



SUMMER on the ROAD

Going Farther on a Gallon of Gas



Summer on the Road:

Going Farther on a Gallon of Gas

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Executive Summary

As summer approaches, the dangers of our continued dependence on oil are apparent everywhere we look. In 2012, we have already experienced the hottest average temperatures ever recorded through April in the United States.¹ At the same time, increasing evidence is still coming forth of long-lasting harm from the BP oil spill,² and other tragic spills have occurred in waterways throughout the country since.

Our oil dependence risks our environment to disasters like oil spills, endangers our climate with the nearly 2 billion metric tons of global warming pollution from oil consumption each year, and threatens our families' health.³ With prices in some areas hitting \$4 per gallon once again, our oil consumption is also putting an incredible burden on American families' finances. It's time for us to break our dependence on oil.

The transportation sector accounts for nearly two-thirds of the nearly 19 million barrels of oil consumed each day in the United States.⁴ The largest percentage is consumed by passenger cars and light duty trucks such as SUVs, vans, and pickup trucks.⁵ Our greatest opportunity to cut America's oil consumption is to set strong global warming pollution and fuel efficiency standards for our cars and trucks.

The summer travel season is the most popular time of the year for driving, which means it's also when Americans most feel not just the environmental consequences of oil, but the economic pain at the pump. Americans are expected to spend more than \$132 billion at the gas pump this summer.

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.⁶ Meanwhile, numerous technologies are already being put to use 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.

If our cars and trucks today met the proposed 54.5 mpg standard, Americans would cut gasoline consumption by 16 billion gallons over the course of this summer, slashing global warming pollution by more than 146 million metric tons and saving consumers over \$64 billion at the gas pump. The average American family would save \$551 in just three months. Not only could families take road trips to their favorite summer destinations without worrying about the impacts of the gasoline they burn along the way, but they could book a hotel for a couple of extra days with the money they would be saving. While all 50 states would experience similar savings, California, Texas, Florida, New York, and North Carolina would see the largest overall reductions in gasoline consumption and global warming pollution. Meanwhile, individual families would be able to save the most

gasoline—as well as the most money—in Wyoming, Mississippi, Montana, North Dakota and North Carolina.

The proposed standards build on the recently finalized light-duty standards for model years 2012-2016, which represented the largest increase in fuel economy in over 30 years and the first-ever global warming tailpipe pollution standards. These standards were first developed based on standards created by California and adopted by 13 other states: Arizona, Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Vermont and Washington.

By requiring the average cars and light trucks to achieve a standard of at least 54.5 mpg miles per gallon by 2025, the administration's new standards would yield major savings beyond just a single summer. The Natural Resources Defense Council projects that even beyond fuel efficiency standards currently in place, the new proposal will cut our oil consumption by 71.4 million gallons of oil per day by 2030. That's as much we currently import from Saudi Arabia and Iraq combined. And that also means cutting 297 million metric tons of carbon pollution for each full year by 2030—the equivalent of the pollution pumped out by 76 coal-fired power plants.⁷ Finalizing these standards will be a resounding victory for American families, dramatically reducing oil consumption, cutting pollution, and yielding cost savings at the pump—not just for one summer, but for years to come.

America has the workforce and the technology ready to build cleaner, more fuel efficient cars that help break our dangerous dependence on oil. We only 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 54.5 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 as well as on other treasured waterways across the country, including the Kalamazoo river and the Yellowstone river. It also 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.⁸

Getting Americans from point A to point B consumes about two-thirds of the nearly 19 million barrels of oil consumed each day in the United States.⁹ 8.5 million of those barrels of oil directly fuel passenger cars and light duty trucks such as SUVs, vans, and pickup trucks, which means reducing our dependence on oil requires building cars and trucks that are much cleaner and more fuel efficient.¹⁰

54.5 mpg – We Have the Technology to Get There

American ingenuity has given us the technology today that can make cars and trucks achieve a 54.5 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.¹¹

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.¹² 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 54.5 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. Automakers are also selling **plug-in electric vehicles** that require no gasoline at all. Electric vehicles like the Chevrolet Volt and Nissan Leaf have rolled into dealerships this past year, and more models will follow if a strong standard is set in place.

