

You Can Have My Guns But Not My Horses

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About
Us

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For probably the vast majority of the auto purchasing population, the definition of a “good” car is one that gets you from point A to point B in the most efficient, safe and reliable way possible. It helps if it looks good, but that seems to be less important and highly subjective (see the [top-selling cars in the U.S.](#) as evidence).

For a minority of us who crave speed, we smiled knowingly when Tom Cruise said “I feel the need... the need for speed!” before jumping into his F-14 Tomcat (Mach 2.5 – 1,544 mph, 0 to 195 mph in 2.8 seconds). And Mario Andretti, the famous auto racer, once said, “If everything seems under control, you’re not going fast enough.” (An unfortunate observation, but too often quite accurate analysis of the aftermath of a car wreck). And Aldous Huxley opined, “Speed provides the one genuinely modern pleasure.”

EPA and the American Icon

America has, from the earliest days, had a love affair with cars and guns. (Ironically and tragically, the cause of death rates for each is often compared by both camps pursuing auto and/or gun safety. In 2014, deaths caused by guns [surpassed autos](#) as the prime cause of deaths in America for the first time).

In the 1960s and 70s, most male (and no doubt quite a few female) adolescents, waiting to get their driver’s license, drooled over the muscle cars of this era: the Pontiac GTO, the Mustang GT 289, the Chevy Corvette, Plymouth Road Runner Hemi and of course the Shelby Cobra (These same adolescents, upon getting their driver’s licenses, continually ran out of gas because they would only put a few dollars’ worth in the tank because gas was so expensive — speaking for myself).

From the movies, the imagery of Steve McQueen in Bullitt, driving (and leaping) his 1968 Ford Mustang 390 GT through the streets of San Francisco, is indelibly etched in the mind; the dragsters from American Graffiti cruising the streets of Fresno; the 1981 DeLorean DMC-12 in Back to the Future; and of course all the Bond films. Musical odes to cars and speed, such as Commander Cody and his [Lost Planet Airmen’s Hot Rod Lincoln](#); The Beach Boys’ [Little Deuce Coupe](#) and [409](#); Prince’s [Little Corvette](#); and Chuck Berry’s [Maybellene](#) all documented our love of cars and speed. We’ve had a “jones” for fast cars since before the Model T.

Automotive Industry Versus the EPA

So where forth comes the temerity of the EPA to tamper with our deep-seated relationship with our cars and love of speed by imposing stringent minimum mileage requirements that threaten this love affair?

Once again, if the automotive industry is to be believed, the EPA’s most recently mandated CAFE standards, passed under the Obama administration for 2025, will wreak havoc upon the industry, erode auto sales, put people out of jobs, force them to produce cars that no one wants and depress the economy. The automotive industry, believing they will find a more sympathetic ear with Scott Pruitt, the newly appointed head of the EPA (and climate change denier), recently sent a letter to the EPA requesting that they reconsider and withdraw the Obama-era ruling regarding future emission and mileage standards, as outlined in the EPA’s “Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation.” If Mr. Pruitt and the EPA acquiesces, it will be a sad day for the automotive buying public, especially for those of us who have come to expect continuing improvements in performance from auto manufacturers.

Simply put, the EPA is once again challenging the automotive industry to increase automotive efficiencies by bringing Corporate Average Fuel Economy (CAFE) standards up to 54.5 miles per gallon (mpg) by 2024, from the current 2016 standard of 34.1 mpg.



A 1969 Pontiac GTO — one of the original muscle cars. (Photo: Greg Gjerdingen / Flickr)

In their letter, the automotive industry reiterated its time-worn prospect of doom and gloom should these new CAFE standards be implemented, citing them as impractical and technically impossible to obtain “without heavy reliance upon electrification and hybrid technologies” (this is a somewhat new argument). They claim new CAFE standards will raise the cost of automobiles to the consumer, which will depress auto sales, resulting in loss of jobs and adversely affecting the American economy.

