on American families. Whether we consider these prices at the pump, the scars left by the oil spill disaster in the Gulf, the billion dollars that we send overseas every day, or the nearly 2 billion metric tons of global warming pollution that our oil consumption pumps into the air each year¹, it has become clear that we must break our dependence on oil.

The transportation sector accounts for nearly two-thirds of the more than 19 million barrels of oil consumed each day in the United States.² The largest percentage is consumed by passenger cars and light duty trucks, such as SUVs, vans, and pickup trucks.³ Requiring automobile manufacturers to meet strong global warming pollution and fuel efficiency standards represents the greatest opportunity to cut America's oil consumption, reduce global warming pollution from the transportation sector, and deliver important economic benefits to both consumers and businesses - including saving Americans billions of dollars at the pump.

The summer travel season is the most popular time of the year for driving, which means it's also when Americans

most feel the most economic pain of our dependence on oil. Americans are expected to spend more than \$130 billion at the gas pump this summer.

Our analysis found that if our cars and trucks today met a 60 mpg standard, Americans would save \$67 billion at the gas pump and cut gasoline consumption by 17 billion gallons this summer. The average American family would save \$513 in just three months. Not only could you afford to drive out to the beach, but now you could book a hotel there and stick around for a week. While families in all 50 states would experience similar savings, those in California, Texas, Pennsylvania, Florida and New York would see the largest overall consumer savings and the largest reductions in gasoline consumption.

American ingenuity has provided the technology to make our current vehicle fleet much cleaner and more fuel efficient. Automakers have developed plug-in hybrid cars that can travel 100 miles on a gallon of gas and U.S. auto dealers are selling electric cars that can go more than 200 miles on one charge.⁴ Additionally, several techniques are already being used to make conventional internal combustion engine vehicles more efficient.

Recognizing this, the Obama administration is currently developing new fleet-wide fuel efficiency and global warming pollution standards for cars and light trucks through 2025. In October,

The administration released an analysis that automakers can cost-effectively turn a 60 mile per gallon standard into a reality.⁵ By requiring the average cars and light trucks to achieve a standard of at least 60 miles per gallon by 2025, the administration would save Americans \$101 billion at the gas pump each year and cut our oil consumption by nearly 3 million barrels of oil per day by 2030—nearly three times the amount of oil we currently import from Saudi Arabia.⁶

It is clear that America has the workforce and the technology to build cleaner, more fuel efficient cars that help break our dangerous dependence on oil. Ending this dependence that threatens our economy, our environment, and our national security will require our leaders to put American ingenuity to work to move us beyond oil. The Obama administration should move clean cars into the fast lane by setting standards that require new cars and light trucks to meet a standard of 60 miles per gallon by 2025.

The United States Needs to Get off Oil

America's dangerous dependence on oil harms our environment and threatens our economy. Our dependence on this dirty energy source devastates our shores as we have sadly seen along the Gulf Coast, forces American families and businesses to send hundreds of billions of dollars overseas each year, and exacerbates the threat posed by global warming by spewing nearly 2 billion metric tons of carbon pollution into our air, or nearly one-third of the global warming pollution we emit.⁷

Getting Americans from point A to point B consumes nearly two-thirds of the more than 19 million barrels of oil consumed each day in the United States.⁸ 8.5 million of those barrels of oil directly fuel passenger cars and light-duty trucks such as SUVs, vans, and pickup trucks,⁹ which means reducing our dependence on oil requires building cars and trucks that are much cleaner and more fuel efficient.

60 mpg – We Have the Technology to Get There

By requiring automobile manufacturers to meet strong global warming pollution and fuel-efficiency standards, America can save billions of dollars at the pump,

reduce global warming pollution from cars and trucks, and significantly cut our dangerous dependence on oil.

American ingenuity has given us the technology today that could make cars and trucks achieve a 60 mpg fleet-wide standard. By applying existing and emerging fuel saving technologies to conventional internal combustion engine vehicles, while ramping up production of hybrids and plug-in electric vehicles, automakers can deliver a full range of cars and trucks that use less oil and emit less global warming pollution.¹⁰

Conventional internal combustion engine vehicles can be made much more efficient by applying fuel-saving techniques such as downsized turbocharged engines, enhanced aerodynamic designs, high-strength lightweight materials, six-speed and seven-speed transmissions and more climate-friendly air conditioning systems.¹¹ While a growing number of automakers are already using some of these techniques, applying the full range of these technologies will significantly increase fuel efficiency.

