# 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.

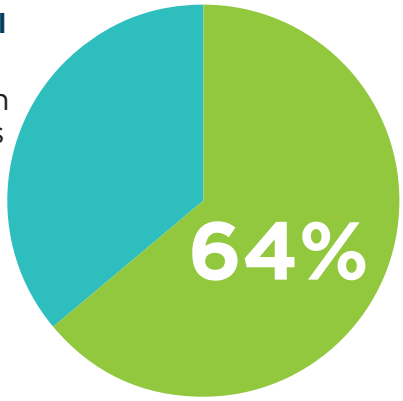
Note: California Air Resources Board (CARB), LCFS Pathway Certified Carbon Intensities.

### 2021 NGV Fuel Use

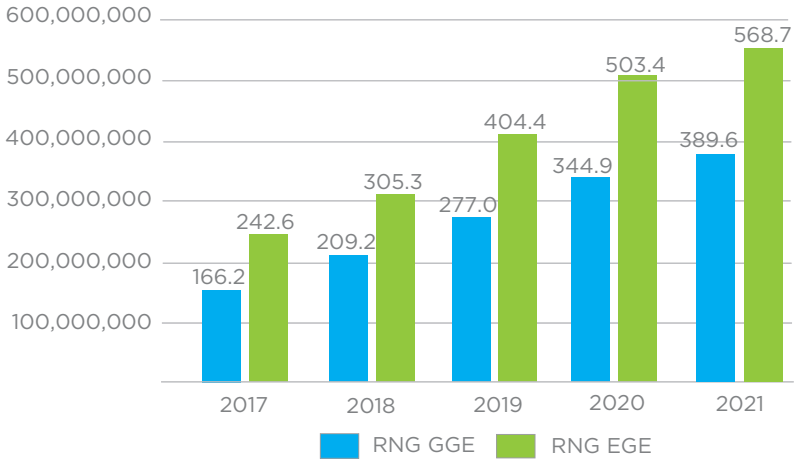
**610 Million GGE Total**

In 2021, **64%** of all on-road fuel used in natural gas vehicles was RNG

- Conventional Natural Gas **220 Million GGE**
- Renewable Natural Gas **390 Million GGE**




### RNG Growth




### RNG Production Facilities

**250** in operation

**112** under construction

**125** in development

Note: in U.S. and Canada as of 4/15/22, U.S. DOE Argonne National Laboratory

RNG use as a transportation fuel grew **13% over 2020** volumes, increasing **234%** over the last five years. RNG offset a total of **3.8 million tons** of CO2e in 2021.

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 (2022) and RNG numbers derived from U.S. EPA RFS Reporting with adjustments made based on fueler member reporting. Total greenhouse gas emissions and associated carbon dioxide equivalent ($CO_2e$) 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 51.31 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 2021 was carbon-negative and below zero at -44.41 $gCO_2e/MJ$.

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 **9,426,002,333** miles driven by the average passenger car

Reduced $CO_2$ emissions equal to **427,301,698** gallons of gasoline consumed

Sequestered carbon equal to growing **62,790,835** tree seedlings for ten years

or **4,494,013** acres of U.S. forests for one year

Note: Assumes 3,797,430 metric tons of $CO_2e$ eliminated in 2021 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 2021 on-road RNG use report was issued by NGVAmerica and the Coalition for Renewable Natural Gas, May 2022. Find out more at **RNGCoalition.com** or **NGVAmerica.org**.

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Natural Gas Vehicles for America