Multnomah County

Program #10031 - East County Clean Diesel School Bus Retrofits 5/7/2015

Department:	Nondepartmental	**Program Contact:**	John Wasiutynski
Program Offer Type:	Innovative/New Program	**Program Offer Stage:**	As Proposed
Related Programs:	10018		
Program Characteristics:	One-Time-Only Request		

Executive Summary

Exposure to diesel engine exhaust causes cancer, increases the risk of heart attack, stroke, and cardiovascular disease, exacerbates asthma and can lead to low-weight and preterm births. School Children in Multnomah County ride over 1.5 million miles a year in dirty diesel buses. Increased exposures from commuting by school bus were estimated to increase a child's lifetime cancer risk due to diesel PM by approximately 4%. This program offer would retrofit 20 school buses with diesel particulate filters and reduce the pollution from those buses by 95%.

Program Summary

The problem of diesel Particulate Mater (PM) exposure is particularly acute in Multnomah County. Multnomah County has the 4th highest exposure rate to diesel exhaust of all United States' counties. Exposure to diesel engine exhaust causes cancer, increases the risk of heart attack, stroke, and cardiovascular disease, exacerbates asthma and can lead to low-weight and preterm births.

All Multnomah County residents are exposed to a dangerous level of diesel pollution. In some areas, however, like near transportation corridors or rail yards, levels of diesel pollution are over 10 times health benchmarks. In 2014 the Multnomah County Department of Health conducted a study of racial and ethnic health disparities and found that communities of color are exposed to levels of diesel pollution 2-3 times higher than their white counterparts. The levels of diesel pollution in Multnomah County result in significant public health impacts. A snapshot of annual impacts include: 91 Premature deaths; 70 non-fatal heart attacks; 13,273 work loss days.

Children are especially vulnerable to diesel PM because their lungs are still in the developmental phase and they breathe, on average, 50 percent more air per pound of body weight than adults. For school aged children, riding on the school bus can be a significant exposure route for diesel PM. A California Air Resources Board study found that increased exposures from commuting by school bus were estimated to increase a child's lifetime cancer risk due to diesel PM by approximately 4%. School Children in Multnomah County ride over 1.5 million miles a year in dirty diesel buses.

Fortunately there are solutions available. Because of federal regulations, newer school buses are fitted with pollution controls that reduce toxic emissions by 99%. But because federal rules only apply to new engines, it is left to states to address older and dirtier engines still in use. Approximately 68% of school buses in use in East County are older diesel engines. This program offer would fund the retrofit of 20 older buses, and result in %95 pollution reduction per a bus. The monetized public health return on investment over the life of the measures would approximately total $2 million (based on the EPA diesel emissions quantifier).

Performance Measures

Measure Type	Primary Measure	FY14 Actual	FY15 Purchased	FY15 Estimate	FY16 Offer
Output	Number of pre-model year 2007 school buses retrofitted.	n/a	n/a	n/a	20
Outcome	Monetized public health benefit calculated using the EPA diesel emission quantifier over the lifetime of the measur	0	0	0	$2,000,000

Performance Measures Descriptions

This program will be aimed at East County School Districts. East County School districts serve a diverse community; 53% of students are minorities, and 61% qualify for free and reduced lunches. Because the program is aimed at communities already burdened by environmental health factors, the calculated public health return on investment is likely a conservative estimate. Estimated cost per a retrofit is equal to $25,000.

Legal / Contractual Obligation

Revenue/Expense Detail

	Proposed General Fund	Proposed Other Funds	Proposed General Fund	Proposed Other Funds
Program Expenses	**2015**	**2015**	**2016**	**2016**
Contractual Services	$0	$0	$500,000	$0
Total GF/non-GF	**$0**	**$0**	**$500,000**	**$0**
Program Total:	**$0**		**$500,000**	
Program FTE	0.00	0.00	0.00	0.00

Program Revenues				
Total Revenue	**$0**	**$0**	**$0**	**$0**

Explanation of Revenues

One-time-only general fund request.

Significant Program Changes

Last Year this program was:

Although this is a new program, it would build off of the County's experience with diesel retrofits and clean diesel contracting. In 2009 the Office of Sustainability worked with the City of Portland, County Fleet Services, and DCM to retrofit existing county equipment. A study conducted by the Office of Sustainability project and the Health Department on the impact of clean diesel contracting at the East County Courthouse found that for every $1 invested in retrofiring equipment there was $10 in public health benefit.