

Matrix #2a

Annual Cost-Effectiveness (regulation, PM only)

10/17/2003

This scenario assumes that VDECS retrofits are not used, and that engine replacement is used for 10 years and newer units, per the ATCM requirements, and that TRU replacement is used for 11 years and older units.

Engine/TRU Replacement Scenario

Operator Cost Range (2002 \$)
(basis for calculations below) Int. rate for 2008 Cost Pmt. Adj.: 0.05
\$78,760 \$2,346,240

Year	Emission Benefits (tpy)	Annual In-Use Cost (2002 \$)	Annual Operator Reporting Cost Range		In-Use & Operating Costs = Total Ann. Operating Cost		In-Use Cost Payment Adj. ¹		PM Cost Effectiveness (In-Use & Rept. Costs Only)		Not Used for Cost-Effectiveness Calculation					
			(low)	(high)	(low)	(high)	(low)	(high)	\$/lb. (low)	\$/lb. (high)	Fac. Rep. Cost Range (low)	(high)	Total Annual Cost (low)	(high)		
2000			\$0	\$0	\$0	\$0										
2001			\$0	\$0	\$0	\$0										
2002			\$0	\$0	\$0	\$0										
2003			\$0	\$0	\$0	\$0										
2004			\$0	\$0	\$0	\$0										
2005		\$2,865,244	\$0	\$0	\$2,865,244	\$2,865,244										
2006		\$3,854,819	\$0	\$0	\$3,854,819	\$3,854,819										
2007		\$4,689,092	\$0	\$0	\$4,689,092	\$4,689,092										
2008	0.000	\$5,249,449	\$52,481	\$1,563,399	\$5,301,930	\$6,812,848			See Footnote 1			\$198,200	\$5,145,153	\$198,200	\$5,145,153	
2009	213.890	\$5,653,914			\$5,653,914	\$5,653,914	\$7,761,708	\$7,940,702	18.14	18.56	\$198,200	\$5,145,153	\$7,959,908	\$13,085,855		
2010	219.000	\$5,859,046			\$5,859,046	\$5,859,046	\$7,966,840	\$8,145,833	18.19	18.60	\$198,200	\$5,145,153	\$8,165,040	\$13,290,986		
2011	253.675	\$6,056,496			\$6,056,496	\$6,056,496	\$8,164,290	\$8,343,284	16.09	16.44	\$198,200	\$5,145,153	\$8,362,490	\$13,488,437		
2012	269.735	\$6,246,883			\$6,246,883	\$6,246,883	\$8,354,677	\$8,533,670	15.49	15.82	\$198,200	\$5,145,153	\$8,552,877	\$13,678,823		
2013	279.225	\$6,430,300			\$6,430,300	\$6,430,300	\$8,538,094	\$8,717,087	15.29	15.61	\$198,200	\$5,145,153	\$8,736,294	\$13,862,240		
2014	286.890	\$6,607,783			\$6,607,783	\$6,607,783	\$8,715,577	\$8,894,570	15.19	15.50	\$198,200	\$5,145,153	\$8,913,777	\$14,039,723		
2015	296.015	\$4,724,484			\$4,724,484	\$4,724,484	\$6,832,278	\$7,011,271	11.54	11.84	\$198,200	\$5,145,153	\$7,030,478	\$12,156,424		
2016	293.825	\$4,336,062			\$4,336,062	\$4,336,062	\$6,443,855	\$6,622,849	10.97	11.27	\$198,200	\$5,145,153	\$6,642,055	\$11,768,002		
2017	242.360	\$4,083,322			\$4,083,322	\$4,083,322	\$6,191,115	\$6,370,109	12.77	13.14	\$198,200	\$5,145,153	\$6,389,315	\$11,515,262		
2018	222.650	\$4,039,499			\$4,039,499	\$4,039,499	\$6,147,293	\$6,326,286	13.80	14.21	\$198,200	\$5,145,153	\$6,345,493	\$11,471,439		
2019	204.035	\$3,942,927			\$3,942,927	\$3,942,927	\$6,050,721	\$6,229,714	14.83	15.27	\$198,200	\$5,145,153	\$6,248,921	\$11,374,867		
2020	191.625	\$3,524,432			\$3,524,432	\$3,524,432	\$5,632,226	\$5,811,219	14.70	15.16	\$198,200	\$5,145,153	\$5,830,426	\$10,956,372		
2972.925																
				Totals:			\$86,798,674	\$88,946,595	11	19	\$2,576,600	\$66,886,989	\$89,375,274	\$155,833,584		
				Tots (all yrs):		\$78,216,233	\$79,727,150		Minimum	Maximum			Total Cost Range (2002 \$)			

¹These columns take the 2005 - 2008 in-use costs and converts them into uniform payments for the years 2009 - 2020 by doing the following: converting the 2008 in-use cost to 2009 dollars, and then converting that amount to a uniform payment series; interest rate used is 5%. This calculation is performed to account for the 2008 in-use costs, since a cost-effectiveness figure cannot be calculated for this year due to zero PM emission reduction.