School Buses May Foul Air for Many Years

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New York City's fleet of 6,200 yellow school buses is the largest in the country by far. And despite recent efforts to clean up the most polluting buses in the fleet, it may still be one of the dirtiest.

In a city with asthma rates so high that in some neighborhoods - Harlem, for example - one in four children has the disease, officials have found that efforts to reduce harmful emissions from school buses are hindered by the age of the fleet and by the fact that the buses are owned not by the city, but by outside companies.

These companies have thousands of buses more than a decade old, and some more than two decades old - powered by diesel engines so old that the most effective new exhaust filters simply do not work properly.

The city has begun to force the 52 private companies that own and operate the buses to retire the oldest ones, but the requirements are being implemented in such a staggered order that a child who entered kindergarten this year could be in high school before all of the dirtiest buses are taken off the roads. For their part, the bus companies say they will go bankrupt if the requirements are put in place more quickly.

At the end of a school day, children from Public School 84 on West 92nd Street climb aboard the bus that will take them home.

The state attorney general, Eliot Spitzer, has threatened to prosecute private operators in the city if drivers let their buses idle while waiting to load students. So far, Mr. Spitzer's office has signed agreements with the seven largest companies, which operate 75 percent
of the city's school buses. They have agreed to eliminate unnecessary idling within one block of a school.

No statistics show a high percentage of physical injuries to children because of the buses' age, or that the age contributes to a high rate of accidents. Rather, it is emissions that has drawn the ire of prosecutors.

Peter Lehner, chief of the attorney general's environmental division, said eliminating excessive idling could cut down on pollution, "but if the bus itself is old, it can still produce significant emissions." The city says the average age of large buses in its fleet is less than 11 years. But it did not know how many of them had been built before 1996, the year bus manufacturers were forced to substantially tighten emissions controls to reduce the most harmful pollutant: fine-particle soot.

However, a study done by the New York Metropolitan Transportation Council, a government and transportation industry planning group, found that 60 percent of the school buses in the city, including those that carry private school students, were built before 1996. For the companies serving the public schools, there appears to be a similar profile.

About 185,000 students ride a bus to school. Few ever see the oily black smoke long associated with diesel engines, but the buses they ride still produce exhaust that can be harmful. At Public School 9 in Brooklyn on Friday morning, the six buses that dropped off students all seemed to be free of visible smoke. But when Jacqueline Mack, a sixth grader, got off, she complained about the fumes. "Every time I smell it I can't really breathe," she said. "I start coughing from the fumes."

Peter M. Iwanowicz, director of environmental health at the American Lung Association of New York State, said, "The city is moving, but not nearly fast enough, not when we're talking about children's health." Students riding the older buses breathe in more pollution than those who ride newer ones, Mr. Iwanowicz said.

"Kids are being exposed to very high levels of soot on buses that can't be retrofit and should be retired right now," he said.

Marty Oestreicher, chief executive of the Office of School Support Services in the Department of Education, said the city was doing its best to reduce school bus emissions. But the city does not own the buses. It contracts with private companies that own the vehicles and have to pay for their replacements.

The Metropolitan Transportation Authority has reduced the age of its fleet substantially over the last five years and cut emissions by 85 percent. The privately owned school bus
fleet is not being replaced anywhere near as quickly. Instead, the owners are upgrading them by installing pollution-trapping catalysts and filters.

Combined with a new type of diesel fuel that contains very little sulfur, the most effective filters can reduce harmful pollutants by 95 percent.

But experts say, and city officials concede, that the most advanced filters do not work on pre-1996 buses because their engines cannot be controlled electronically.

Instead of using those filters on pre-1996 buses, the city has been using state grants to install oxidation catalysts, but the results have not been as good. When combined with low-sulfur fuel, the best the catalysts can do is reduce the amount of pollution by 30 percent to 40 percent, far less than the 95 percent reduction achieved with a filter-fuel combination.

But Mr. Oestreicher said that even the sophisticated filtering devices on some buses built after 1996 do not function effectively in New York. The culprit, he said, is the compactness of the city. Mr. Oestreicher said buses were not on the road long enough for the diesel engines to reach temperatures at which the filters function properly.

In the last three decades, the federal government has forced school bus manufacturers to meet progressively stronger pollution standards. But existing buses were exempt from the new standards.

To eliminate the oldest buses, New Jersey has a 12-year mandatory retirement age for school buses. In New York, local districts set their own standards, and some, like the Bethlehem Central School District near Albany, keep buses for as little as seven years. All school buses in New York State are inspected annually, but the emissions testing does not measure the most dangerous pollutants, environmental experts say.

In the last few months, New York City has begun two separate attempts to clean up the buses. First, the City Council passed a law in April requiring all school buses to be equipped with the best available technology to reduce emissions.

The law's principal sponsor, Councilman John C. Liu of Queens, chairman of the Council's Transportation Committee, said he realized that its impact was limited.

"I'm the first to concede that the law doesn't go far enough," said Mr. Liu, who experiences how bad the bus exhaust can be when he picks up his 5-year-old son, Joey, at school. "The exhaust pipes are almost at the same height as their faces," he said.
Mr. Liu said that the legislation ideally would have forced older buses off the roads immediately, but that would have created a hardship for the private operators and, eventually, for the Department of Education in future contracts. Instead, the law called for the buses to be cleaned up with filters.

Under the new law, half of the fleet's 6,200 buses must be modernized with pollution control devices by Sept. 1, 2006, and the rest by 2007.

Although the legislation did not impose a legal requirement to retire old buses, the Department of Education included a bus age provision in the four-year contract extension for the 52 private operators that run the city's buses, at a total cost of $700 million a year.

The contract extension, signed in August, imposed what amounts to a 20-year mandatory retirement age for buses, effective next June, along with a sliding scale for limiting the number of older buses in the fleet.

According to the new contract, all buses built before 1987 will have to be retired by next June. The fleet contains 190 buses, including at least one built in 1982, that will have to be taken off the roads. The contract also says that no more than 25 percent of the buses in any contractor's fleet can predate 1990.

The requirements change every year, so that by 2009 any bus built before 1990 will have to be retired.

If the same rate is applied in future contracts, the last pre-1996 bus will not be retired until 2015.

"Meeting these provisions represents a very high capital investment on the part of school bus contractors," said Peter R. Silverman, a lawyer who represents many of the companies. The gradual phase-in arrangement will replenish the fleet, he said, "in such a way as to keep the operators from going bankrupt."