



An all-electric bus in Washington State

Electric Buses

Clean Transportation for Healthier Neighborhoods and Cleaner Air

Each day, buses carry millions of children to school and move millions of Americans around our cities. But, the majority of America's buses burn fossil fuels like diesel that threaten public health and contribute to global warming. The good news is that all-electric buses are here, and they're cleaner, healthier and often cheaper to run.

Pollution from Diesel Exhaust Threatens Public Health

Diesel exhaust from tailpipes is a dangerous pollutant – one that is common in urban areas and places with frequent truck and bus traffic, including the areas around our schools.

- Exposure to diesel exhaust has been linked to higher rates of mortality and lung cancer, decreased lung function and aggravated asthma symptoms.
- Children are especially vulnerable to diesel air pollution, which can harm their lungs, increase their likelihood of developing asthma, and harm developing fetuses.
- Levels of air pollution are higher near schools when school buses are idling, on buses traveling behind other buses, and near busy roads where buses travel.

Electric Buses Can Help Clean Our Air

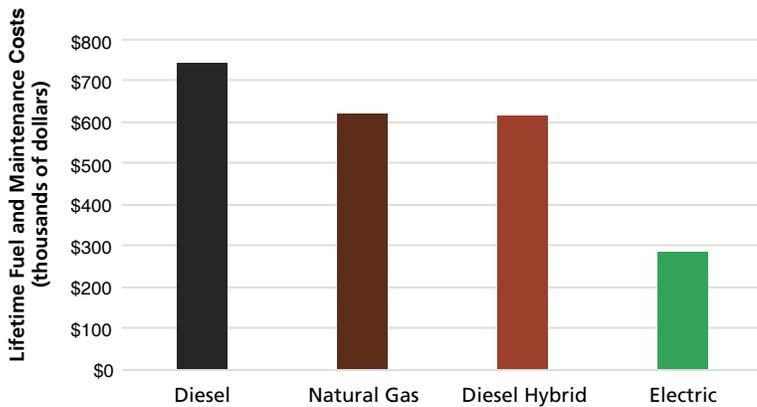
Electric buses produce no tailpipe emissions and use energy up to four times more efficiently than diesel or natural gas buses. By expanding transit options and improving bus service, while switching to clean electric buses, cities and schools across the country can help reduce global warming emissions and local air pollution.

- Replacing all of America's school buses with electric buses could avoid an average of 5.3 million tons of greenhouse gas emissions each year.
- Replacing all of the diesel-powered transit buses with electric buses in the United States could save more than 2 million tons of greenhouse gas emissions each year.

Potential Emissions Savings from Electric Buses for Select Transit Agencies

Agency	Major City Served	GHG Emissions Averted Annually with Electric Buses (short tons)	Equivalent # of Cars Taken Off the Road
City of Phoenix Public Transit Department (Valley Metro)	Phoenix, AZ	9,075	1,752
Denver Regional Transportation District	Denver, CO	46,967	9,067
Metropolitan Atlanta Rapid Transit Authority	Atlanta, GA	10,889	2,102
Chicago Transit Authority	Chicago, IL	54,993	10,616
Massachusetts Bay Transportation Authority	Boston, MA	55,071	10,631

Estimated Lifetime Fuel and Maintenance Costs of Transit Buses, by Fuel Type



Clean, All-Electric Buses Make Economic Sense

All-electric buses can save school districts and transit agencies money in annual operating costs from reduced fuel costs, while also providing more predictability in costs since electricity prices are relatively stable compared to oil prices. Electric buses also save money on maintenance costs since they have fewer parts, no exhaust systems and their breaking systems last longer. For instance:

- An analysis of an electric school bus pilot program found that the electric bus saves nearly \$2,000 a year in fuel and \$4,400 a year in reduced maintenance costs.
- According to the California Air Resources Board, an electric bus can save \$458,000 in fuel and maintenance costs over the bus's lifetime compared to a diesel bus and \$336,000 compared to a natural gas bus. (See chart above.)

Although electric buses today are still more expensive upfront than their diesel or natural gas-powered counterparts, electric buses can pay for themselves over their lifetime.

Recommendations

To support more widespread adoption, state governments should:

- Allocate settlement money from Volkswagen's "Dieselgate" settlement to subsidize the purchase of electric school and transit buses, as well as charging infrastructure.
- Create incentive programs and grants for transit agencies, school districts and bus contractors to help finance the upfront cost of electric buses and charging infrastructure.
- Facilitate the installation of charging infrastructure through programs that help cover the costs.
- Encourage utilities to design their rates in ways that support electric buses.
- Consider low-cost financing programs that help agencies, districts and bus contractors leverage other sources of funding, like Volkswagen settlement money.
- Identify other ways to ensure successful electrification of buses, including technical assistance and research, as well as the publication of data and lessons learned.

Transit agencies, school districts and bus contractors should:

- Replace buses powered by fossil fuels with the cleanest possible technology for the health of future generations: all-electric.
- Consider adopting goals to repower the entire fleet with electric buses over one replacement cycle.
- Ask state governments and beneficiary agencies to dedicate funds from the Volkswagen settlement to electric buses.

*For more information and the full report, please visit
www.uspirgedfund.org*

