

NATURAL GAS SCHOOL BUSES

Natural gas buses provide communities across the U.S. with a clean, reliable, and cost-effective transportation option for school children.

Most Cost Effective NOx Emissions Reductions

When comparing the cost of NOx reduction, Type-D natural gas school buses are:

24% more cost effective than diesel

\$220
per lb of NOx



Natural Gas

Technology Cost \$148,000

NOx Reduced 671 lbs

\$291
per lb of NOx

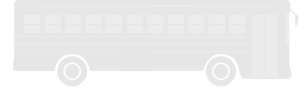


Diesel

Technology Cost \$115,000

NOx Reduced 396 lbs

Not Commercially Available



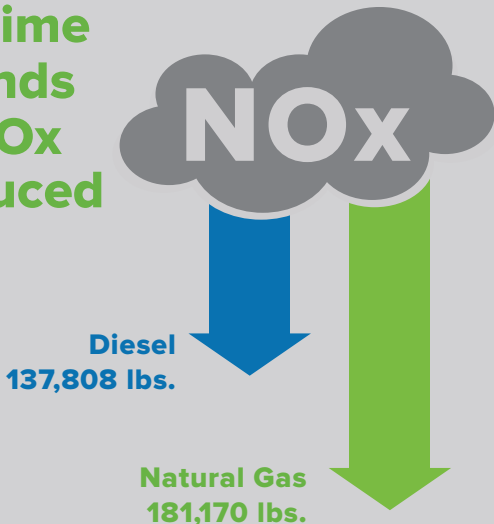
Electric

In 2015, a revolutionary natural gas engine was certified by the U.S. EPA and CARB to a level 90% below the EPA's current exhaust standard. These calculations assume the full cost to deploy the cleanest commercially available Type-D buses for each fuel type.

What would \$10 million in VW Settlement Funds buy?

The VW Settlement's Environmental Mitigation Trust (EMT) Fund provides millions in funding for states to replace older diesel vehicles with new cleaner trucks and Type-D buses. Funds may be used to offset 25% of the each new natural gas (\$37,000) and diesel (\$28,750) school bus. NGV America urges states to prioritize funding for the purchase of Type-D natural gas school buses because they deliver the greatest amount of emission reductions and air quality benefit for each dollar spent. Figures below represent benefit of using \$10 million to purchase new cleaner Type-D buses and include emission reductions associated with replacing older diesel buses and comparing lifetime emissions of new cleaner Type-D buses.

Lifetime Pounds of NOx Reduced



Total Gallons of Diesel Displaced

Natural Gas
>9 Million Gallons



Natural Gas School Buses are Road-Tested and Ready to Deploy

School buses represent a great opportunity for natural gas use in the U.S., with thousands of buses in operation today.

Both Thomas Built and Blue Bird provide factory-built Type C and Type D natural gas powered school buses. These buses are available through the standard dealer network. There are also a number of options to retrofit new buses or repower buses already in use.



natural gas school buses operate in the U.S.

Fast Return-on-Investment Due to Low Fuel and Maintenance Costs

\$35,000
fuel savings
per bus

Even with today's oil prices, natural gas prices can be \$0.75 to \$1 or more lower than diesel at the pump. The price differential quickly translates into substantial fuel savings for school buses, which typically consume around 2,300 diesel gallon equivalents (DGE) per year, and have tough-duty cycles, low miles per gallon, and high engine hours.



Natural gas trucks/buses are easier to maintain than diesel trucks/buses. Advantages include:

- No diesel particulate filter regeneration or waste
- No selective catalytic reduction
- No diesel emission fluid

Natural Gas School Bus Fleet Success Stories:



LOS ANGELES UNIFIED SCHOOL DISTRICT

The Los Angeles Unified School District (LAUSD) Transportation Branch is committed to protecting children's health while ensuring environmental stewardship. To reduce emissions, the LAUSD operates the largest compressed natural gas (CNG) school bus fleet in the State of California with over 520 buses operating on clean burning CNG.



LEE'S SUMMIT R-7 SCHOOL DISTRICT

Lee's Summit R-7 School District of Lee's Summit, Missouri, has made a positive impact on the health of its 12,000+ students. In 2014, Lee's Summit R-7 placed an order for 106 natural gas school buses, at the time, one of the largest one-time orders of CNG buses in U.S. history. Since the first order, Lee's Summit R-7 School District has acquired nearly 150 CNG school buses and more than 75 CNG light-duty vehicles.