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SAVING MONEY AT THE GAS PUMP

State-by-State Consumer Savings from Stronger Fuel Efficiency and Carbon Pollution Standards

Making our cars and trucks go farther on a gallon of gasoline is a powerful way to save Americans money at the gas pump, reduce carbon pollution, and cut oil dependence. Fuel-saving technology, such as more efficient engines, smarter transmissions, better aerodynamics, and high-strength light-weight materials can make all vehicles get better fuel efficiency and emit less tailpipe carbon pollution.

Raising Fuel Efficiency Standards to 60 MPG by 2025

Right now, we have an opportunity to strengthen fuel efficiency and carbon pollution standards for new vehicles sold in the United States. In May, President Obama directed the U.S. Department of Transportation (DOT) and Environmental Protection Agency (EPA) to establish joint fuel efficiency and pollution standards for new cars and trucks. Specifically, the agencies will establish new Corporate Average Fuel Economy and carbon pollution standards, respectively, for light-duty vehicles—a category that includes cars, SUVs, minivans, and most pickup trucks— through model year 2025.

Using a combination of existing and emerging fuel-saving technology, analysis suggests that automakers can achieve new fuel efficiency standards of at least 60 miles-per-gallon (mpg) in model year 2025 and no more than 143 grams-per-mile of greenhouse gas pollution. This means that the average new car and truck sold in 2025 would achieve 60 mpg, although since this is a fleetwide average, some vehicles would have higher fuel efficiency and some would be lower.

Raising fuel efficiency standards to 60 mpg in model year 2025 would deliver significant economic, environmental, and national security benefits. It would save 44 billion gallons of oil in 2030 and reduce heat-trapping carbon pollution by 465 million metric tons – the equivalent of taking nearly 70 million vehicles off the road.

State by State Consumer Savings at the Gas Pump

In addition to the oil savings and clean air benefits, increasing the fuel efficiency of new vehicles means that American consumers will spend less at the gas pump. Even after accounting for the cost of the additional fuel-saving technology, consumers still have significant net benefits. In fact, for most consumers who finance the purchase of a new vehicle, the fuel savings will be greater than the

additional cost of the loan from the moment they drive off the lot. The net consumer savings by both State and household are show in the following table:

Table 1: Consumer Savings by State and Household on Transportation Fuel Bills in 2030

State	Fuel Savings (million gallons)	Total State Fuel Bill Net Savings ($ millions)	Fuel Bill Net Savings per Household
Alabama	596	$1,293	$679
Alaska	103	$259	$845
Arizona	1288	$3,005	$757
Arkansas	425	$983	$778
California	5300	$13,373	$848
Colorado	724	$1,640	$734
Connecticut	440	$1,041	$739
Delaware	124	$277	$719
District of Columbia	60	$139	$737
Florida	3642	$8,347	$734
Georgia	1413	$3,197	$724
Hawaii	164	$413	$847
Idaho	232	$532	$745
Illinois	1493	$3,199	$644
Indiana	786	$1,691	$646
Iowa	330	$650	$560
Kansas	322	$652	$575
Kentucky	561	$1,232	$687
Louisiana	598	$1,366	$767
Maine	179	$427	$745
Maryland	841	$1,907	$726
Massachusetts	842	$2,002	$742
Michigan	1224	$2,624	$644
Minnesota	690	$1,402	$577
Mississippi	356	$786	$691
Missouri	716	$1,452	$576
Montana	135	$304	$732
Nebraska	201	$403	$569
Nevada	522	$1,226	$762
New Hampshire	197	$473	$748
New Jersey	1219	$3,084	$864
New Mexico	254	$579	$740
New York	2472	$6,271	$866
North Carolina	1523	$3,494	$734
North Dakota	69	$136	$561
Ohio	1359	$2,880	$637
Oklahoma	512	$1,172	$770