A 60 mpg standard will also help bring more hybrid-electric vehicles into the marketplace. These vehicles can significantly improve fuel efficiency and lower global warming pollution emissions by combining an efficient gasoline engine with an electric motor.¹² Automakers are additionally beginning to introduce plug-in hybrids and battery electric vehicles that will require no gasoline at all. Electric vehicles like the Chevrolet Volt and Nissan Leaf have recently begun to roll into dealerships, and more models will follow with a strong standard.

Efficient Vehicles Will Save Consumers Money at the Pump

America's inefficient vehicle fleet combined with rising gasoline prices are costing consumers more money at the pump. Throughout the summer travel season, Americans are expected to spend over \$130 billion at the gas pump.

If the vehicle fleet met a 60 mpg standard, Americans would save almost \$67 billion at the gas pump this summer. California, Texas, Pennsylvania, Florida and New York would see the largest overall savings due to large travel volume and high gas prices.

Top 10 States for Savings at the Pump

| Rank: | State: | Savings at the Pump (\$) |
|-------|----------------|--------------------------|
| 1 | California | \$7,859,373,529 |
| 2 | Texas | \$5,097,962,086 |
| 3 | Florida | \$4,155,837,648 |
| 4 | New York | \$3,203,815,576 |
| 5 | Pennsylvania | \$2,497,544,961 |
| 6 | Ohio | \$2,429,784,815 |
| 7 | Illinois | \$2,423,956,693 |
| 8 | Georgia | \$2,244,211,677 |
| 9 | Michigan | \$2,227,547,268 |
| 10 | North Carolina | \$2,220,598,126 |

Perhaps more importantly, individual families across the country would stand to save hundreds of dollars this summer. The average American family, over the summer months, would save about \$513. Not only could they afford a roadtrip to the beach, but they could book a hotel there for the week with the money they've saved. In some of the states where families drive the most, they stand to gain hundreds more than that:

Top 10 States for Savings at the Pump per Household

| Rank: | State: | Savings per household |
|-------|-------------|-----------------------|
| 1 | Wyoming | \$863 |
| 2 | Mississippi | \$719 |
| 3 | Oklahoma | \$662 |
| 4 | Montana | \$656 |

| | | |
|----|--------------|-------|
| 5 | North Dakota | \$649 |
| 6 | South Dakota | \$638 |
| 7 | New Mexico | \$634 |
| 8 | Missouri | \$595 |
| 9 | Alabama | \$589 |
| 10 | Nebraska | \$584 |
| 10 | Vermont | \$584 |

Clean Cars Will Cut Oil Consumption

The benefits of reducing our dependence on oil don't end with the consumer savings we would see.

Given that the majority of the oil consumed in the United States goes toward filling the gas tanks of our cars and light trucks, strong clean car standards represent the best and most

immediate opportunity to lock in significant reductions in our oil use. If our fleet of vehicles met a 60 mpg standard, Americans would use roughly 17 billion fewer gallons of gasoline during the summer this year—that's more than a 50 percent drop from expected oil consumption.

While these reductions in oil use are significant for just the summer, their effect over time would have truly profound benefits for our nation's energy security, our environment, and our health.

Top 10 States for Gasoline and Global Warming Emission Savings

| Rank: | State: | Gas Savings (gal) | Global Warming Emissions Avoided (MMTCO ₂) |
|-------|----------------|-------------------|--|
| 1 | California | 1,843,625,036 | 17,388,594 |
| 2 | Texas | 1,338,047,791 | 12,620,121 |
| 3 | Florida | 1,072,474,232 | 10,115,299 |
| 4 | New York | 778,191,784 | 7,339,704 |
| 5 | Pennsylvania | 630,374,801 | 5,945,532 |
| 6 | Ohio | 616,227,445 | 5,812,098 |
| 7 | Illinois | 615,529,886 | 5,805,519 |
| 8 | Georgia | 582,156,077 | 5,490,745 |
| 9 | North Carolina | 576,030,642 | 5,432,972 |
| 10 | Michigan | 565,654,461 | 5,335,106 |

Moving Clean Cars into the Fast Lane

The foundation for strong federal clean vehicle standards comes from momentum built in states across the country. California began the movement toward cleaner cars in 2002 by passing a landmark clean cars law that targeted reductions in global warming pollution spewing from tailpipes. The District of Columbia and thirteen other states (Arizona, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington) adopted California's historic clean car standards.¹³

President Obama took action to build on these rulings in early 2010, calling for new federal light-duty clean car standards for model years 2012-2016 that would increase fuel efficiency to 35.5 mpg. This represented the largest increase in fuel economy in more than 30 years and set the first ever federal tailpipe global warming pollution standards. While these standards will provide significant benefits for America's economy and environment, still greater improvements in fuel economy are necessary to truly get America off oil.

