

✓ Cleaner Air Starts with Cleaner Trucks



Heavy-duty trucks and buses are the #1 sources of urban emissions.



74%

3 out of 4 heavy-duty trucks on our roads today are not certified to EPA's latest NOx standard.

Source: DTF Analysis on IHS Vehicles in Operation Data, December 2015

Natural Gas is NOW

✓ Heavy-Duty = Heavy Impact

Replacing 1 traditional diesel-burning heavy-duty truck with 1 new Ultra Low-NOx natural gas heavy-duty truck is the emissions equivalent of removing 119 traditional combustion engine cars off our roads.

Source: https://greet.es.anl.gov/afleet_tool



Unlike trucks and buses, passenger vehicles sit idle 95% of the time.



✓ Go Carbon-Free with Renewable Natural Gas

When Renewable Natural Gas captured from agricultural, food, landfill or wastewater is used as transportation fuel, even greater CO₂ and greenhouse gas emission reductions are achieved... up to 125% lower than the cleanest diesel.

RNG is carbon-neutral, even carbon-negative.

Up to -303.3 EER-Adjusted Carbon Intensity

Source: California Air Resources Board, February 2017.

✓ The Cleanest Heavy-Duty Truck Engine in the World is Powered by Natural Gas

90% cleaner than EPA's current NOx emissions requirement.
90% cleaner than the cleanest diesel engine.

Source: U.S. Environmental Protection Agency and California Air Resources Board, 2018

In real-life study, natural gas engines emitted lower NOx emissions than certified; diesel engines emitted 5x more than their EPA certification.

Source: University of California, in-use testing of heavy-duty trucks in port applications, November 2016



✓ RNG Use is Growing Rapidly

32% of natural gas used in on-road transportation in 2018 was RNG.

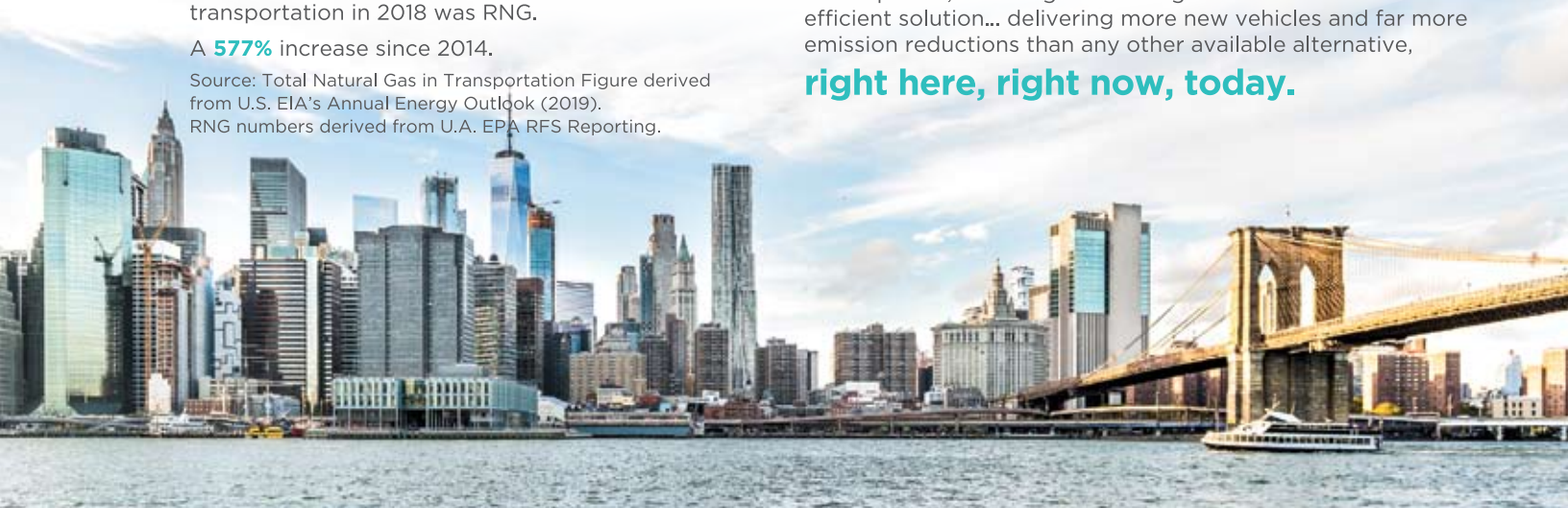
A **577%** increase since 2014.