It is a similar argument made by the industry when confronted with implementation of the first CAFE standards mandated under the Energy Policy and Conservation Act of 1975. At the time, the industry made the claim that, should the mandate go into effect, the only autos they could sell would be “sub-Pinto size” and that the only place you would see a light truck would be a museum. Interestingly, these mandates did not precipitate the industry’s premonitions and forewarnings. Their loss of market share was mainly attributable to the industry’s lack of innovation and competitiveness with the auto industries of Japan and Europe.

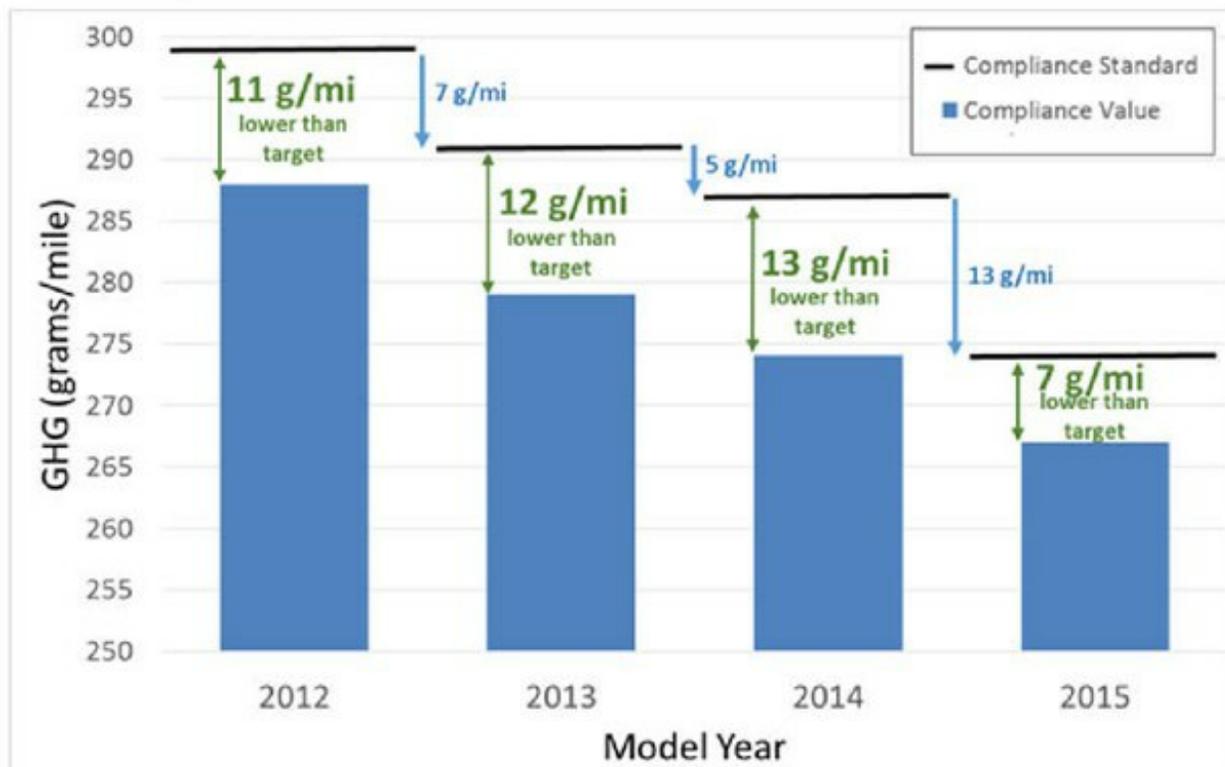
American Auto Industry in Crisis

The 1970s was a period of crisis in the American auto industry. Precipitated by the increase in the price of oil, when the Organization of Petroleum Exporting Countries (OPEC) began restricting oil production. The price of oil surged from \$20 per barrel in 1970, to \$45 in 1975, and to over \$100 in 1981 (2015 dollars). All the while, the American auto industry was still producing large, gas guzzling vehicles. Failure of the industry to anticipate customer demand for more efficient automobiles arising from this increase in fuel costs enabled the Japanese and European manufacturers, who were manufacturing smaller, more fuel efficient autos, to make significant inroads into the U.S. markets. Sales for Toyota, Nissan (formerly Datsun) and Honda rose from a million in 1978 to almost 1.5 million in 1982. Over a similar period, Ford sales dropped 47 percent, from 2.5 million in 1978 to 1.4 million in 1982. A 1973 VW Beetle could get 27 or more mpg, a Datsun B210 over 35 mpg. The bestselling car in America at the time was the Ford Galaxie, which got between 10 to 15 mpg.

