independent of production volumes. The fixed costs considered in this analysis are those for engine control recalibration, vehicle redesign, mechanical integrity testing on redesigned engine families, certification durability demonstration, annual certification costs, and test facility upgrades and construction. Variable costs are costs for the necessary emission control hardware and are, by nature, directly dependent on production volume. Table 7 presents a summary of the cost estimates calculated by the Agency. Discussion of the assumptions and data included in these estimates can be found in the RIA.

TABLE 7.—REGULATORY COST ESTIMATES

	Annual cost ($ million)	Cost/vehicle ($)
US06	16.8	1.12
Soak/start	139.4–187.0	9.30–12.47
A/C	18.3	1.22
Totals	174.5–222.1	11.63–14.81

C. Cost-Effectiveness

The cost-effectiveness estimate represents the expected cost per ton of pollutant reduced. The costs presented in Table 7 are not necessarily equally spread among the three pollutant emissions (NMHC, CO, and NO_X). Since the requirements associated with A/C are targeted for NO_X control, all costs associated with A/C have been allocated to NO_X. For US06, the costs associated with each area have been allocated equally across each pollutant. As the CO reduction from soak/start is minimal, the costs associated with soak/start have been split equally between NMHC and NO_X. Table 8 contains the per vehicle cost allocation to each pollutant within each control area.

TABLE 8.—COST ALLOCATION ($/VEHICLE)

	NMHC	CO	NO_X	Total
US06 costs	0.37	0.37	0.37	1.12
Soak/start costs	4.65–6.23	0.00	4.65–6.23	9.30–12.47
A/C Costs	0.00	0.00	1.22	1.22
Total	5.02–6.61	0.37	6.24–7.83	11.63–14.81

Dividing the costs shown in Table 8 by the lifetime emission reductions shown in Table 5, gives the cost-effectiveness estimates shown in Table 9.

TABLE 9.—COST-EFFECTIVENESS ESTIMATES ($/TON)

Control area	NMHC	CO	NO_x
US06	74	2	65
Soak/start	2291–3072	NA	1362–1827
A/C	NA	NA	153
Total	707–930	2	355–445

D. Consumer Impacts

Two impacts on value to the consumer not included in the above estimates are potential savings associated with reduced fuel consumption and impact on the horsepower output of some vehicle engines. As previously discussed, EPA expects manufacturers to eliminate or greatly reduce the amount of commanded enrichment currently used in order to meet the NMHC and CO standards for the US06 control cycle. Due to the lower fuel consumption associated with stoichiometric air/fuel control as compared to commanded enrichment, this action will result both in a small improvement in fuel economy and a small loss in horsepower output. The Agency approximated the fuel economy benefit by determining how much extra fuel is used during commanded enrichment operating modes and the in-use incidence of these commanded enrichment operating modes. The result was an estimated 0.51 percent reduction in fuel consumption. Using this fuel consumption reduction and multiplying it by the miles driven in a given year, the appropriate survival rate and a seven percent discount factor, results in an estimated lifetime fuel economy savings of $16.56, based on a gasoline cost of $0.80 per gallon, excluding state and federal taxes.[31] A more detailed discussion of fuel economy cost savings can be found in the RIA for this rule.

Accompanying the lost horsepower output will be the potential for some consumers to consider such affected vehicles as having less value. The Agency does not believe that this lost value will be noticed by most consumers, as the horsepower loss is quite small, but acknowledges its potential effect nonetheless. Due to the difficult nature of trying to quantify a cost associated with reduced power output, or reduced 0 to 60 mph acceleration time, etc., the Agency has not been able to quantify the loss in consumer value. However, the Agency believes that this cost should be roughly negated by the associated savings in fuel expenses. Comments and data are solicited on ways to quantify the consumer value of the power loss.

The Agency does not anticipate that today's proposal will have any impact on Inspection/Maintenance programs.

[31] From Cost Projections, FFA, 1992, updated from DOE/EIA Monthly Energy Review, May 1994, and DOT/FHA. According to FHA, average sales-weighted state taxes for gasoline were 18.54¢ in June 1994. Federal tax is 18.4¢.

XII. Public Participation

A. Comments and the Public Docket

The Agency welcomes comments on all aspects of this proposed rulemaking. All comments, with the exception of proprietary information, should be directed to the EPA Air Docket Section, Docket No. A–92–64 (see **ADDRESSES**). Commenters who wish to submit proprietary information for consideration should clearly separate such information from other comments by:

- Labeling proprietary information ''Confidential Business Information'' and
- Sending proprietary information directly to the contact person listed (see **FOR FURTHER INFORMATION CONTACT**) and not to the public docket.

This will help ensure that proprietary information is not inadvertently placed in the docket. If a commenter wants