Clean Cars Will Cut Oil Consumption

Because 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 54.5 mpg standard, Americans would use roughly 16 billion fewer gallons of gasoline during the summer this year—**that nearly slashes our cars’ expected oil**

consumption in half.

While these reductions in oil use are significant in the scope of a summer, their effect over time would have truly profound benefits for our nation’s energy security, our environment, and our health. Finalizing a 54.5 mpg standard would, in effect, be the single biggest step we have ever taken to get off oil.

Top 10 States for Gasoline and Global Warming Emission Savings

| State | Oil Savings Statewide (gallons) | Global Warming Pollution Reduced Statewide (metric tons CO2) |
|----------------|--|---|
| California | 1,825,886,840 | 16,101,002 |
| Texas | 1,254,152,428 | 11,059,344 |
| Florida | 1,027,012,267 | 9,056,381 |
| New York | 744,731,931 | 6,567,182 |
| North Carolina | 704,002,912 | 6,208,026 |
| Ohio | 619,212,691 | 5,460,330 |
| Illinois | 612,336,087 | 5,399,691 |
| Pennsylvania | 603,464,419 | 5,321,459 |
| Georgia | 568,083,869 | 5,009,467 |
| Michigan | 542,869,655 | 4,787,123 |

Efficient Vehicles Will Save Consumers Money at the Gas Pump

America’s inefficient vehicle fleet combined with rising gasoline prices are costing consumers more money at the pump. Throughout the summer

travel season, our findings project that Americans will spend about \$132 billion at the gas pump. But with a 54.5 mpg standard, we could cut that figure nearly in half, alongside our cuts in oil consumption.

If the cars on the road today met a 54.5 mpg standard, Americans would save over \$64 billion at the gas pump this summer.

Individual families stand to save hundreds of dollars each. The average American family would save about 143 gallons of oil, amounting to \$551 in their pockets by the end of the summer. Not only could they afford a summer road trip to a favorite destination more

easily, but they could book a hotel and stick around for a couple of extra days with the money they have 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

| <i>State</i> | <i>Oil Savings per Household (gallons)</i> | <i>Money Saved per Household</i> |
|----------------|--|----------------------------------|
| Wyoming | 265 | \$1,010.89 |
| Mississippi | 204 | \$750.45 |
| Montana | 197 | \$751.37 |
| North Dakota | 193 | \$726.16 |
| North Carolina | 188 | \$708.67 |
| Oklahoma | 185 | \$697.37 |
| South Dakota | 182 | \$685.09 |
| New Mexico | 180 | \$664.90 |
| Vermont | 178 | \$703.97 |
| Indiana | 175 | \$656.77 |

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. President Obama officially announced his proposal for a 54.5 mpg standard in November 2011, and the rule is scheduled to be finalized in the coming months. By making new cars and light trucks meet standards that achieve at least 54.5 mpg by 2025, the administration would be helping Americans save 71.4 million gallons of oil a day, leading to savings across the country of \$68 billion a year, even accounting for the costs of adopting new technologies.¹⁴

Strong clean cars standards enjoy overwhelming public support. More than 74 percent of likely voters polled in 2010

favor increasing fuel efficiency standards for cars and light trucks to as much as 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 standards to achieve 54.5 mpg when they are informed that fuel-saving technologies would pay for themselves with savings at the pump within four years.¹⁵

Conclusion

It is abundantly clear that we are spending too much money at the pump, and jeopardizing our environment as well as our families' finances 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 54.5 miles per gallon by 2025.

Methodology

We obtained state-by-state data on total vehicle miles travelled (VMT) for June, July and August of 2011 from U.S. Department of Transportation, Federal Highway Administration, *Traffic Volume Trends*. We adjusted this total VMT figure to reflect the fact that, nationally, light-duty vehicles account for approximately 89.25% percent of miles driven, per U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2010, Table VM-1*, February 2012.

