Cleaning the Air and

Decarbonizing
New Jersey

with CNG Refuse Trucks

New Jersey refuse haulers are voluntarily investing in alternative fuel vehicle technology, drastically reducing criteria pollutants and greenhouse gas emissions to clean the air and decarbonize their fleets.

Today's natural gas-fueled waste and recycling collection and disposal vehicles virtually eliminate NOx and particulate matter emissions and - when fueled with biomethane (RNG) collected above ground - can offer a net-zero carbon collection result.

Investing in What's Right

natural gas (CNG) powered refuse trucks operate across the state, currently servicing at least 16 of New Jersey's 21 counties





CNG

Waste to Wheels

CNG refuse trucks can be fueled by the very waste they collect for a carbon-free result.



Biomethane, or renewable natural gas (RNG), is created by capturing methane emissions from landfills, wastewater treatment plants, and other waste streams.



Because RNG removes natural emissions from the atmosphere and replaces dirty fuels, it is the only motor fuel capable of being carbon-negative.



RNG use can reduce transportation GHG emissions by more than 200%.

Investments to Date in Clean Natural Gas Refuse Trucks

76% of New Jersey counties utilize natural gas refuse trucks

\$200 million in

investment to support clean air refuse collection in the State of New Jersey

Note: Figure includes purchase of 550 natural gas refuse vehicles at an estimated cost of \$300,000/unit (\$165,000,000 total) plus construction of 18 refueling stations to support them at a total cost of \$35,000,000 (individual station costs between \$1,500,000 and \$3,000,000 depending on fleet need).





Clean the air and decarbonize the state's refuse collection affordably and immediately with natural gas vehicles fueled with RNG. Learn more at NGVAmerica.org.



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CNG: The Most Cost-Effective and Immediate Solution





| | Refus | e Truck | —) |
|-------|-------|-----------|------------|
| | 00 | | 0 |
| Total | Cost | \$335,000 | |

| otal Cost | \$335,000 |
|-----------|-----------|
| ayload | 10 tons, |
| | |

Comparable to Diesel

\$24,842 LFG**

\$33 LFG**

Cost per ton of NOx

P

reduced

Cost per ton of GHGs reduced

Sector Wide*** \$350 million **Transition** Incremental Cost

Battery Electric Refuse Truck

| Total | Cos |
|-------|-----|
| Paylo | ad |

\$650,000* Up to 5 tons, 50% less than Diesel

Cost per ton of NOx reduced

\$360,575

Cost per ton of GHGs reduced

\$381

Sector Wide*** \$3.5-4.2 billion **Transition** Incremental Cost

*Note that costly battery electric refuse trucks are still in development. Those currently in service are for $demonstration\ purposes\ only.\ Alternatively,\ CNG\ refuse\ trucks\ are\ deployable,\ scalable,\ and\ affordable\ now.$ **LFG = RNG produced from landfill gas

with CNG Refuse Trucks

Achieve Carbon-Free Collection and Eliminate More Emissions Now with RNG

Refuse collection using ultra-low-NOx natural gas trucks fueled with renewable natural gas (RNG) reduces more criteria pollutant (NOx) and greenhouse gas (GHG) emissions than collection using a battery electric alternative:

| | Renewable Natural GAS | Battery Electric |
|-----------------------|--|---------------------------------------|
| Criteria Polutants | 14,000 tons of NOx reduced | 9,700 tons of NOx reduced |
| Greenhouse Gases | 10.6 million tons of GHG reduced | 9.2 million tons of GHG reduced |

Note: Figures above based on conversion of the entire state fleet of 10,000 refuse trucks; tabulated using U.S. DOE Argonne National Laboratory's AFLEET Tool. Figures based on vehicle lifetime emissions (12-year lifecycle) compared to diesel refuse truck fleet.

> Get More Clean Refuse Trucks on the Road Now with Natural Gas



^{***} Incremental vehicle costs only (over diesel incumbent) to convert entire state fleet of 10,000 refuse trucks