

UC Berkeley

ACCESS Magazine

Title

THE Access Almanac: The CAFE Standards Worked

Permalink

<https://escholarship.org/uc/item/9vd48739>

Author

Glazer, Amihai

Publication Date

1994-10-01

The CAFE Standards Worked

Cars manufactured in the United States have become increasingly fuel efficient in the past two decades, and many people attribute that to rising gasoline prices. From 1975 to 1985, following the 1973 oil embargo, the fuel efficiency of new cars increased by more than 60 percent. What's surprising, however, is that fuel efficiency continued to remain high even when gasoline prices declined, even falling below prices in 1970.

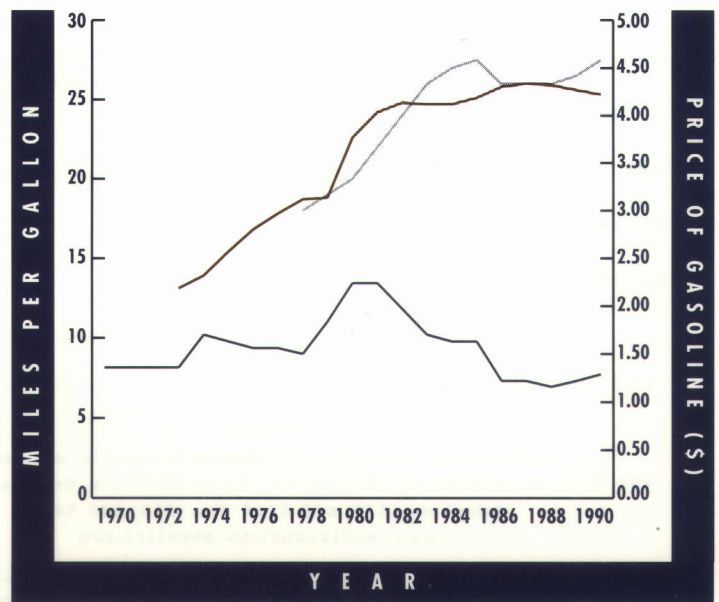
Why didn't we see a return of the gas guzzlers?

It seems that the Energy Policy and Conservation Act worked, just as Congress intended. It mandated minimum corporate average fuel economy (CAFE) standards for all new cars sold in the United States. Each automobile manufacturer was essentially required to double the fuel efficiency of its cars. Despite vehement industry opposition, the standards were largely met. (See Figure 1.)

With that dramatic improvement, American cars are almost as fuel efficient as cars sold in Japan and Europe, where fuel efficiency has always been higher. Fuel efficiency is improving abroad, too, but at a slower rate. (See Table 1.) American car owners can be happy that the price of gasoline here is considerably lower than elsewhere, lower than it was before the oil embargo, and taxes are a small proportion of the price. (See Table 2.)

—Amihai Glazer

FIGURE 1
US Fuel Economy



FUEL ECONOMY OF NEW CARS _____
CAFE STANDARDS _____
PRICE OF GASOLINE (1994 \$ US) _____

FUEL ECONOMY (MILES PER GALLON)