We calculated state-by-state gasoline consumption that would result from current fuel efficiency standards in comparison to a scenario in which light-duty vehicles had to meet a standard of 54.5 mpg, applying the on-road fuel efficiency of the current mixed fleet of light-duty vehicles as reported in the Energy Information Administration *Annual Energy Outlook 2012*, January 2012. We based the on-road fuel efficiency of vehicles adhering to a 54.5 mpg standard on an analysis performed by the Union of Concerned Scientists, "Translating Auto Standards into On-Road Fuel Efficiency," September 2011. 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 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. This data does not account for some additional global warming pollution reductions that would occur beyond tailpipe emissions from the proposed 54.5 mpg standard, such as those resulting from credits for improved air conditioning systems.

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*, 7 May 2012.

To calculate 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 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, *2010 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 - Gasoline and global warming emission savings with vehicles at 54.5 mpg standard, summer 2012.

| State | Oil Savings Rank | Oil Savings per Household (gallons) | Oil Savings Statewide (gallons) | Global Warming Pollution Reduced Statewide (metric tons CO2) | Money Saved Statewide | Money Saved per Household |
|---------------|-------------------------|--|--|---|------------------------------|----------------------------------|
| Alabama | 12 | 166 | 312,524,657 | 2,755,899 | \$1,151,653,361 | \$611.35 |
| Alaska | 47 | 118 | 30,392,890 | 268,010 | \$127,224,639 | \$493.01 |
| Arizona | 36 | 135 | 320,802,050 | 2,828,891 | \$1,342,877,383 | \$564.00 |
| Arkansas | 16 | 161 | 184,479,750 | 1,626,776 | \$679,807,879 | \$592.64 |
| California | 29 | 145 | 1,825,886,840 | 16,101,002 | \$7,776,452,051 | \$618.28 |
| Colorado | 41 | 128 | 251,547,860 | 2,218,195 | \$973,490,217 | \$493.44 |
| Connecticut | 39 | 129 | 177,348,457 | 1,563,891 | \$699,994,361 | \$510.54 |
| D.C. | 51 | 73 | 19,420,038 | 171,249 | \$75,524,528 | \$283.17 |
| Delaware | 13 | 165 | 56,647,084 | 499,524 | \$220,300,509 | \$643.59 |
| Florida | 35 | 138 | 1,027,012,267 | 9,056,381 | \$3,870,809,233 | \$521.62 |
| Georgia | 18 | 158 | 568,083,869 | 5,009,467 | \$2,141,676,186 | \$597.30 |
| Hawaii | 48 | 115 | 52,168,802 | 460,034 | \$218,378,604 | \$479.60 |
| Idaho | 17 | 160 | 92,728,029 | 817,693 | \$353,201,062 | \$609.59 |
| Illinois | 42 | 127 | 612,336,087 | 5,399,691 | \$2,302,996,023 | \$476.12 |
| Indiana | 10 | 175 | 436,940,245 | 3,853,019 | \$1,643,332,263 | \$656.77 |
| Iowa | 25 | 148 | 180,298,605 | 1,589,906 | \$678,103,054 | \$555.11 |
| Kansas | 26 | 147 | 163,743,819 | 1,443,923 | \$615,840,502 | \$553.77 |
| Kentucky | 28 | 147 | 253,224,563 | 2,232,980 | \$952,377,580 | \$553.72 |
| Louisiana | 31 | 141 | 243,610,052 | 2,148,198 | \$897,703,041 | \$519.40 |
| Maine | 24 | 148 | 82,625,364 | 728,605 | \$326,122,313 | \$585.27 |
| Maryland | 27 | 147 | 317,491,093 | 2,799,694 | \$1,234,722,861 | \$572.58 |
| Massachusetts | 43 | 121 | 308,852,890 | 2,723,521 | \$1,195,878,391 | \$469.51 |
| Michigan | 33 | 140 | 542,869,655 | 4,787,123 | \$2,041,732,774 | \$527.24 |
| Minnesota | 19 | 158 | 329,779,838 | 2,908,059 | \$1,216,228,044 | \$582.70 |
| Mississippi | 2 | 204 | 227,225,058 | 2,003,712 | \$837,324,338 | \$750.45 |
| Missouri | 14 | 164 | 388,549,331 | 3,426,299 | \$1,461,334,033 | \$615.14 |
| Montana | 3 | 197 | 80,800,093 | 712,510 | \$307,767,554 | \$751.37 |
| Nebraska | 15 | 162 | 116,838,590 | 1,030,304 | \$439,429,937 | \$609.36 |
| Nevada | 49 | 109 | 109,304,040 | 963,863 | \$457,546,710 | \$454.70 |
| New Hampshire | 30 | 145 | 75,281,831 | 663,849 | \$297,137,386 | \$572.55 |
| New Jersey | 44 | 121 | 389,568,087 | 3,435,282 | \$1,515,030,290 | \$471.33 |
| New Mexico | 8 | 180 | 142,795,646 | 1,259,198 | \$526,201,957 | \$664.90 |
| New York | 50 | 102 | 744,731,931 | 6,567,182 | \$3,019,887,982 | \$412.68 |

