

Therma Cat test could clean the air

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The air along the route to Willis Road Elementary School is getting cleaner nowadays, thanks in part to a new catalytic converter system on one of Coweta County's school buses.

The Therma Cat, the first of its kind, was installed on the bus as part of a six-month road test project currently undergoing verification by the California Air Resources Board (CARB). It's the first such installation in the nation.

"We beat out California by three days," Keith McCullough offered proudly.

McCullough is the shop foreman who oversees the maintenance of the Coweta County School System's fleet of 280 buses.

When the Therma Cat is CARB-verified, the product can then be offered to other school districts across the United States.

The prototype diesel particulate filter system was developed by ESW Group of Companies, a subsidiary of Environmental Worldwide Solutions of Ontario, Canada.

John Macaluso, ESW's senior business development manager, said Coweta's bragging rights are largely due to the transportation department's willingness to explore new technologies.

"We talked with several counties, and Coweta is one of our 'Yeah, come play with us' counties," he said. "This is the one we use as a model and showcase, and are actually road testing."

All emission control devices in the U.S. have to be verified or certified by CARB and/or the federal Environmental Protection Agency before they can be considered eligible for funding under federal programs.

If the Therma Cat is verified by CARB later this month and -- in an ideal world -- installed on all the state's school buses, the smell of diesel fumes and the sight of black smoke billowing from the back of those buses would be a thing of the past. With CARB or EPA's seal of approval, school districts can then apply for federal and/or state funding to retrofit their buses with the equipment.

More importantly, the technology would greatly reduce the amount of air pollutants Georgians breathe in, said Stacy Allman of the Georgia Environmental Protection Division.

"It would vastly reduce our emissions, and we're talking not just smog but reducing particulate matter which can cause asthma and a lot of the health risks for children," she said.

Therma Cat's new technology virtually reduces all the particulates emitted by diesel engines. Emissions, under 2006 federal standards, were reduced by 97.3 percent, according to Macaluso.

"There's no smoke, no odor," he said.

In comparison, buses that were retrofitted with diesel oxidation catalysts after 2004 were only able to reduce emissions by 20 percent, Allman said.

To better see the difference, Macaluso pointed to the soot-blackened inside of a tail pipe on one of the buses. He said the tail pipes on buses equipped with the Therma Cat would be soot-free.

"The pipe could actually rust because it'd be so clean," he said.

Allman explained the state EPD has done all that it can to curtail emissions from stationary sources, and that's why the state's focus nowadays is more on mobile sources such as cars, trucks and buses.

Others, including Dennis Rosser and Jake Tatum of Nalley Motor Trucks, also support the technology. Nalley is the bus company that installed Therma Cats on school buses in Coweta and Clayton counties so far. Rosser noted while most people may not be that interested in particulates or emission control technology, the bottom line is that it'll make a huge difference for the health of families as well as the drivers and mechanics who work for long periods of time around the buses.

Coweta's transportation department has about 300 employees, most of whom are drivers exposed to the fumes for several hours a day, said Transportation Manager Judy Gresham.

CARB-verification of the Therma Cat is expected later this month. Its verification is important because, like all emerging technology, it's not cheap, and without federal or state aid, most school systems won't be able to afford it.

ESW's development of the Therma Cat cost about half-a-million dollars, according to Macaluso. The end product, which Coweta gets to keep, costs about \$16,000. Its purchase was made possible largely through the Georgia Retrofit Program, which is supported by funding from EPA and the Georgia Pacific Supplemental Environmental Program.

Macaluso said what makes the system expensive, beside the cost of the research and technology, is its interior coating that -- like other catalytic converters -- consists of some very expensive precious metals.

"The more precious metals put in there, the greater the reduction of emissions," he said.

While acknowledging the new product is costly, Allman said it's worth it because it's all about reducing emissions and keeping the state's air quality clean, "which in turn means healthier children and healthier people."