EPA Tries to Save the Industry From Itself

The U.S. government, originally through the EPA, and subsequently, since 1986, with the National Highway Transportation Safety Administration (NHTSA), sought to force American car manufacturers to make more efficient automobiles. Before the original CAFE standards took effect, the average fuel economy for an American passenger car was 15.2 mpg. In the Energy Policy and Conservation Act of 1975, Congress required manufacturers to meet a “fleet” average of 18 mpg by 1978, 20 mpg by 1980, and 27.5 mpg by 1985.

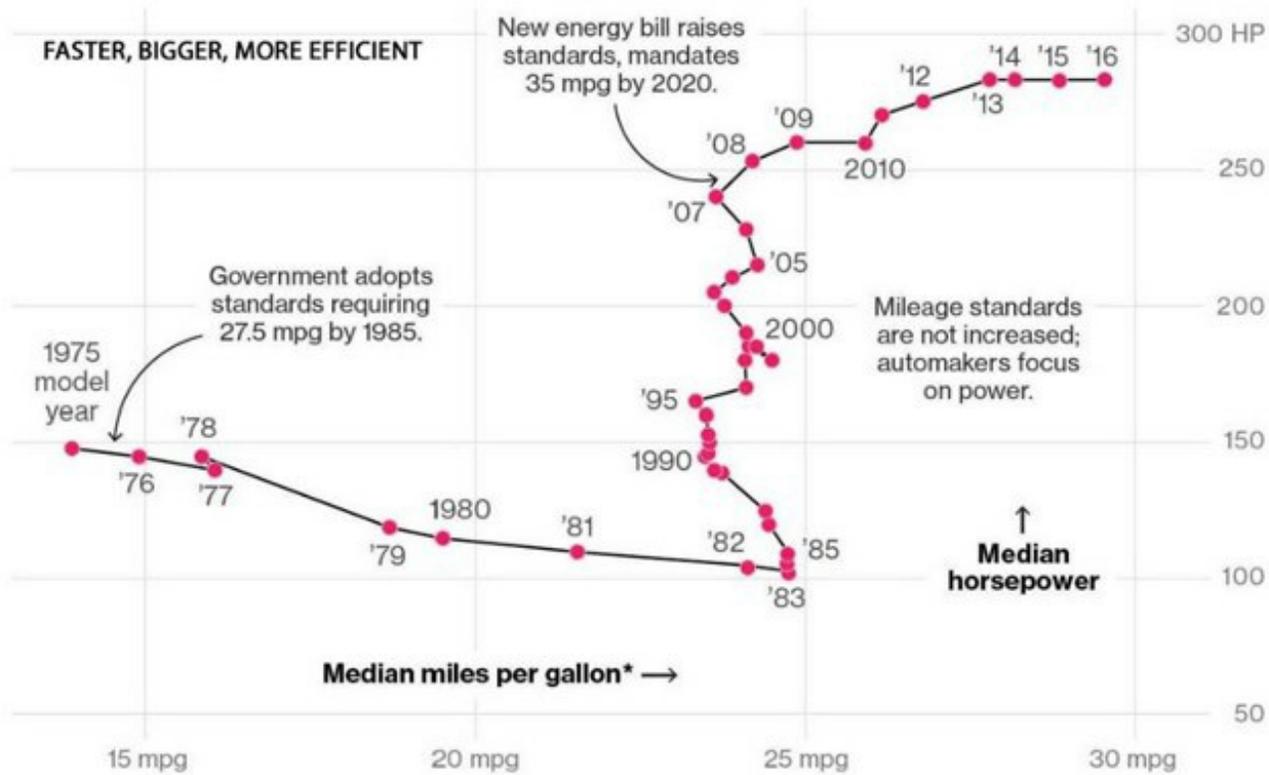
Industry Compliance Values versus Standards in 2012-2015 Model Years



Source: U.S. EPA

Ironically, after complaining that the CAFE standards were too difficult to meet within the timeframe given, the industry miraculously achieved the targeted numbers earlier than mandated, and have ever since CAFE standards came into existence.