Just over a month after finalizing the 2012-2016 standards, President Obama announced that his administration would work with California to strengthen emissions and fuel efficiency standards for cars and light trucks through 2025. In October 2010, the administration released a technical analysis that demonstrates that automakers can cost-effectively make clean cars the norm and not the exception to the rule. By reducing greenhouse gas emissions by 6 percent per year and making new cars and light trucks meet at least a 60 mpg standard by 2025, the administration would save Americans \$101 billion at the gas pump¹⁴ and cut our oil consumption by nearly 3 million barrels of oil per day in 2030—nearly three times the amount of oil we currently import from Saudi Arabia.¹⁵

Strong clean cars standards enjoy overwhelming public support. More than 74 percent of likely voters favor increasing the average fuel efficiency standard for cars and light trucks to 60 mpg by 2025, making it clear that Americans are eager to reap the benefits of cleaner, more fuel efficient cars. Furthermore, Americans overwhelmingly support cutting pollution and saving oil even if it would increase retail prices. 83 percent of voters support a 60 mpg standard when they are informed that fuel-saving technologies would pay for themselves with savings at the pump within four years.¹⁶

Conclusion

It is abundantly clear that we are spending too much money at the pump, and jeopardizing our economy, environment, and energy security through our dependence on oil. Setting the strongest possible standard requiring cars and trucks to emit less global warming pollution and use less gas would save drivers billions of dollars annually. The Obama administration should move clean cars into the fast lane by setting standards that require new cars and light trucks to average 60 miles per gallon by 2025.

Methodology

We obtained state-by-state data on total vehicle miles travelled (VMT) for June, July and August of 2009 from U.S. Department of Transportation, Federal Highway Administration, *Traffic Volume Trends* for July, August and September 2009. We adjusted this total VMT figure to reflect the fact that, nationally, light-duty vehicles account for approximately 89 percent of miles driven, per U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2009, Table VM-1*, April 2011.

We calculated state-by-state gasoline consumption that would result from current fuel economy standards in comparison to a scenario in which light-duty vehicles had to meet a standard of 60 mpg. We applied the on-road fuel economy of the current mixed fleet of light duty vehicles, per the Energy Information Administration *Annual Energy Outlook 2011*, 25 April 2011. We based the on-road fuel economy of vehicles adhering to a 60 mpg standard on an analysis performed by the Union of Concerned Scientists, *The ABCs of GHGs and MPGs*, pre-publication draft. The difference in the amount of fuel consumed under the two different fuel economy standards represents the savings that could be obtained from higher standards.

We estimated what this would mean in terms of reduced global warming pollution by converting gasoline savings to an equivalent amount of carbon

dioxide. We also assumed that the fuel economy standard modeled here would be paired with a strong global warming tailpipe emission standard that would cause automakers to reduce emissions from air conditioners by 15 grams per mile. We assume a gallon of gasoline to contain 19.4 pounds of carbon dioxide, per U.S. Environmental Protection Agency, *Emissions Facts: Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel*, February 2005. This figure does not account for non-combustion emissions from gasoline, such as those inherent in its extraction and delivery.

We calculated state-by-state cost savings using current gasoline prices, on a regional or, where available, state level, from U.S. Department of Energy, Energy Information Administration, *Weekly Retail Gasoline and Diesel Prices*, 25 April 2011.

To know what this would mean for individual consumers, we assumed that every household in a state is responsible for an equal share of statewide VMT, and so we estimated savings on a household basis. We calculated the number of households in every state using population figures and average household size data from U.S. Census Bureau, Population Estimates Program, *2009 Population Estimates*, 20 July 2010, available at factfinder.census.gov/home/en/official_estimates_2009.html. We divided our statewide gasoline cost savings by the number of households to derive a per-household savings figure.

