

NATURAL GAS TRANSIT FLEETS

Natural gas transit buses have a track record of clean, reliable, and cost-effective service in major metro markets and dozens of small communities.

Most Cost Effective NOx Emission Reductions

When comparing the cost of NOx reduction, natural gas transit buses are:

49% more cost effective than diesel

52% more cost effective than electric

\$273
per lb of NOx



Natural Gas

Technology Cost \$360,000

**NOx Reduced
1,318 lbs**

\$540
per lb of NOx



Diesel

Technology Cost \$300,000

NOx Reduced 555 lbs

\$569
per lb of NOx



Electric

Technology Cost \$750,000

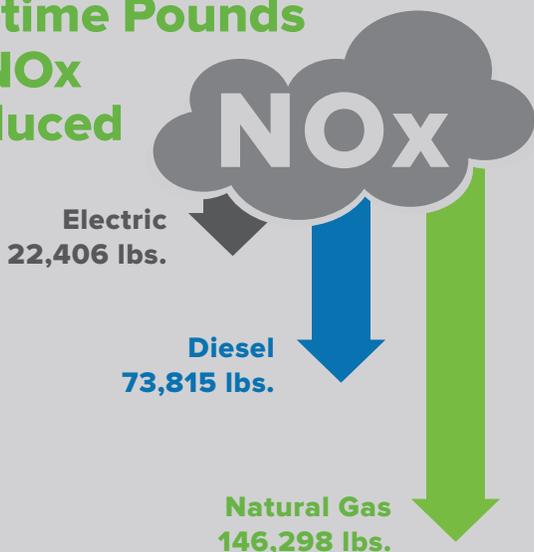
NOx Reduced 1,318 lbs

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 acquire the cleanest commercially available 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 buses. Funds may be used to offset 25% of the each new natural gas (\$90,000) and diesel (\$75,000) transit bus and 75% of the cost of a new electric (\$562,500) bus. NGV America urges states to prioritize funding for the purchase of natural gas 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 buses and include emission reductions associated with replacing older diesel buses and comparing lifetime emissions of new cleaner buses.

Lifetime Pounds of NOx Reduced



Total Gallons of Diesel Displaced

Natural Gas
>13 Million Gallons

Electric
>2 Million Gallons



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

Transit buses are one of the fastest growing segments of natural gas vehicles in the U.S., with thousands of buses that have been in operation for more than a decade. Natural gas transit buses are available from OEMs with established sales and service networks, including:

- DesignLine
- El Dorado
- Gillig
- New Flyer/NABI
- NOVA
- Motor Coach Industries



30%

of new transit buses on order in the U.S. are powered by natural gas



natural gas transit buses operate in the U.S.

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



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 transit buses, which typically consume 10,000 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 Transit Fleet Success Stories:



LA COUNTY METROPOLITAN TRANSIT AUTHORITY

The Los Angeles County Metropolitan Transit Authority (LA Metro) operates the largest natural gas transit fleet in North America with more than 2,250 CNG buses. In the fall of 2016, LA Metro began deploying and testing near-zero-emission natural gas engines from Cummins Westport. In May 2017, LA Metro signed a multi-year contract with Clean Energy to purchase renewable natural gas (RNG), with plans to run on 100% RNG within five years.



PENNSYLVANIA CENTRE AREA TRANSPORTATION AUTHORITY

Pennsylvania's Centre Area Transportation Authority (CATA) in State College was the first agency on the East Coast to convert its fleet to run on natural gas. Since its first CNG bus was purchased in 1993, CATA has remained committed to a clean, domestic transportation fuel; converting its entire fleet to CNG. By going all-in on CNG, CATA is promoting energy independence, supporting the state's economy, helping to keep the air clean, and saving money.