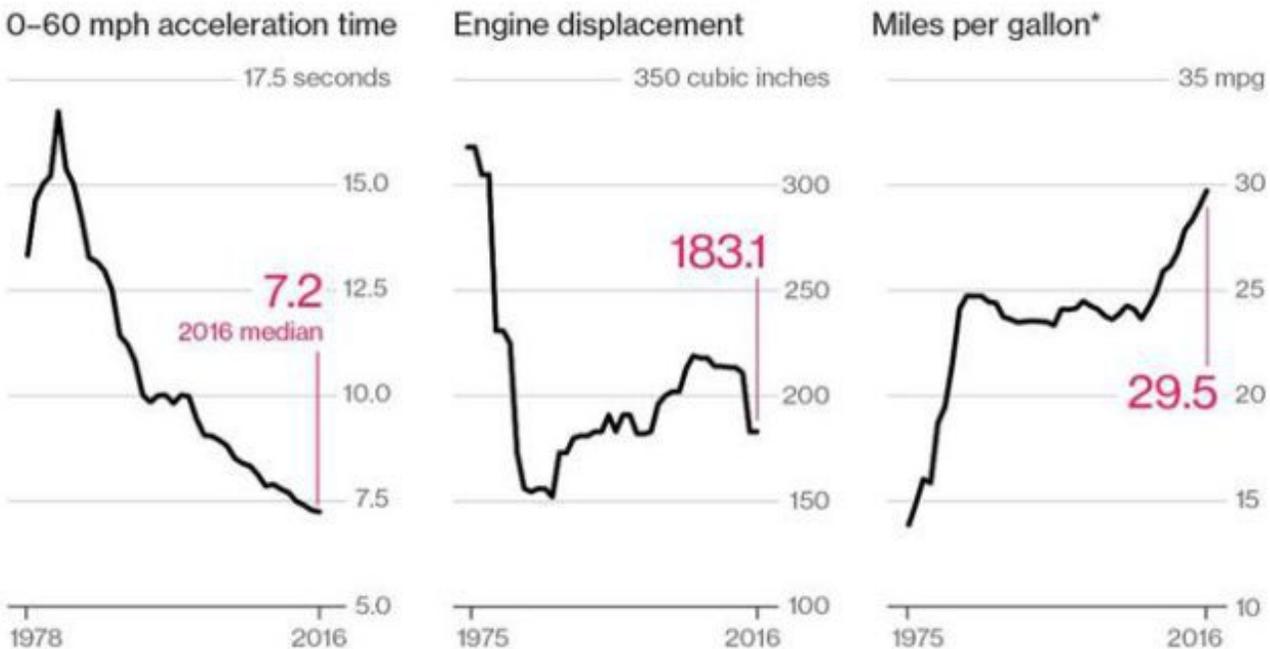
Efficiency, Speed and Power



*Unadjusted laboratory fuel economy figures, weighted 55% city and 45% highway.
Source: Office of Transportation and Air Quality, EPA

Bloomberg

Median value of production vehicles tested by EPA, by model year



*Unadjusted laboratory fuel economy figures, weighted 55% city and 45% highway.
Source: Office of Transportation and Air Quality, EPA

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So how did implementation of these CAFE standards affect our junkie fix for speed? The muscle cars of the 1960s and 70s would go from 0 to 60 mph in under 5.5 seconds. Average fuel economy was in the range of 9 to 12 miles per gallon. In the 1970s, the average 0 to 60 mph times for these cars increased to a bit over 5.5 seconds. By the

1980s, 0 to 60 speeds were once again under 5 seconds (though most of the really fast cars were coming from Europe). By the 1990s, Car & Driver's 10 Quickest Cars all did 0 to 60 mph in 4 seconds or under. The answer to the question posed in the first sentence: not much to not at all. Horsepower increased, cars got faster and fuel economy improved.

