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Mr. Chairman: I am happy to be with you today to comment on future automotive fuel economy, particularly as it is influenced by the Energy Policy and Conservation Act and President Carter's automotive energy proposals. In response to requests from committees in both houses of Congress, the Congressional Budget Office has previously examined and evaluated the Carter energy proposals. Today I would like to discuss briefly six points related to federal policy governing the fuel efficiency of new cars.

(1) The automotive fuel economy which is likely to come about under present policy;

(2) The principal issues and uncertainties surrounding the attainment of existing standards;

(3) The impact of the President's plan on the fuel economy of new cars;

(4) The magnitude of the potential gasoline savings associated with these policies;

(5) The potential impact of these polices on new car sales; and

(6) The likely impacts of changes in the penalties set under the Energy Policy and Conservation Act.

Effects of Present Policy

Prior to 1973 the price of gasoline had not increased as fast as the price of all other goods, and therefore, with rising incomes there was little incentive to conserve this fuel.

The substantial increase in gasoline prices which followed the 1973 oil embargo changed this situation by providing a limited price incentive to reduce gasoline consumption. This total is small, however, relative to the fuel savings which are due to other non-price

causes -- in particular the Energy Policy and Conservation Act. This 1975 Act, which set fuel economy standards for new cars, began the legislative drive to conserve automotive gasoline through non-price mechanisms.

Projections made by CBO indicate that the Energy Policy and Conservation Act is making, and will continue to make, a substantial contribution to the nation's conservation of fuel. In 1978, the fuel economy of new cars is estimated to be 0.8 miles per gallon higher under this legislation than it would have been without it, and the corresponding gain is estimated to be 2.7 miles per gallon in 1985. As more and more of the new, fuel-efficient cars are phased into the nation's automotive fleet, the effects of improved efficiency for new cars is reflected in overall consumption of gasoline. CBO estimates that the Energy Policy and Conservation Act will result in automotive gasoline savings of 440,000 barrels per day by 1985, and 640,000 barrels per day by 1990. These savings reperesent 7.6 and 10.6 percent of automotive gasoline consumption in these years, respectively.

Fuel savings by light trucks are not included in the preceding estimates. If the standards for light trucks that are called for under the Energy Policy and Conservation Act are set as stringently as are those for cars, the fuel savings from light trucks will also probably be between 7 and 11 percent of their consumption.

The Energy Policy and Conservation Act produces sizeable savings in gasoline consumption -- equivalent to about 28 days of driving in 1985 and 39 in 1990. Impressive though these savings are, they reflect a conservative view of future automotive technology. Analysis by CBO indicates that the automobile manufacturing industry will produce cars which average 23.3 miles per gallon in 1985. Although substantially beneath the statutory level of 27.5 miles per gallon, the economic incentives contained in present policy do not appear to warrent improvements beyond this point.

Any projection of this sort is obviously speculative since it is subject to uncertainties about the cost and speed of technological change on the one hand, and to the vagaries of consumer purchasing patterns on the other. Since both of these areas are extremely difficult to forecast, I would like to take a moment to explain our findings in these areas and to compare them to those of other independent analyses.

Fuel Economy under the Energy Policy and Conservation Act

The Federal Energy Administration and the White House Energy Office project that the fuel economy of new cars in 1985 will be about 24 miles per gallon, while the Department of Transportation projects that the 1985 standards can not only be met but exceeded. Other than examinations conducted by the automobile manufacturing firms themselves, these studies appear to represent the only independent analyses of this issue that have been based upon explicit device-by-device

analysis of future automotive technological possibilities. Investigations by the Rand Corporation and James Sweeney of Stanford University have also addressed this issue and have found the standards to be achievable in 1985, but these analyses are based upon highly theoretical treatments of future technological capability rather than evaluation of specific energy-saving components.

The major discrepancies between those forecasts indicating that the standards will not be met (such as those prepared by the Federal Energy Administration, the White House Energy Planning Office, and the CBO) and those indicating that the standards will be met (such as the Department of Transportation and the domestic automobile manufacturers) appears to be in three areas:

(1) CBO forecasts that there will be no significant shift in consumer purchasing patterns by vehicle size-class, while Ford and Chrysler have indicated that a shift to smaller cars is part of their strategy for meeting the standards.

