

Tomorrow's Buses for Today's Children



 **CLEAN SCHOOL BUS USA** 



www.epa.gov/cleanschoolbus



Steer Your Community in the Right Direction

School buses provide 24 million of our nation's children with safe and convenient transportation between their homes and classrooms. On average, children spend more than an hour on a bus each school day as well as time waiting for, and getting on and off, the bus.

Unfortunately, school buses—particularly older ones that lack emissions control devices—emit tiny, sooty particles and toxic gases in their exhaust that can pose health hazards to children. When inhaled, pollutants in diesel exhaust may aggravate asthma and allergies or cause other serious health problems for our children.

Nevertheless, accident statistics indicate that school buses are the safest way to transport children. By adopting better idling practices, retrofitting buses with modern emission control technology, using cleaner fuels, and replacing older school buses, we can help put tomorrow's cleaner buses on the road today.



“We know that breathing diesel exhaust is not good for anyone. It has an especially significant impact on children’s health since they have a faster breathing rate than adults. The Clean School Bus USA program provides us a great opportunity to make a difference and reduce the amount of air pollution created by school buses. The school districts and communities that are already improving the air quality around our schools by providing the cleanest school buses should be recognized as leaders in providing healthier environments for today’s children.”

*—Margo Tsirigotis Oge, Director,
Office of Transportation and Air Quality, U.S. EPA*

Help Clear the Air with Clean School Bus USA

Clean School Bus USA is a new initiative sponsored by the U.S. Environmental Protection Agency (EPA) to help our communities reduce pollution from school buses. It's a partnership of educators, industry and corporate partners, transportation experts, public health officials, and other community leaders who are committed to protecting children's health and modernizing America's school bus fleet.

Clean School Bus USA is also a call to action for communities to join the partnership to begin work at the local level toward three important goals:

Reduce school bus idling time and adopt smart driving practices.

Retrofit the current school bus fleet with new technologies and introduce cleaner fuels.

Replace the oldest buses with new ones that meet stringent pollution control standards.

“The Portland School District uses scheduling and routing software to keep buses moving efficiently. We want to be on the leading edge when it comes to protecting our students from harmful pollutants.”

— *Kevin Mallory, Transportation Director for the City of Portland, Maine Schools*



For More Information

If you are interested in learning more about Clean School Bus USA, e-mail us at **cleanschoolbususa@epa.gov**, leave a voice message at **734-214-4780**, or visit our Web site at **www.epa.gov/cleanschoolbus**. We look forward to hearing from you!

Don't Be Idle: Improve Our Air and Save Money, Too

Idling school buses pollute the air that children breathe. Pollutants can accumulate inside the bus and outdoors near the bus. Exhaust from idling engines may also be sucked into building ventilation systems, affecting air quality inside schools. Drivers may occasionally need to let their engines idle briefly to warm the engine or run equipment, such as defrosters, but most idling is not necessary. Eliminating unnecessary idling is a simple, cost-effective way to help reduce children's exposure to air pollution.

Many school districts and local governments have developed initiatives to reduce school bus idling. In New England, for example, several government agencies have enacted idle time regulations, created educational materials for bus drivers, and developed idling policy guidelines.



Reduce Idling Time—The Savings Add Up!

If...

- ✓ A school bus fleet has 50 buses
- ✓ A school bus fleet reduces idling time by 30 minutes per bus per day
- ✓ A typical school bus uses a half gallon of diesel fuel per hour of idling
- ✓ Diesel fuel costs \$1.00 per gallon

Then...

What are the annual savings?

*Fuel Cost = 50 buses x 0.5 hours/day x 0.5 gallons of fuel/hour
x \$1.00 per gallon x 180 days*

Savings = 2,250 gallons of diesel fuel and **\$2,250**

Give the Green Light to Cleaner Fuels and Technologies

EPA is working aggressively to reduce pollution from new diesel buses by requiring them to meet tougher emission standards in the future. Tighter standards for new buses are scheduled to take effect starting in 2004 and again in 2007.

These standards won't apply to existing buses, however, and school buses can be in operation for 20 to 30 years. Without special action, it will take many years before new buses meeting the new pollution limits dominate our school bus fleet. In fact, today's kindergartner will be in college before the fleet fully turns over to reflect the benefits of the new standards.

The good news is that today's buses *can* take advantage of cleaner technologies and fuels similar to those that will be used to meet future emission standards. Retrofits with such systems can reduce pollution from current buses by 90 percent or more.

Nationwide, more and more school bus projects are underway, and a growing number of school districts are interested in retrofitting their fleets. School bus retrofit projects will benefit school children and help improve local air quality. To learn more about clean technologies and fuels for school buses, visit www.epa.gov/cleanschoolbus.

“Today’s technology has given our district the opportunity to move from the cloud of black diesel smoke that shrouded our buses daily to a rich environment that supports a healthy, safe mode of transportation. The Cleveland Municipal School District takes pride in educating our children and providing the safest transportation.”

*— Howard Strong,
Fleet Maintenance Manager,
Cleveland Municipal School District,
Cleveland, Ohio*

“Clean School Bus USA is very important to the health of our communities and especially to the health of school children. We hope that other school districts will follow as they see what a difference this program makes for our kids, our community, and for the environment.”

*— Dennis McLerran, Executive Director,
Puget Sound Clean Air Agency,
whose program was one of the first
in the nation to retrofit school buses.*



Drive It Home: Replace Your Older Buses

About a third of all diesel school buses now in service were built before 1990. These buses are excellent candidates for replacement. Older buses are not equipped with today's pollution control or safety features. Pre-1990 buses can pollute as much as six times more than new buses, so their replacement with clean diesel technology or clean burning alternative fuels (such as natural gas) means cleaner air for students, teachers, and the whole community. Newer buses also have important safety features such as additional emergency exits, improved crossview mirror systems, and new pedestrian safety devices that have been mandated by the Federal Motor Vehicle Safety Standards since 1990.

“New school buses have enhanced pollution control, safety, comfort, and maintenance features, as well as improved fuel efficiency. The bottom line: replacing a pre-1990 school bus provides society with a school bus that is cleaner, safer, and more efficient.”

*— Charles Gautier,
Executive Director,
National Association of State Directors of
Pupil Transportation Services*

In its first year, Clean School Bus USA awarded \$5 million in grants to help local school districts upgrade their bus fleets. For up-to-date information about future opportunities for financial assistance, visit the Clean School Bus USA Web site at www.epa.gov/cleanschoolbus.



Air Pollution Matters to Children's Health!

Did you know...

School buses travel 4 billion miles each year.

There are approximately 450,000 school buses on the road nationwide, and 390,000 of those buses are diesel.

Asthma is the most common long-term childhood disease, affecting 6.3 million children.

Smart driving practices include following at least 3 car lengths behind a vehicle with visible exhaust or a noticeable odor.

In partnership with the Alabama Department of Environmental Management, the city of Birmingham, Alabama, became the first community in the southeast to undertake a school bus retrofit project. The project was funded with a grant from the U.S. EPA. The city installed diesel oxidation catalysts on 70 school buses and was able to complete the installation in just 30 days. The oxidation catalysts are expected to significantly reduce school bus emissions: particulate matter by 20 percent, hydrocarbons by 50 percent, and carbon monoxide by 50 percent. The partners have shared their experiences and offered technical assistance to other communities interested in a school bus retrofit program. Driver surveys are underway to gather information on bus performance and maintenance requirements.





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