A Debt of Gratitude to the EPA

Today's fastest true production car from 0 to 60 mph is the Tesla Model S, an all electric vehicle. It can accomplish this in 2.28 seconds. Watch a 2015 Tesla P90 versus a 2015 Corvette Z06 in the ¼ mile (both cost approximately \$80,000):

The Tesla's competitors in acceleration are primarily limited edition Bugattis, Lamborghinis, Ferraris and Porsches — cars that will set you back well over \$150,000. Since implementation of the CAFE standards, median 0 to 60 mph averages have gone from 15 seconds to 7.2 seconds.

The 1989 top of the line Corvette, producing 240 HP, with average mileage of 15 city, 22 highway, goes 0 to 60 mph in 5.5 seconds, with a top speed of 150 mph. The top of the line 2016 Corvette with 650 HP will do 0 to 60 in 3 seconds, with a top speed of 195 mph, and an EPA mileage rating of 15 city, 26 highway. According to the EPA, a 1989 Corvette emitted 494 grams per mile of greenhouse gases (GHG). The 2016 Corvette emits 477 grams of GHG per mile.

Today's performance cars can easily match the 0 to 60 mph of the earlier muscle cars. But they are able to do this getting EPA mileage rating of 17 city to 25 highway, twice that of what the muscle cars of the 1960s and 70s did, while emitting fewer greenhouse gas emissions.

Post-1975 mandates precipitated adoption of innovation such as electronic engine control, fuel injection, variable valve timing, turbo chargers and other technologies which improved not just mileage, but performance. Without the EPA mandates, many of these improvements and innovations might not have been introduced for decades, if the U.S. auto industry's history of adoption of new technologies is any indicator. EPA CAFE standards have [forced the industry to innovate](#) in areas which they may not necessarily have innovated had they not been challenged, and the result has been higher performance cars in all areas.

Without the CAFE standards, I doubt we would have the electric or hybrid automobiles now available, nor do I believe would we have the number of cars that are affordable (under \$30,000) and that can go from 0 to 60 mph in under 6 seconds — formidable competition for the muscle cars of the 1960s and 1970s. And we might not have the super cars that can go from 0 to 60 mph in under 3 seconds.

An important footnote to the ability of the automotive industry to so drastically increase horsepower while maintaining or increasing fuel economy: From 1980 to 2004, the average horsepower of new cars increased by 80 percent, while fuel economy increased by just 6.5 percent (light duty trucks' horsepower increase by almost 100%). Most of the scholarly studies of the automotive industry and fuel economy arrive at the same conclusion, that obtaining the CAFE mileage targets of 54.5 miles per gallon (mpg) by 2024 are obtainable, providing the industry stops obsessing over increasing horsepower and reducing 0 to 60 mph times.

The auto industry will always want to cater to the speed-obsessed buyer because it's good for marketing, but the vast majority of the buying public is looking for good basic transportation — a car that gets you from point A to point B in the most efficient, safe and reliable way possible. And there will always be people like my friend Paul Giraud. When I asked him what sort of mileage his newly purchased, twin-turbo Porsche Carrera got, he responded, "I have no f***** idea."

FOOTNOTE:

Below are a number of scholarly studies of how meeting the EPA emission and CAFE standards have forced and

accelerated innovation in the automotive industry.

- <http://ageconsearch.umn.edu/bitstream/206195/2/CAFEpaperAAEA2015.pdf>
- <http://faculty.washington.edu/dwhm/wp-content/uploads/2016/02/MacKenzie-CAFE-Standards-and-Technology-Change.pdf>
- http://web.mit.edu/knittel/www/papers/steroids_latest.pdf

Peter Banner, a founding member of the California-based Independent Energy Producers Association (IEP), has over 35 years of experience in the renewable energy and demand side management fields. His areas of expertise in renewables include solar, wind, biomass and small hydro.

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