(2) The analysis done by CBO assumes that the auto manufacturers will make improvements to automotive fuel economy only as long as it is cheaper to do so than pay penalties. That is, it is assumed that a manufacturer will not make an improvement which costs $201 if it saves only $200 in penalty costs, after taxes. The automobile manufacturers, by contrast, have argued that corporate goodwill, the possibility of criminal liability, and the threat of stockholder suits for mismanagement would lead them to make improvements beyond the economic break-even point.

(3) The CBO analysis is based upon the assumption that auto performance (particularly acceleration times) will be maintained at present levels, while the Department of Transportation and the automobile manufacturers do not. If it is assumed that the automobile manufacturers downsize their engines by 10 percent as assumed by the Department of Transportation, CBO projections of future fuel economy would increase by about one mile per gallon, that is to 24.3 miles per gallon.

All things considered, the CBO estimate of future automotive efficiency probably represents a conservative set of assumptions about consumer behavior, technological possibilities, and automobile manufacturer commitment, while the forecasts of the domestic manufacturers probably represent an optimistic outlook. While we continue to project future fuel economy beneath the standard set by the Energy Policy and Conservation Act, we would also like to note that all projections of this sort are necessarily subject to substantial uncertainty, and that the range of possible outcomes relative to future automotive fuel economy is even broader than the 23 to 28 mile per gallon range associated with previous analyses.

Effects of the President's Plan on the Efficiency of New Cars

Of the many provisions in the President's Energy Package, only the "gas-guzzler" excise taxes and rebates have a noticeable effect on new car fuel economy. CBO projects that this program would increase the fuel economy of new cars in 1985 from 23.3 to 26.0 miles per gallon. According to CBO analysis, most of this improvement is expected to come through the additional efficiency improvements that would be made to vehicles in each size class; very little is expected to come through sales shifts from large to small cars.

Fuel Savings under the President's Plan

In addition to improvements to the efficiency of new cars, the President's plan would also encourage gasoline conservation through

two provisions which would raise the price of gasoline: the crude oil equalization tax and the standby gasoline tax. CBO estimates that these pricing provisions together would result in gasoline savings of 90,000 barrels per day in 1985, compared with 215,000 barrels per day for the gas guzzler program. These savings are smaller than those estimated for the Energy Policy and Conservation Act, but this is due chiefly to the increasing difficulty associated with making further gains in automotive efficiency, and should not be interpreted as evidence of structural shortcomings in the President's program.

Effects on Sales

Sales of new cars tend to fall under both the Energy Policy and Conservation Act and the President's proposals. These declines in sales are traceable to the increases in new car prices that stem from government-imposed taxes and penalties, as well as from increased manufacturing costs for cars with greater fuel efficiency. While the increased cost of efficient cars is partly offset by the associated savings in operating cost, both the Energy Policy and Conservation Act and the President's program encourage the adoption of technologies which do not pay for themselves out of fuel savings. As a reuslt, the cost of owning and operating a vehicle increases and therefore purchases and consequently sales decline.

CBO projects that reductions in the sales of new cars attributable to existing and proposed programs for increased efficiency are likely to be sizeable. The Energy Policy and Conservation Act is estimated to diminish sales of new cars in 1985 by 890,000. The crude oil equalization tax proposed by the President is projected to reduce new car sales by 80,000 in 1985, and his proposed gas guzzler excise taxes and rebates are forecast to cause a further decline in sales of 280,000 new cars in 1985. On an expected sales base of almost thirteen million new cars in 1985, these findings indicate a loss of 7.0 percent of new car sales for the Energy Policy and Conservation Act, and a loss of 2.8 percent for the President's gas-guzzler excise tax and rebate program.

Changes in Penalties Under the Energy Policy and Conservation Act

Because the CBO analysis projects that the auto industry will not find it economically advantageous to comply with the standards set out by the Energy Policy and Conservation Act, we have been frequently asked whether an increased penalty structure would result in compliance. Increasing the penalties clearly strengthens the economic incentive for manufacturers to comply. Indeed, the current penalty structure will actually grow less stringent over time since the penalties are in terms of a specified number of dollars, thus making them an ever-shrinking economic consideration as inflation errodes their magnitude.

CBO projections indicate that the existing standards could be met in every year if the penalties were increased by a factor

of four. Alternatively, enactment of the President's gas guzzler proposal together with a doubling of the existing penalties would have about the same effect on new car efficiency. If penalties were increased four-fold, sales of new cars in 1985 are projected to fall by almost one half million, and gasoline savings are forecast to increase by about a third of a million barrels per day.

Mr. Chairman, I would be happy to answer any questions.