Decarbonize Transportation

with Renewable Natural Gas

Affordable and proven natural gas vehicle technology fueled with **biomethane (RNG)** collected at local landfills, wastewater treatment plants, commercial food waste facilities, and agricultural digesters can yield a **carbon-negative** lifecycle emissions result.

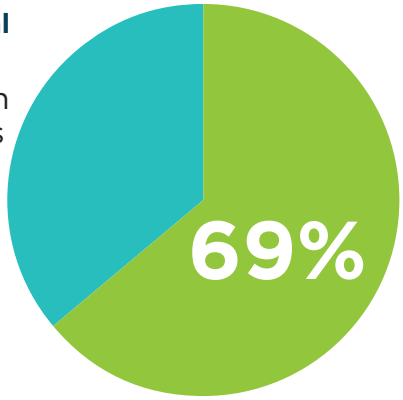
Note: California Air Resources Board (CARB), LCFS Pathway Certified Carbon Intensities.

2022 NGV Fuel Use

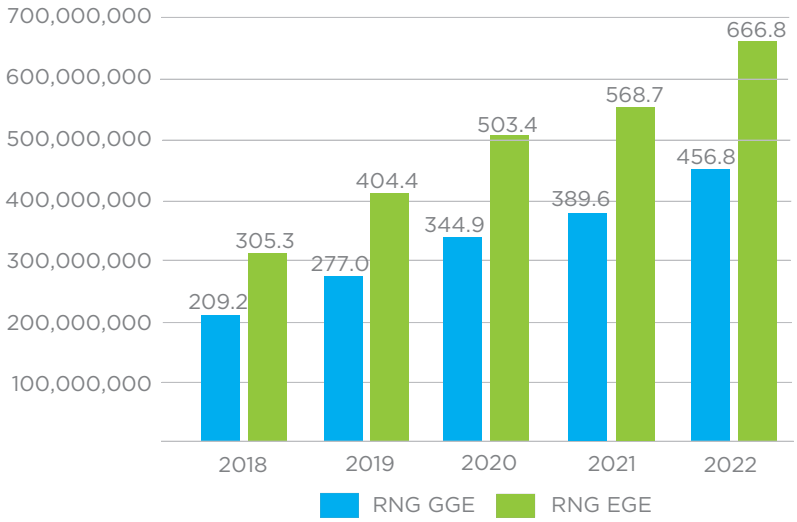
663 Million GGE Total

In 2022, **69%** of all on-road fuel used in natural gas vehicles was RNG.

- Conventional Natural Gas **206 Million GGE**
- Renewable Natural Gas **457 Million GGE**



RNG Growth



RNG Production Facilities

281 in operation

180 under construction

296 in development

Note: in U.S. and Canada as of 3/20/23

RNG use as a transportation fuel grew **17% over 2021** volumes, increasing **218%** over the last five years. RNG offset a total of **5.63 million tons** of CO2e in 2022.

Note: GGE = gasoline gallon equivalent. EGE = ethanol gallon equivalent. EGE units are converted to GGE using a 0.69 multiplier (77,000 Btu/112,400 Btu). Total Natural Gas in Transportation Figure derived from U.S. EIA's Annual Energy Outlook (2023) and RNG numbers derived from U.S. EPA RFS Reporting. Total greenhouse gas emissions and associated carbon dioxide equivalent (CO2e) metric tons identified using average carbon intensity (CI) scores of RNG sold in California and fuel sold nationally. Based on data available at the time of publication, California volumes accounted for 47 percent of all RNG use with the remainder sold outside of California.

CARB LCFS program data confirms that the annual average CI value of California's bio-CNG vehicle fuel portfolio for 2022 was carbon-negative and below zero at -92.26 gCO_2e/MJ.

Note: California Air Resources Board Low Carbon Fuel Standard Program Certified Fuel Pathways

Put into Perspective, Last Year RNG as a Transportation Fuel ...

Lowered GHG emissions equivalent to **13,962,408,760** miles driven by the average passenger car

Reduced CO_2 emissions equal to **632,947,114** gallons of gasoline consumed

Sequestered carbon equal to growing **93,009,875** tree seedlings for ten years

or **6,656,825** acres of U.S. forests for one year

Note: Assumes 5,625,001 metric tons of CO2e eliminated in 2022 through RNG usage calculated using CARB's LCFS carbon intensity numbers. GHG equivalency calculated using the U.S. EPA's calculator.

THE COALITION FOR RENEWABLE NATURAL GAS

This 2022 on-road RNG use report was issued by NGVAmerica and the Coalition for Renewable Natural Gas, April 2023. Find out more at **RNGCoalition.com** or **NGVAmerica.org**.

NGVAMERICA
Natural Gas Vehicles for America