Oregon	**633**	**$1,615**	**$857**
Pennsylvania	**1695**	**$4,264**	**$859**
Rhode Island	**140**	**$335**	**$746**
South Carolina	**630**	**$1,428**	**$726**
South Dakota	**87**	**$174**	**$566**
Tennessee	**906**	**$2,002**	**$691**
Texas	**3971**	**$9,221**	**$781**
Utah	**355**	**$809**	**$739**
Vermont	**88**	**$208**	**$741**
Virginia	**1199**	**$2,717**	**$725**
Washington	**1117**	**$2,840**	**$854**
West Virginia	**224**	**$505**	**$721**
Wisconsin	**718**	**$1,538**	**$644**
Wyoming	**67**	**$148**	**$720**
U.S. Aggregate	**43,700**	**$101,718**	**$748**

Methodology: Calculating Consumer Fuel Savings

The bulk of the average American household's transportation costs come from owning and operating personal vehicles, such as cars, minivans, SUVs, and pickup trucks. We calculate the savings to households in 2030 by taking the difference in the cost of driving a fleet made up primarily of vehicles that meet fuel efficiency standards established through model year 2016[1] (*base case*) and the cost of purchasing and driving more efficient vehicles that reach a fleet average of 60 mpg (*higher efficiency case*).

The cost of driving is simply the product of fuel consumption and fuel prices, which includes prices for both gasoline and electricity used for electric vehicle charging. For both the base and higher efficiency vehicle cases, we start with gasoline prices as projected by DOE's Energy Information Administration (EIA). When calculating the transportation cost of the more efficient fleet, however, we adjust the cost to include a modest fuel price decrease because a reduction in U.S. oil demand puts downward pressure on world oil prices, and therefore state gas prices. It should be noted that, even without the cost-reduction effect, all states have substantial net savings.

Fuel consumption for the base and higher efficiency cases is determined by dividing EIA mileage projections by projections of on-road vehicle efficiency (in miles per gallon and kWh per mile), which come out of a national vehicle stock turnover model. For this analysis, the 2030 national consumption is then allocated to states in proportion to state-level household projections. State-level fuel costs are calculated by multiplying a state's consumption by the gasoline prices for that state's region. We also calculate the use of electricity for a modest penetration of electric drive vehicles and multiply it by a national average electricity price. Finally, average state household costs are determined by dividing state costs by 2030 household projections from Census data.

[1] EPA/NHTSA Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for MY2012-MY2016 finalized on April 1, 2010.

Detailed Assumptions

Fuel Prices

State gasoline prices for the *base* case are assumed to equal the regional prices for the region in which the state is located, as reported by EIA's Annual Energy Outlook 2010.[2] In the *higher efficiency* case, those *base* case gasoline prices are adjusted downward to reflect the fact that changes in U.S. oil demand can affect world oil prices and therefore U.S. gasoline prices. Today, the U.S. consumes nearly a quarter of world daily production and a reduction in demand from driving more efficient vehicles will lower worldwide demand and therefore oil prices. We adopt the EPA/NHTSA estimates that the drop in fuel prices due to the new standards is equivalent to $0.28 per gallon.[3] However, as mentioned above, even with this price reduction excluded from the analysis, households in all states still save money on their monthly fuel bills in 2020.

For electricity, we adopt the 2030 national average cost of $0.11/kWh as projected by EIA. In many cases, the prices could be lower as utilities implement special off-peak charging rates for electric vehicles.

Vehicle Costs

The technology to make more efficient vehicles increases the price of the vehicles. For the higher efficiency case, we assume that MY 2025 – MY 2030 vehicles reaching a fleet average of 60 mpg will cost approximately $2670 more than vehicles that reach the MY 2016 35.5 mpg standard in the base case. We include sales tax and insurance premiums to the incremental cost of the higher efficiency vehicles using EPA estimates.[4] We also assume that the incremental cost is not paid for entirely upfront but is included in a 5-year loan with a 7 percent interest rate. We allocate the more efficient vehicle incremental costs to individual states according to an estimate of new vehicles sales in each state in 2030. We use the EIA AEO 2010 projection of national sales and assign each state a share of the sales according its projected fraction of national households in 2030.

For Further Information:

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[2] Available at http://www.eia.doe.gov/oiaf/aeo/index.html. Using motor gasoline retail prices.
[3] EPA/NHTSA MY2012-2016 Final Rule, Table III.H.8-1. Assumes 42 gallons per barrel.
[4] EPA/NHTSA MY2012-2016 Final Rule, Tables I.C.2-6 and III.H.5-3.