



FACT SHEET

Clean and Green School Buses

Reducing Fuel Use and Exposure to Diesel Exhaust

October 21, 2008

Making schools “greener” is not just about buildings. Transportation of students and staff to and from school is an important component of a school’s environmental and greenhouse gas footprint. School buses play an important role in minimizing that footprint, but they present unique challenges and opportunities in reducing fuel use, emissions, and health impacts.

School Buses Displace Trips by Private Automobiles

School buses transport students to school safely while reducing the need for parents or others to drive students to school in a private automobile. The savings in time, fuel, and family dollars is substantial:

- A fleet of 500,000 school buses transport 25 million U.S. students each day
- School buses travel approximately 4.3 billion miles each year
- School buses substantially reduce air pollution and (assuming one school bus displaces the equivalent of 20 private vehicles):
 - Reduce oil consumption by 80 percent
 - Cut carbon emissions by 80 percent
 - Cut carbon monoxide by 60 percent
 - Cut nitrous oxides by 50 percent

Source: Massachusetts Department of Environmental Protection

Idle Reduction Saves Fuel and Protects Young Lungs

While school bus fleets cut fuel use and emissions compared to the automobile trips they displace, the practice of idling school bus engines needlessly consumes more fuel, produces more air pollutants, and specifically endangers the health of schoolchildren:

- 95 percent of all school buses have diesel engines – about 1/3 were built prior to 1990
- An idling diesel school bus consumes approximately one gallon of fuel per hour
- Truck and bus idling consumes approximately 2.4 billion gallons or 56 million barrels of diesel fuel each year (2-3 percent of annual U.S. diesel consumption = 2.5 billion barrels)
- Idling results in incomplete fuel combustion, creating more pollutants per gallon
- Pollutants in diesel exhaust – especially particulate matter – cause multiple health problems:
 - Decrease lung function
 - Exacerbate bronchitis and pneumonia
 - Trigger asthma
 - Cause allergy symptoms, including inflammation and irritation of airways
 - Identified as a possible human carcinogen and cause of premature death

Source: Utah Clean Cities Program

- **School children are especially susceptible to diesel exhaust:**
 - Young children inhale 50 percent more air per pound of body weight than adults
 - Developing lungs are less able to defend against the fine particulates in diesel exhaust which can become permanently lodged in the lungs
 - Idle exhaust disperses slowly and **accumulates inside buses**
 - Diesel exhaust may enter school buildings through air intakes when buses idle nearby
 - Children are exposed to exhaust as they board
- **Idle Reduction Strategies Make a Big Difference**
 - Educate bus drivers and school officials about the need to reduce idling of engines
 - Use equipment such as auxiliary heaters that remove incentives to idle
 - Route bus traffic and locate drop-off areas away from building and gathering places

EESI and Utah Clean Cities Partner to Promote Idle Reduction Curriculum for Bus Drivers and School Officials

Idle reduction strategies are simple and proven to work. But educating school officials and school bus drivers about the seriousness of the problem and how they can help solve it is an essential step.

The Utah Clean Cities program has developed an idle reduction and clean school bus curriculum specially tailored for local school district employees that has been tested in six school districts to date. EESI is working with school-related organizations across the country to distribute and promote the final curriculum.

For more information regarding the Clean School Bus and Idle Reduction Project, please contact Jan Mueller at (202) 662-1883 or jmueller@eesi.org.

Author: Jan Mueller

Editor: Carol Werner

Environmental and Energy Study Institute

1112 16th Street, NW, Suite 300

Washington, DC 20036

(202) 628-1400

www.eesi.org

The Environmental and Energy Study Institute (EESI) is a non-profit organization that works at the nexus of policy and innovation to promote environmentally sustainable societies. EESI was founded in 1984 by a bipartisan group of Congressional Members dedicated to finding environmental and energy solutions. EESI provides credible, timely information and innovative policy ideas through coalition building, media outreach, publications, briefings, workshops and task forces on the issues of energy efficiency and renewable energy, transportation, smart growth, agriculture and global climate change.