Appendix A. Gasoline and global warming emission savings by state.

| Rank: | State: | Gas Savings (gal) | Global Warming Emissions Avoided (MMTC O2) |
|-------|----------------|-------------------|--|
| 1 | California | 1,843,625,036 | 17,388,594 |
| 2 | Texas | 1,338,047,791 | 12,620,121 |
| 3 | Florida | 1,072,474,232 | 10,115,299 |
| 4 | New York | 778,191,784 | 7,339,704 |
| 5 | Pennsylvania | 630,374,801 | 5,945,532 |
| 6 | Ohio | 616,227,445 | 5,812,098 |
| 7 | Illinois | 615,529,886 | 5,805,519 |
| 8 | Georgia | 582,156,077 | 5,490,745 |
| 9 | North Carolina | 576,030,642 | 5,432,972 |
| 10 | Michigan | 565,654,461 | 5,335,106 |
| 11 | Virginia | 466,840,955 | 4,403,123 |
| 12 | New Jersey | 409,117,998 | 3,858,695 |
| 13 | Missouri | 405,499,414 | 3,824,566 |
| 14 | Indiana | 392,725,376 | 3,704,084 |
| 15 | Tennessee | 391,352,058 | 3,691,131 |
| 16 | Wisconsin | 349,345,963 | 3,294,941 |
| 17 | Washington | 344,768,236 | 3,251,765 |
| 18 | Alabama | 339,928,925 | 3,206,122 |
| 19 | Arizona | 330,097,711 | 3,113,396 |
| 20 | Maryland | 328,811,588 | 3,101,266 |
| 21 | Minnesota | 321,269,238 | 3,030,128 |
| 22 | Massachusetts | 314,686,030 | 2,968,037 |
| 23 | South Carolina | 280,919,844 | 2,649,563 |
| 24 | Oklahoma | 278,936,163 | 2,630,854 |
| 25 | Louisiana | 273,987,858 | 2,584,183 |
| 26 | Kentucky | 269,257,540 | 2,539,567 |
| 27 | Colorado | 266,532,703 | 2,513,867 |
| 28 | Mississippi | 242,728,522 | 2,289,353 |
| 29 | Oregon | 207,807,005 | 1,959,982 |
| 30 | Arkansas | 193,310,870 | 1,823,258 |
| 31 | Iowa | 181,735,760 | 1,714,085 |
| 32 | Connecticut | 180,798,416 | 1,705,244 |
| 33 | Kansas | 169,288,703 | 1,596,687 |
| 34 | Utah | 150,607,217 | 1,420,488 |
| 35 | New Mexico | 148,034,970 | 1,396,228 |
| 36 | West Virginia | 118,039,959 | 1,113,322 |

| | | | |
|--------|----------------------|----------------|-------------|
| 37 | Nebraska | 117,669,382 | 1,109,827 |
| 38 | Nevada | 113,702,018 | 1,072,408 |
| 39 | Idaho | 92,971,455 | 876,883 |
| 40 | Maine | 86,061,267 | 811,708 |
| 41 | New Hampshire | 79,085,683 | 745,916 |
| 42 | Montana | 78,911,293 | 744,271 |
| 43 | Delaware | 59,793,834 | 563,960 |
| 44 | South Dakota | 59,205,269 | 558,409 |
| 45 | Wyoming | 59,139,873 | 557,792 |
| 46 | Rhode Island | 53,973,581 | 509,065 |
| 47 | Hawaii | 53,624,802 | 505,775 |
| 48 | North Dakota | 52,098,893 | 491,383 |
| 49 | Vermont | 45,951,659 | 433,404 |
| 50 | Alaska | 31,782,504 | 299,764 |
| 51 | District of Columbia | 20,185,596 | 190,385 |
| Total: | United States | 16,978,898,285 | 160,140,575 |

Appendix B. Total savings at the pump, by state.

| Rank: | State: | Savings at the Pump (\$) |
|-------|----------------|--------------------------|
| 1 | California | \$7,859,373,529 |
| 2 | Texas | \$5,097,962,086 |
| 3 | Florida | \$4,155,837,648 |
| 4 | New York | \$3,203,815,576 |
| 5 | Pennsylvania | \$2,497,544,961 |
| 6 | Ohio | \$2,429,784,815 |
| 7 | Illinois | \$2,423,956,693 |
| 8 | Georgia | \$2,244,211,677 |
| 9 | Michigan | \$2,227,547,268 |
| 10 | North Carolina | \$2,220,598,126 |
| 11 | Virginia | \$1,799,671,882 |
| 12 | New Jersey | \$1,620,925,508 |
| 13 | Missouri | \$1,596,856,691 |
| 14 | Indiana | \$1,546,552,530 |
| 15 | Tennessee | \$1,541,144,403 |
| 16 | Washington | \$1,385,968,309 |
| 17 | Wisconsin | \$1,375,724,403 |
| 18 | Arizona | \$1,301,245,177 |

