Retiring Old Cars: Programs To Save Gasoline and Reduce Emissions

INTRODUCTION

Older vehicles produce a disproportionate share of total U.S. vehicle air emissions. Cars of 1971 or earlier vintage make up about 3.4 percent of total auto registrations and only 1.7 percent of total miles driven, yet produce 7.5 percent of the hydrocarbon (HC), 7.6 percent of the carbon monoxide (CO), and 4.7 percent of the nitrogen oxide (NO_x) emissions of the fleet.[1] In the Los Angeles Basin, these older cars play a still more important role in vehicle emissions: they are said to make up 6 percent of the total car population and 3 percent of the miles driven but 22 percent of the fleet's HC, 15 percent of the CO, and 13 percent of the NO_x emissions.[3] As a result, programs aimed at removing older, more polluting cars from the fleet could be a viable option for reducing urban air pollution.

On June 1, 1990, the Union Oil Company of California, Unocal, began scrapping the first of 7,000 model year 1970 and older vehicles registered in the Los Angeles Basin. The purpose of Unocal's scrappage program was to demonstrate a viable alternative to ever-more-stringent new source emission standards for vehicles and industry: eliminating some of the area's highest-emission vehicles. Indeed, smog tests showed that the vehicles bought and destroyed by the program emitted, on a ''per vehicle mile' basis, 65 times the HC and 50 times the CO as do new vehicles.[4] The success of the initial program brought additional contributions from companies, individuals, and a regulatory agency to pay for purchasing and scrapping additional vehicles, with a new total of 8,376 vehicles.[5]

Positive publicity for the Unocal program has brought suggestions that similar programs be established on a nationwide basis. In the House of Representatives, the Subcommittee on Energy and Power of the Committee on Energy and Commerce has been exploring the use of early retirement programs to gain both emissions and fuel conservation benefits. In the Senate, legislative proposals (S. 2049 and S. 2237) would stimulate vehicle scrappage programs by granting credits toward meeting corporate average fuel economy (CAFE) standards to automakers who get older cars in trade for new cars and who destroy the older cars. Under S. 2049, the automaker would receive a credit equal to the difference between the fuel economy of the older car and the new car. And recently, the Administration has announced a plan to allow companies to obtain pollution credits if they scrap old vehicles.[6]

Proponents believe that a vehicle scrappage program could improve fleet fuel economy—with energy security and global warming benefits—as well as reduce emissions. Because new car fuel economy has essentially doubled during the past 15 years, retiring older vehicles should tend to disproportionately remove fuel *inefficient cars* from the fleet. Further, a retirement program could be structured to emphasize the removal of ''gas guzzlers" by tying incentives to fuel economy, as do the CAFE credit provisions of S. 2049.

Not surprisingly, a scrappage program will have some negative impacts: the potential for some loss of mobility with the elimination of the least expensive vehicles available to poor people; a lower supply of and higher prices for used auto parts (unless the cars in the program are stripped before

[1] MOBILE4 (vehicle emissions model) data provided by the U.S. Environmental Protection Agency.

[2] Older cars are a larger share than the national average because California's mild climate and consequent lack of road salting (for deicing) tends to greatly extend the lifetime of auto sheet metal and exhaust and suspension components.

[3] Unocal brochure, "SCRAP: A Clean-Air Initiative from Unocal," based on California Air Resources Board data. The differences in old car emissions/mile between the Environmental Protection Agency and Unocal data are unlikely to be caused pprimarily by differences in the California and U.S. fleets; they more likely reflect uncertainty in the actual on-road emissions of older vehicles. Another California source-the California Air Resources Board-gives yet another set of statistics: in 1990, they estimated that pre-1972 cars were 4 percent of all vehicles and yielded 13 percent of HC emissions and 9 percent of CO emissions.

[4] Ibid. Unocal brochure, based on Federal Test Procedure results. The HC comparison is for tailpipe emissions only; Unocal did not test for evaporative emissions.

[5] Ibid.

[6] Press briefing of March 18, 1992 by Michael Boskin, Chairman of the Council of Economic Advisors; Richard Morganstern Assistant Administrator for Policy and Planning, U.S. Environmental Protection Agency; and others.