So how do schools ensure a safe, clean environment? Power buses with alternative fuels, say the authors. The report suggests, “alternative fuel technologies represent the cleanest available options for heavy-duty applications,” and recommends that alternative fuel buses “play an integral part in our emission-reduction strategy.”

INFORM, a New York-based nonprofit organization, agrees. INFORM examined nine major emission studies comparing conventional diesel buses with natural gas buses and published its findings in “Bus Futures: New Technologies for Cleaner Cities.” Specifically, INFORM reports that natural gas buses emit 40 to 86 percent less particulate matter and 38 to 58 percent less nitrogen oxides than diesel buses. Moreover, according to “Bus Futures,” natural gas is “virtually toxic-free, while diesel exhaust contains more than 40 toxic constituents, about half of which are known or suspected carcinogens.”

In addition to the clean air benefits, buses powered by domestically produced alternative fuels such as biodiesel, electricity, ethanol, natural gas, or propane can contribute significantly to our nation’s energy security. “School buses consume more than twice the amount of fuel used by the average passenger car,” said Shelley Launey, Director of the U.S. Department of Energy’s (DOE’s) Clean Cities Program. “Collectively, when powered by alternative fuel, they can make a big difference in reducing our nation’s petroleum consumption,” she said. “School buses are also highly visible to the community, which can generate good publicity for the school district or local government—they make an excellent alternative fuel niche market,” she said.

Niche markets, according to the Clean Cities definition, are “targets” or opportunities for which alternative fuels make sense. They include fleets with high mileage, high fuel-use vehicles that can reap the cost-savings benefits of using a less expensive alternative fuel. Niche vehicles also travel predictable routes and are capable of central refueling—factors that can help a fleet surmount refueling barriers. School buses, big fuel-users that drive relatively defined routes and are typically housed at a central facility, clearly fit the description.

Many schools already enjoy the benefits of alternative fuels. The NRDC and CCA report that there are approximately 2,675 alternative fuel school buses operated by nearly 130 school districts across the country. The
majority is located in California, with large numbers also in Texas, Oklahoma, Indiana, and Pennsylvania. Many of these fleets actively participate in the Clean Cities Program—for example, Clean Cities National Partner Award winners Northside Independent School District (Alamo Area coalition), Tulsa Public Schools (Greater Tulsa coalition), and Lower Merion School District (Greater Philadelphia coalition). The Clean Cities website features a growing number of success stories about school bus fleets using alternative fuels such as biodiesel, natural gas, and propane.

Whether they’re required to (see side box) or they voluntarily pursue alternative fuels, school districts face a critical barrier—cost. Alternative fuels such as natural gas and propane may cost less than traditional transportation fuels, but the initial price of a new alternative fuel bus is approximately $30,000 more than a conventional vehicle.

Some school districts, however, have been able to take advantage of state and local incentives to defray the initial cost. California, for example, offers several programs, including the Compressed Natural Gas School Bus Incentive Program, which can help reduce the initial purchase price of an alternative fuel bus even below the cost of a conventional diesel bus. Incentives in other states include Arizona’s SB2001, New York’s Clean Water/Clean Air Bond Act Funding, and Pennsylvania’s Alternative Fuels Incentive Grants (AFIG) Program, among others.

Soon, schools without the benefit of local incentives may also be eligible for help. If passed, several bills pending on Capitol Hill could help local governments and school districts finance the transition to a cleaner, alternative fuel fleet. For example, alternative fuel school buses feature prominently in the Comprehensive Energy Research and Technology Act of 2001, H.R. 2460, proposed by Congressman Sherwood Boehlert (R-NY).

Specifically, Subtitle A of H.R. 2460, referred to as the “Alternative Fuel Vehicle Acceleration Act of 2001,” would create a $300 million, DOE-sponsored, competitive grant program to fund up to 15 demonstration projects in partnership with state and local governments. Eligible projects would include the purchase of AFVs such as school buses, as well as infrastructure to support vehicles purchased with the grant money.

Subtitle D, also called the “Clean Green School Bus Act of 2001,” would establish a DOE grant program for local governments and others that provide bus service to public school systems. Funds would be available for purchases of alternative fuel or ultra-low sulfur diesel school buses that would replace older, dirtier vehicles. Buses purchased would be required to meet certain emission standards, which would become stricter over time. Funds would also be available for alternative fuel infrastructure, with an emphasis on shared or public access stations.

DOE’s Clean Cities Program also offers funds for school bus purchases through the State Energy Program (SEP). Nearly $490,000 was awarded for alternative fuel school bus projects this year. School buses will remain a project category in SEP 2002. The solicitation was expected in November 2001. Clean Cities’ new school bus tool, distributed to all designated coordinators this summer, can also help school districts select the AFV buses that best meet their needs and determine the cost benefits of making the conversion.

Where to go for more information:
- For a copy of NRDC’s “No Breathing in the Aisles,” go to www.nrdc.org/air/transportation/schoolbus/sbusinx.asp
- To learn about the experiences of alternative fuel school bus fleets, please visit www.ccities.doe.gov/success.shtml#school_buses
- For more on state and local incentives for alternative fuels, please visit www.fleets.doe.gov