

nonroad, locomotive, and marine engines.

TABLE V.D-1—500 PPM FUEL PROGRAM AGGREGATE COST PER TON AND LONG-TERM ANNUAL COST PER TON (\$2001)

Pollutant	2004–2036 Discounted lifetime cost per ton	Long-term cost per ton in 2036
SO _x	\$90	\$50

We also considered the cost per ton of the 500 ppm fuel program without taking credit for the expected maintenance savings associated with low sulfur fuel. Without the maintenance savings, the cost per ton of

SO_x reduced would be \$990 per ton for each year of the program. More detail on how the costs and cost per ton numbers associated with the 500 ppm fuel program were calculated can be found in the draft RIA.

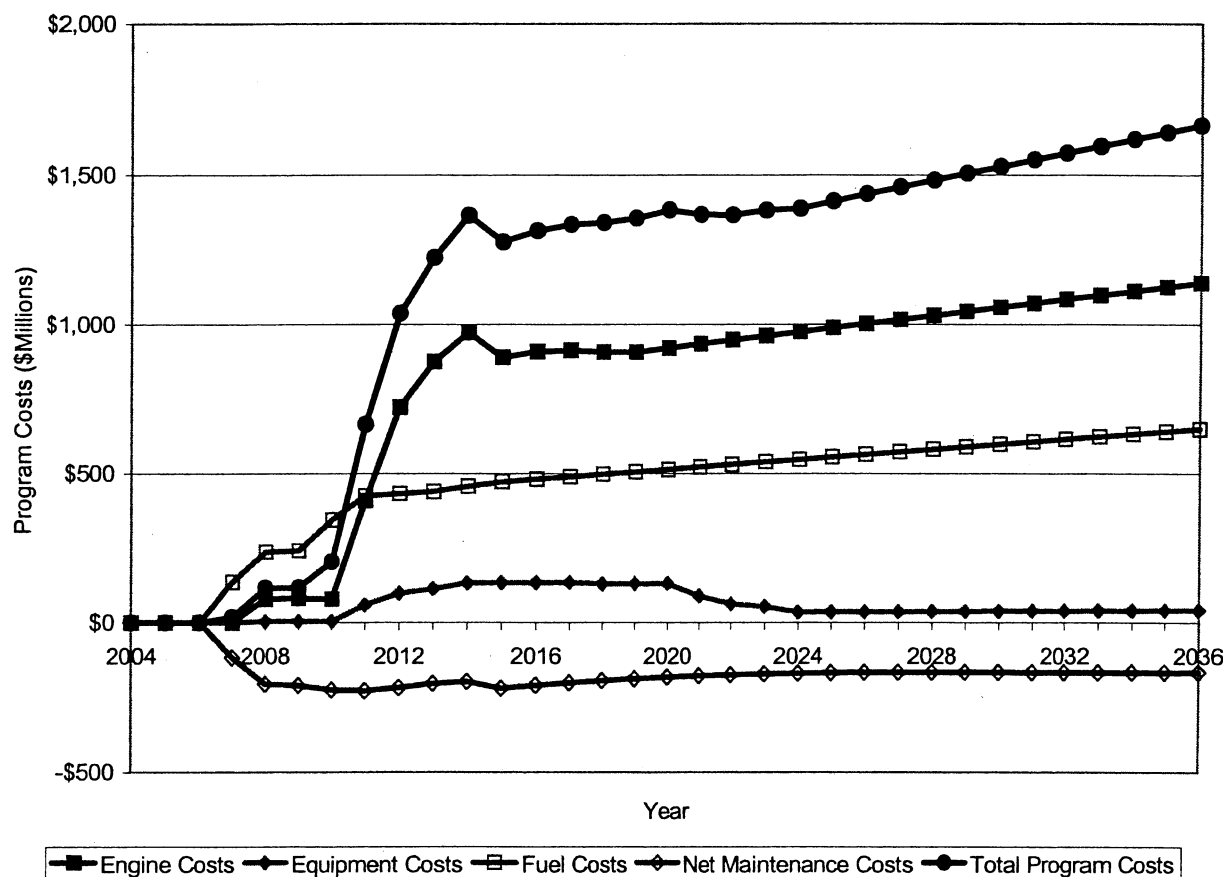
3. Annual Costs for the Proposed Two-Step Fuel Program and Engine Program

The costs of the total proposed engine and fuel program include costs associated with both steps in the fuel program—the reduction to 500 ppm sulfur in 2007 and the reduction to 15 ppm sulfur in 2010. Also included are costs for the proposed 2008 engine standards for <75 horsepower engines, the proposed 2013 standards for 25 to 75 horsepower engines, and costs for the proposed engine standards for >75

horsepower engines. Included are all maintenance costs and savings realized by both the existing fleet (nonroad, locomotive, and marine) and the new fleet of engines complying with the proposed standards.

Figure V.D-2 presents these results. All capital costs for fuel production and engine and equipment fixed costs have been amortized. The figure shows that total annual costs are estimated to be \$120 million in the first year the new engine standards apply, increasing to a peak of \$1.7 billion in 2036 as increasing numbers of engines become subject to the new standards and an ever increasing amount of fuel is consumed. The net present value of the annualized costs over the period from 2007 to 2036 is \$20.7 billion.

FIGURE V.D-2 -- ANNUAL COSTS OF THE PROPOSED TWO-STEP FUEL AND ENGINE PROGRAM



4. Cost per Ton of Emissions Reduced for the Total Program

We have calculated the cost per ton of emissions reduced associated with the

proposed engine and fuel program. We have done this using the net present value of the annualized costs of the program through 2036 and the net

present value of the annual emission reductions through 2036. We have also calculated the cost per ton of emissions in the year 2036 using the annual costs