| | | |
|--------|----------------------|------------------|
| 19 | Alabama | \$1,285,271,265 |
| 20 | Maryland | \$1,267,568,671 |
| 21 | Minnesota | \$1,258,732,873 |
| 22 | Massachusetts | \$1,228,534,263 |
| 23 | Oklahoma | \$1,098,450,609 |
| 24 | South Carolina | \$1,082,946,000 |
| 25 | Kentucky | \$1,060,336,193 |
| 26 | Louisiana | \$1,035,948,091 |
| 27 | Colorado | \$976,309,289 |
| 28 | Mississippi | \$917,756,543 |
| 29 | Oregon | \$819,175,215 |
| 30 | Arkansas | \$730,908,399 |
| 31 | Connecticut | \$721,024,084 |
| 32 | Iowa | \$715,675,424 |
| 33 | Kansas | \$666,658,911 |
| 34 | New Mexico | \$559,720,223 |
| 35 | Utah | \$554,686,380 |
| 36 | Nebraska | \$463,382,025 |
| 37 | West Virginia | \$455,044,044 |
| 38 | Nevada | \$448,213,356 |
| 39 | Maine | \$343,212,332 |
| 40 | Idaho | \$342,413,868 |
| 41 | New Hampshire | \$315,393,703 |
| 42 | Montana | \$290,630,293 |
| 43 | South Dakota | \$233,150,348 |
| 44 | Delaware | \$230,505,228 |
| 45 | Wyoming | \$217,812,151 |
| 46 | Rhode Island | \$215,246,640 |
| 47 | Hawaii | \$211,388,968 |
| 48 | North Dakota | \$205,165,439 |
| 49 | Vermont | \$183,255,217 |
| 50 | Alaska | \$125,286,632 |
| 51 | District of Columbia | \$77,815,473 |
| Total: | United States | \$66,866,339,429 |

Appendix C. Savings at the pump, per household by state.

| Rank: | State: | Savings per household |
|-------|----------------|-----------------------|
| 1 | Wyoming | \$863 |
| 2 | Mississippi | \$719 |
| 3 | Oklahoma | \$662 |
| 4 | Montana | \$656 |
| 5 | North Dakota | \$649 |
| 6 | South Dakota | \$638 |
| 7 | New Mexico | \$634 |
| 8 | Missouri | \$595 |
| 9 | Alabama | \$589 |
| 10 | Nebraska | \$584 |
| 11 | Vermont | \$584 |
| 12 | California | \$582 |
| 13 | Delaware | \$580 |
| 14 | Utah | \$576 |
| 15 | Arkansas | \$557 |
| 16 | Tennessee | \$553 |
| 17 | Indiana | \$550 |
| 18 | Georgia | \$549 |
| 19 | Kentucky | \$547 |
| 20 | Maryland | \$541 |
| 21 | Virginia | \$539 |
| 22 | Kansas | \$539 |
| 23 | Minnesota | \$538 |
| 24 | Iowa | \$532 |
| 25 | Wisconsin | \$532 |
| 26 | Louisiana | \$530 |
| 27 | New Hampshire | \$528 |
| 28 | Idaho | \$527 |
| 29 | North Carolina | \$521 |
| 30 | Texas | \$521 |
| 31 | South Carolina | \$519 |
| 32 | West Virginia | \$509 |
| 33 | Connecticut | \$498 |
| 34 | Oregon | \$497 |
| 35 | Michigan | \$493 |
| 36 | Maine | \$490 |

| | | |
|--------|----------------------|-------|
| 37 | Washington | \$489 |
| 38 | Ohio | \$477 |
| 39 | Rhode Island | \$474 |
| 40 | Arizona | \$471 |
| 41 | Florida | \$469 |
| 42 | New Jersey | \$459 |
| 43 | Illinois | \$457 |
| 44 | Pennsylvania | \$452 |
| 45 | Colorado | \$446 |
| 46 | Massachusetts | \$445 |
| 47 | Alaska | \$438 |
| 48 | Hawaii | \$412 |
| 49 | New York | \$400 |
| 50 | Nevada | \$395 |
| 51 | District of Columbia | \$268 |
| Total: | United States | \$513 |

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- 14 See note 6.
- 15 Ibid.
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