RURAL HOUSEHOLDS BENEFIT MORE FROM INCREASES IN FUEL ECONOMY

Mark Cooper,
Director of Research

JUNE 2007

One of the great myths in the fuel economy debate is the claim that increasing the fuel standards will hurt rural households. The auto industry is more than willing to propagate this myth because inefficient pick-up trucks are among their highest profit models. However, a little bit of common sense and research from the National Academy of Sciences shatters the myth and shows that the auto company campaign against higher CAFE standards is hurting rural America.

Compared to households in metropolitan areas, households living outside of metropolitan areas use much more gasoline than those in metropolitan areas:

- They are more likely to have a vehicle.
- They drive 15% more miles (28,397 v. 24,674)
- They get 6% fewer miles per gallon (19.70 v. 20.91)
- They consume 21% more gasoline per year ((1,437 v. 1,180)
- They spend 20% more on gasoline ($2683 v. $2239)
- Trucks get 30% fewer miles per gallon (16.2 v. 22)
- Trucks are kept on the road 11% longer (10.1 years v. 9 years)

---

3 Summary of Travel Trends: 2001 National Household Travel Survey, December 2004, p. 36.
5 Id.
6 Id.
As a result of these differences, the burden of recent increases in gasoline prices falls heavier on rural households than non-rural households.

Exhibit 1: The Mounting Burden of Rising Gasoline Prices on Household Budgets

- Rural households have suffered an increase in their gasoline bills of almost $1,300 in the past five years, compared to urban households who have experienced an increase of about $1,000.
- Because rural households have lower incomes in addition to higher gasoline expenditures, the burden of rising gasoline prices is heightened. While urban households have seen gasoline expenditures increase from about 2.4% of income to about 3.5%; for rural households the increase has been from about 3.3% to about 5.4%.

We have calculated a direct consumer pocketbook test for vehicles getting 35 miles per gallon. Since most households take out auto loans to finance their purchase of new vehicles, we estimate the net monthly bill for loan payments plus the cost of gasoline (see Exhibit 2).
Exhibit 2:
Consumer Analysis of 35 mpg vehicles: Rural Households save Twice as Much

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>Rural Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Payment increase</td>
<td>$1909</td>
<td>$1909</td>
</tr>
<tr>
<td>Life of Loan (5 years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Cost Savings</td>
<td>$2487</td>
<td>$2984</td>
</tr>
<tr>
<td>Net savings</td>
<td>$578</td>
<td>$1075</td>
</tr>
<tr>
<td>Life of vehicle (10 years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Cost Savings</td>
<td>$3480</td>
<td>$4176</td>
</tr>
<tr>
<td>Net Savings</td>
<td>$991</td>
<td>$2267</td>
</tr>
</tbody>
</table>

Assumptions: $3 per gallon, constant real dollars; 5-year, 7% loan, an average $1600 per vehicle to achieve 35 mpg. Rural household gasoline expenditures exceed urban households by 20%.

- We find that fuel efficiency pays for itself, since the reduction in gasoline expenditures is greater than the increase in monthly loan payments.

- Savings for rural households are likely to be twice as large as those for urban households and the longer the household holds onto the car, the greater the savings, another factor that is likely to benefit rural households more.

The National Highway Traffic Safety Administration (NHTSA) used the National Research Council estimates of the cost of fuel efficiency to conduct a national cost-benefit analysis of increasing CAFE. In spite of unrealistic and irresponsible assumptions biased against fuel economy,10 its analysis shows that increasing fuel economy for the new vehicle fleet by about 4% per year, or about 10 miles per gallon, in ten years is cost justified.

The net national economic benefits of increasing fuel efficiency for trucks are three times as great as the net national benefit for cars.

To examine cars and trucks, we used the NHTSA data on 4% per year improvements and compared the cost of fuel efficiency to the value of energy savings (see Exhibit 3). We used gasoline prices of $3 per gallon (whereas NHTSA used only $1.50 per gallon).

- Both the costs and benefits for trucks are higher and the benefit of increasing fuel efficiency for trucks is about two and a half times as large.

All of these analyses show that it is time for the Senate, which is uniquely designed to represent the interest of rural areas, to act on the facts and raise the CAFE standard for all vehicles.

Exhibit 3: Cost-Benefit of 4% per Year CAFE Increase.

Sources: National Highway Traffic Safety Administration, Cafe Compliance and Effects Modeling System, Documentation (Draft, 5/26/06). Calculated as the number of gallons saved time $3/gallon. The number of gallons saved includes NHTSA’s excessively large rebound effect, which assumes 20 percent of the simple savings are consumed by increased driving.