

Market-Driven Light-Duty Fuel Use

The effect of a combination of moderate improvements in vehicle efficiencies, rising market share of light trucks, and a steady but slightly slower increase in miles driven—which OTA considers the most probable future for personal highway travel during the next decade—will be that, ABSENT POLICY CHANGES, fuel consumption of the passenger vehicle fleet is likely to change only modestly between now and 2001; we project that expected efficiency improvements will nearly offset the expected increase in miles driven.

To be more precise, the fuel efficiency and vmt projections of the Energy Information Administration cited above, indicate that year-2000 fuel use by autos and light trucks combined will be 3.3 percent higher than in 1989. This is a small change for an 11-year period, less than 0.3 percent/year. The range for scenarios varying from “low oil price-high economic growth” to “high oil price” is + 10.5 percent to -1.3 percent for the 11-year period.

A projection of relatively stagnant light-duty vehicle fuel consumption conforms to the experience of the previous decade and a half. Between 1973 and 1987, petroleum consumption of the light-duty fleet went from 5.66 mmbd to 6.09 mmbd, an increase of only 7.6 percent.¹ During this period, the in-use fuel economy of the U.S. automobile fleet improved from about 13.3 mpg to 19.2 mpg, and light-truck fuel economy improved from 10.5 mpg to 12.9 mpg²—but this increased efficiency was offset by the increase in miles driven. Looked at another way, however, the improvement in efficiency amounted to a sav-

ings of about 2.56 mmbd over what oil consumption would *have been* had 1987 driving levels been attained with 1973 fleet efficiency (at \$1.00/gallon this would be an annual savings to U.S. drivers of about \$40 billion per year).

Alternative projections show only small variations from this. For example, a recent Chevron forecast (World *Energy Outlook*, April 1990) projects an increase of 0.5 percent per year in gasoline demand through 2000.

GOING BEYOND THE MARKET: IMPROVING NEW-CAR FUEL ECONOMY

The next two chapters deal with alternative ways to improve new-car fleet fuel economy—by improving technology and design *within the constraints of existing and projected consumer preferences, assuming no unexpected oil price shocks or large increases in gasoline taxes*; and by changing consumer preferences for fuel economy and other vehicle attributes that influence fuel economy. These alternatives are not independent of each other, because most advances in technology and design yield benefits that can be taken as a variable combination of increased fuel economy and improvements in other vehicle attributes such as performance. The extent to which one or the other is favored is the automaker’s decision; the incentive for improving technology and design and the primary influence in making tradeoffs among fuel economy, performance, size, and other attributes is consumer preference.

¹Based on table 2.9 in Oak Ridge National Laboratory, *Transportation Energy Data Book, Edition 11*, ORNL-6649, January 1991. Note: These values include *all* light trucks, whereas EIA and other projections generally try to exclude light-truck freight use.

²Oak Ridge National Laboratory, *op. cit.*, tables 3.11 and 3.19.