Source: Total Natural Gas in Transportation Figure derived from U.S. EIA's Annual Energy Outlook (2019).
RNG numbers derived from U.A. EPA RFS Reporting.

✓ Natural Gas Makes \$ense

Compared to expensive electric or fuel cell technologies still in development, investing in natural gas vehicles is the most cost-efficient solution... delivering more new vehicles and far more emission reductions than any other available alternative,

right here, right now, today.



Why wait? Get clean air and combat climate change today with natural gas vehicles. Learn more and view our introductory video at www.ngvamerica.org.

NGVAMERICA

Natural Gas Vehicles for America

✓ Our Air is Killing Our Kids

4 out of every 10 Americans live in areas with air that is unhealthy to breathe....

134 million Americans.

Source: American Lung Association, 2018

25 million Americans suffer from asthma...

1 in 12 people. **Every day in the United States, due to asthma:**

- **30,000** people have an asthma attack
- **5,000** people visit the emergency room
- **1,000** people are admitted to the hospital
- **11** people die

Source: Centers for Disease Control and Prevention

From 2001-2009, the greatest rise in asthma rates was among black children – a **50% increase**.

- **1 in 6** black children had asthma in 2009
- **\$56 billion** annually in medical costs, lost school and work days, and early deaths

Source: Centers for Disease Control and Prevention, May 2011

71% of African Americans live in counties in violation of federal air pollution standards.

- Black children are **2x** as likely to be hospitalized for asthma and **4x** as likely to die from asthma as white children

Source: EPA, July 2015

Why N



✓ A Sustainable Alternative

Natural gas is a naturally-occurring, plentiful and odorless substance composed mainly of methane

- Geologic natural gas reserves come from large quantities of decaying organic materials that have accumulated over millions of years beneath the earth's surface.
- Renewable natural gas is biogas that is captured above ground as organic waste breaks down, harnessed directly from decaying food waste, wastewater, agricultural waste and landfills.

Both are smart, ultra-low-emission, affordable alternatives to traditional transportation fuels like gasoline and diesel.



Natural Gas?

✓ Most Responsible Investment to Clean Air and Combat Climate Change

Natural gas provides the largest and most cost-effective reductions in transportation-related pollutants than any other powertrain option commercially-available today.

✓ Solutions for Every Vehicle Class

Natural gas is impacting vehicles in every class and application... at airports and ports, with short- and long-haul freight delivery, in public transit and school transportation, and through municipal services and refuse and recycling collection.

Off-road applications in marine, rail, and construction are also impacting our air and climate.

See more at www.ngvamerica.org/vehicles/.