| YEAR | UNITED STATES | | JAPAN | | FRANCE | | WEST GERMANY | | ITALY | | UNITED KINGDOM |
|---|---------------|----------|----------|----------|----------|----------|--------------|----------|----------|----------|----------------|
| | All Cars | New Cars | All Cars | New Cars | All Cars | New Cars | All Cars | New Cars | All Cars | New Cars | All Cars |
| 1970 | 12.6 | - | 21.7 | - | 27.8 | - | 23.1 | - | - | - | 23.5 |
| 1971 | 12.6 | - | 20.7 | - | 27.8 | - | 22.1 | - | - | - | 23.4 |
| 1972 | 12.5 | - | 21.9 | - | 27.8 | - | 21.5 | - | - | - | 22.0 |
| 1973 | 12.4 | 13.1 | 21.3 | 22.6 | 27.0 | - | 22.0 | 23.0 | 27.9 | - | 21.8 |
| 1974 | 12.6 | 13.9 | 21.0 | 22.1 | 27.8 | - | 22.3 | - | - | - | 21.9 |
| 1975 | 12.7 | 15.4 | 21.4 | 21.2 | 27.4 | 27.7 | 22.0 | - | - | - | 22.6 |
| 1976 | 12.7 | 16.8 | 21.2 | 22.6 | 26.4 | 28.2 | 21.9 | - | - | - | 22.7 |
| 1977 | 12.9 | 17.8 | 21.0 | 24.9 | 26.6 | 28.5 | 21.7 | - | - | - | 22.5 |
| 1978 | 13.1 | 18.7 | 20.8 | 26.6 | 26.2 | 28.7 | 21.5 | 25.1 | - | - | 22.1 |
| 1979 | 13.4 | 18.8 | 20.4 | 27.3 | 26.6 | 29.1 | 21.8 | 25.4 | 27.9 | - | 21.6 |
| 1980 | 14.3 | 22.6 | 20.4 | 28.2 | 25.8 | 30.4 | 21.6 | 26.7 | 27.9 | 28.4 | 22.7 |
| 1981 | 14.7 | 24.2 | 20.8 | 28.9 | 25.6 | 31.9 | 21.7 | 28.2 | 28.1 | 28.8 | 23.6 |
| 1982 | 15.3 | 24.8 | 21.1 | 30.6 | 25.4 | 33.1 | 21.7 | 29.1 | 28.1 | 29.6 | 23.8 |
| 1983 | 15.7 | 24.7 | 21.1 | 30.1 | 25.4 | 33.7 | 21.7 | 29.3 | 28.4 | 31.9 | 23.8 |
| 1984 | 16.2 | 24.7 | 21.5 | 30.1 | 25.7 | 34.5 | 21.7 | 31.4 | 28.9 | 32.9 | 23.8 |
| 1985 | 16.5 | 25.1 | 21.9 | 29.2 | 25.9 | 35.1 | 21.7 | 32.0 | 29.1 | 32.9 | 24.2 |
| 1986 | 16.5 | 25.8 | 22.0 | 28.2 | 26.0 | 35.3 | 21.7 | 32.8 | 29.6 | 33.8 | 24.2 |
| 1987 | 17.1 | 26.0 | 22.4 | 27.8 | 26.3 | 35.7 | 21.9 | 31.8 | 30.0 | 34.3 | 24.5 |
| 1988 | 17.8 | 25.9 | 22.5 | 27.3 | 26.2 | 36.1 | 22.1 | 30.5 | 30.3 | 34.3 | 25.0 |
| 1989 | 18.2 | 25.6 | 22.5 | 26.8 | 26.6 | 36.3 | 22.5 | 30.0 | 30.1 | - | 25.8 |
| 1990 | 18.6 | 25.3 | 22.3 | 27.1 | 26.7 | 36.3 | 22.7 | 30.0 | 30.1 | - | 25.6 |
| Change (1970-90 or nearest years) | 48% | 93% | 3% | 20% | -4% | 31% | -2% | 30% | 8% | 21% | 9% |

TABLE 1

Note: Each country may use different methods for calculating new car fuel economy. Only approximate comparison can be made across countries. Data were generated for international comparison and are not comparable with other domestic fuel economy measures.

Source: *Transportation Energy Data Book*, 14th Edition, Stacy C. Davis, ed., Oak Ridge National Laboratory, May 1994, Tables 1.5 and 1.6.

