Clean Air School Bus Program

Webster Central School District

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Monroe County

Background

New York State school districts operate more large, diesel school buses than any other State, with over 46,000 in total. The exhaust produced by these buses can be a major contributor to localized air pollution, particularly at schools where fleets of diesel-powered buses gather every day. Children are extremely susceptible to the potential health hazard this pollution presents because their respiratory systems are still developing. In an effort to reduce diesel school bus emissions, the Clean Air School Bus Program administered by the New York State Energy Research and Development Authority (NYSERDA) committed $5 million to fund the installation of emission reduction technology on over 2,000 buses in New York State. Funds came from Governor Pataki's 1996 Clean Water/Clean Air Bond Act.

Webster Central School District is one of the largest single beneficiaries of the Clean Air School Bus Program, with a total of 74 buses retrofitted with equipment that will reduce production of carbon monoxide (CO), particulate matter (PM) and hydrocarbons (HC).

Incentives

More than **$138,000** of Clean Air School Bus funds was awarded to Webster Central School District to cover 100% of the purchase and installation costs of diesel oxidation catalysts (DOCs) and/or crankcase filters on 74 of its buses. The DOCs selected for use have been verified by the EPA to cut tailpipe exhaust concentrations of PM by 20%, CO by 40% and HC by 50 %.

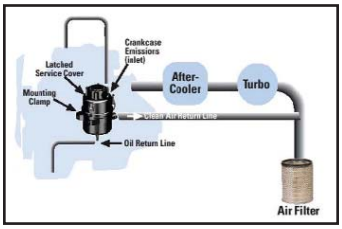
Diesel Oxidation Catalyst

Results

The retrofitting of Webster Central School District buses was completed in December 2004. The required use of ultra-low sulfur diesel fuel (15 parts per million) in trucks and buses by 2007 will enable the catalysts installed in these school buses to more than double their ability to reduce PM. Also, a number of studies have found that bus self-pollution through crankcase draft tubes increases levels of these pollutants onboard buses to concentrations much higher than ambient levels. Crankcase filters were installed to reduce up to 100% of these emissions.

It is estimated that through the Clean Air School Bus Program, this district will benefit from yearly emission reductions of 190 pounds of particulate matter, 43,700 pounds of carbon monoxide, and 1,790 pounds of hydrocarbons. When these figures are aggregated over the lifetime of these buses, total emission reductions amount to:

- 1,400 pounds of particulate matter
- 326,000 pounds of carbon monoxide
- 13,300 pounds of hydrocarbons



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