| | | | | | | |
|----------------|----|-----|----------------|-------------|------------------|------------|
| North Carolina | 5 | 188 | 704,002,912 | 6,208,026 | \$2,654,090,977 | \$708.67 |
| North Dakota | 4 | 193 | 54,291,210 | 478,750 | \$204,189,242 | \$726.16 |
| Ohio | 37 | 135 | 619,212,691 | 5,460,330 | \$2,351,150,586 | \$510.74 |
| Oklahoma | 6 | 185 | 270,798,105 | 2,387,947 | \$1,018,471,674 | \$697.37 |
| Oregon | 38 | 134 | 203,284,290 | 1,792,598 | \$850,948,036 | \$560.23 |
| Pennsylvania | 45 | 120 | 603,464,419 | 5,321,459 | \$2,346,873,126 | \$467.61 |
| Rhode Island | 46 | 120 | 49,706,808 | 438,324 | \$196,192,771 | \$474.35 |
| South Carolina | 21 | 149 | 268,887,938 | 2,371,103 | \$1,013,707,524 | \$562.80 |
| South Dakota | 7 | 182 | 58,705,820 | 517,679 | \$220,792,589 | \$685.09 |
| Tennessee | 20 | 157 | 391,605,599 | 3,453,249 | \$1,472,828,658 | \$590.65 |
| Texas | 32 | 141 | 1,254,152,428 | 11,059,344 | \$4,625,314,156 | \$518.36 |
| Utah | 11 | 172 | 151,221,608 | 1,333,500 | \$576,003,106 | \$656.27 |
| Vermont | 9 | 178 | 45,737,904 | 403,325 | \$180,527,507 | \$703.97 |
| Virginia | 22 | 149 | 454,556,236 | 4,008,360 | \$1,713,677,011 | \$560.75 |
| Washington | 40 | 129 | 336,911,131 | 2,970,944 | \$1,396,496,638 | \$533.00 |
| West Virginia | 34 | 140 | 106,778,373 | 941,591 | \$402,554,468 | \$527.02 |
| Wisconsin | 23 | 149 | 338,736,402 | 2,987,039 | \$1,273,987,610 | \$558.82 |
| Wyoming | 1 | 265 | 60,212,730 | 530,967 | \$229,350,289 | \$1,010.89 |
| | | | | 0 | | |
| TOTAL | | 143 | 16,638,176,017 | 146,718,461 | \$64,325,243,015 | \$551.12 |

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- ⁸ World Resources Institute, *Reducing Greenhouse Gas Emissions in the United States: Using Existing Federal Authorities and State Action*, July 2010.
- ⁹ See note 2.
- ¹⁰ See note 3.
- ¹¹ Union of Concerned Scientists and Natural Resources Defense Council, *The Road Ahead: The Benefits of Strong Fuel Efficiency and Pollution Standards for New Cars and Trucks*, September 2010.
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- ¹⁵ The Mellman Group, *Poll: Voters Overwhelmingly Support Stricter Fuel Efficiency Standards*, 15 September 2010.