GASOLINE PRICES PER GALLON

| YEAR | UNITED STATES | | JAPAN | | FRANCE | | WEST GERMANY | | ITALY | | UNITED KINGDOM | |
|---|---------------|------|-------|------|--------|------|--------------|------|-------|------|----------------|------|
| | Price | Tax | Price | Tax | Price | Tax | Price | Tax | Price | Tax | Price | Tax |
| 1970 | 1.36 | 0.42 | 1.36 | 0.78 | 2.99 | 2.22 | 2.24 | 1.66 | 3.81 | 3.02 | 3.13 | 2.26 |
| 1971 | 1.36 | - | 1.36 | - | 2.86 | - | 2.24 | - | 3.60 | - | 3.06 | - |
| 1972 | 1.36 | 0.39 | 1.36 | 0.69 | 2.79 | 2.01 | 2.18 | 1.60 | 4.01 | 3.14 | 2.86 | 1.96 |
| 1973 | 1.36 | 0.41 | 1.36 | 0.69 | 2.65 | 2.05 | 2.11 | 1.29 | 3.60 | 2.71 | 2.72 | 1.74 |
| 1974 | 1.70 | 0.33 | 1.70 | 0.56 | 3.33 | 2.04 | 2.45 | 1.25 | 3.81 | 2.41 | 2.72 | 1.42 |
| 1975 | 1.63 | 0.33 | 1.63 | 0.54 | 3.13 | 1.88 | 2.52 | 1.31 | 4.89 | 3.35 | 3.94 | 2.05 |
| 1976 | 1.56 | 0.31 | 3.13 | 1.31 | 2.99 | 1.73 | 2.58 | 1.21 | 4.35 | - | 3.60 | - |
| 1977 | 1.56 | 0.30 | 3.33 | 1.25 | 3.26 | 2.11 | 2.45 | 1.24 | 5.91 | - | 3.26 | - |
| 1978 | 1.50 | 0.31 | 2.86 | 1.24 | 3.60 | 2.18 | 2.52 | 1.21 | 5.51 | - | 2.92 | - |
| 1979 | 1.84 | 0.28 | 3.33 | 1.39 | 3.67 | 2.52 | 2.65 | 1.15 | 5.17 | - | 3.40 | - |
| 1980 | 2.24 | - | 3.74 | - | 3.81 | 2.18 | 2.92 | 1.46 | 5.51 | 3.38 | 3.67 | 1.75 |
| 1981 | 2.24 | 0.23 | 3.74 | 1.39 | 3.88 | 1.78 | 3.33 | 1.59 | 5.85 | 3.58 | 3.94 | 2.05 |
| 1982 | 1.97 | 0.24 | 3.88 | 1.27 | 3.94 | 2.08 | 3.13 | 1.50 | 5.85 | 3.48 | 3.94 | 2.14 |
| 1983 | 1.70 | 0.26 | 3.54 | 0.84 | 3.88 | 2.05 | 2.99 | 1.19 | 5.78 | 3.78 | 4.01 | - |
| 1984 | 1.63 | 0.39 | 3.26 | 1.21 | 3.94 | 2.26 | 2.99 | 1.46 | 5.78 | 3.79 | 3.94 | 2.16 |
| 1985 | 1.63 | 0.29 | 3.20 | - | 4.01 | - | 2.99 | 1.15 | 5.37 | 3.65 | 3.94 | - |
| 1986 | 1.22 | 0.40 | 2.79 | 1.22 | 3.33 | 2.46 | 2.24 | 1.38 | 4.96 | 3.88 | 3.33 | 2.13 |
| 1987 | 1.22 | - | 2.72 | - | 3.26 | - | 2.18 | - | 4.76 | - | 3.26 | - |
| 1988 | 1.16 | 0.36 | 2.58 | 1.20 | 3.20 | 2.46 | 2.11 | 1.36 | 4.76 | 3.75 | 3.06 | 2.05 |
| 1989 | 1.22 | 0.36 | 2.58 | 1.22 | 3.33 | 2.49 | 2.45 | 1.59 | 5.91 | 4.49 | 3.06 | 1.95 |
| 1990 | 1.29 | 0.34 | 2.65 | 1.21 | 3.26 | 2.42 | 2.45 | 1.54 | - | - | 3.06 | 1.90 |
| Change (1970-90 or nearest years) | -5% | -19% | 95% | 55% | 9% | 9% | 9% | -7% | 55% | 49% | -2% | -16% |

TABLE 2

Note: Prices for the United States have been adjusted to reflect 1994 price levels. For foreign prices, we use the exchange rate which in 1980 would have made the price level in the foreign country equal the price level in the United States; then we adjust for inflation. Therefore, the price in a foreign country is not the price expressed at current exchange rates; it is roughly what the price of gasoline in the foreign country would be were average prices the same as in the United States in 1994.

Sources: Gasoline prices are from Lee Schipper, et al., "Mind the Gap: The Vicious Circle of Measuring Automobile Fuel Use," *Energy Policy*, December 1993, 21(3): 1173-1190, Table 1. (UCTC No. 228) These retail prices include taxes.

Gasoline taxes are from *Statistical Abstract of the United States*, various years, and from *Energy Prices and Taxes*, Fourth Quarter, 1992, OECD, p. 282.