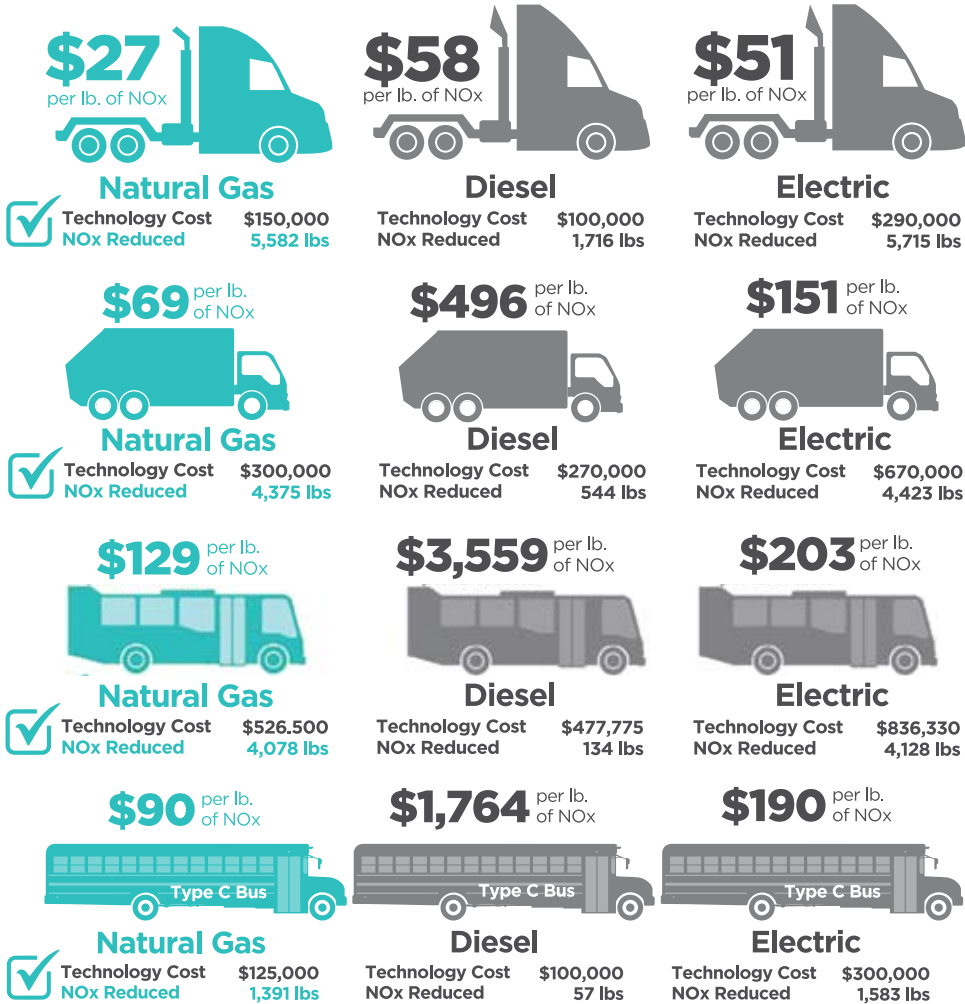


✓ It's More Than Just the Tailpipe

**Total life-cycle counts
Component sourcing matters**

According to the Union of Concerned Scientists, it takes so much energy to make batteries that BEVs with a 250-mile range start out life with a carbon footprint 68% higher than a piston-engine car.

Source:
"The Environmental Downside of BEVs,"
Wards Auto, October 27, 2017



*Emission comparisons are based on results using Argonne National Laboratory's HDVEC tool (<https://afleet-web.es.anl.gov/hdv-emissions-calculator/>) and include modeling of new low-NOx natural gas engines and the diesel in-use emissions option.



Why wait? Achieve Incremental Gains Today.
Find out more how NGVs champion clean air and combat climate change at www.ngvamerica.org.



Why Wait?

“If we want healthier air today... if we want cleaner air now... we need cleaner cars, trucks, buses and ships fueled by natural gas.”

Dan Gage
NGVAmerica President

✓ Most Impactful and Cost-Effective

- More new vehicles and far greater emission benefits for the investment than any other alternative
- No other transportation fuel is as sustainable, adaptive, and competitive across all applications and vehicle classes

✓ Ready-Right-Now

- Road-tested, proven, commercially-available technology
- Established refueling infrastructure of over 2,000 stations
- Mature network of manufacturers, servicers, and suppliers coast-to-coast
- Unmatched system resiliency and redundancy in times of storms and disasters

Join NGVAmerica’s Contract for Clean Air and Climate

- Advance clean natural gas transportation infrastructure investments
- Support tax incentives encouraging NGV adoption, including the \$.50/gallon federal Alternative Fuel Tax Credit
- Eliminate barriers to NGV entry; fund NGV R&D
- Incentivize market build-out; guarantee NG fuel savings



An American Fuel Sourced by American Labor using American Technology



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Renewable natural gas is produced in every U.S. state. 34 states produce geologic natural gas



4.1 million

4.1 million natural gas industry jobs nationwide



#1

America is the world’s leader in natural gas production and technology



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Natural gas fueling pays into the federal highway trust fund

