

# Decarbonize the Road Ahead 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.

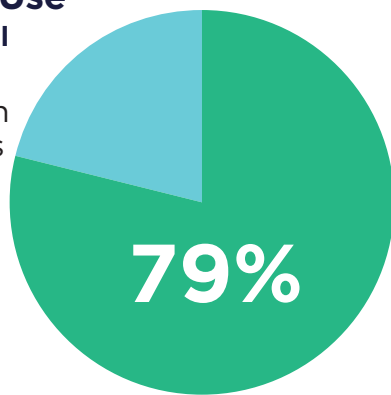
Note: California Air Resources Board (CARB), LCFS Pathway Certified Carbon Intensities.

## 2023 NGV Fuel Use

**675 Million GGE Total**

In 2023, **79%** of all on-road fuel used in natural gas vehicles was RNG.

- Conventional Natural Gas  
**144 Million GGE**
- Renewable Natural Gas  
**531 Million GGE**



## RNG Production Facilities



**338**  
in operation



**165**  
under construction



**324**  
in development

Note: in U.S. and Canada as of 4/20/24

CARB LCFS program data confirms that annual average CI value of California bio-CNG vehicle fuel portfolio for the first three quarters of 2023 was carbon negative and below zero at **-118.85 gCO<sub>2</sub>e/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 **17,810,353,003** miles driven by the average passenger car



Reduced CO<sub>2</sub> emissions equal to **783,592,438** gallons of gasoline consumed



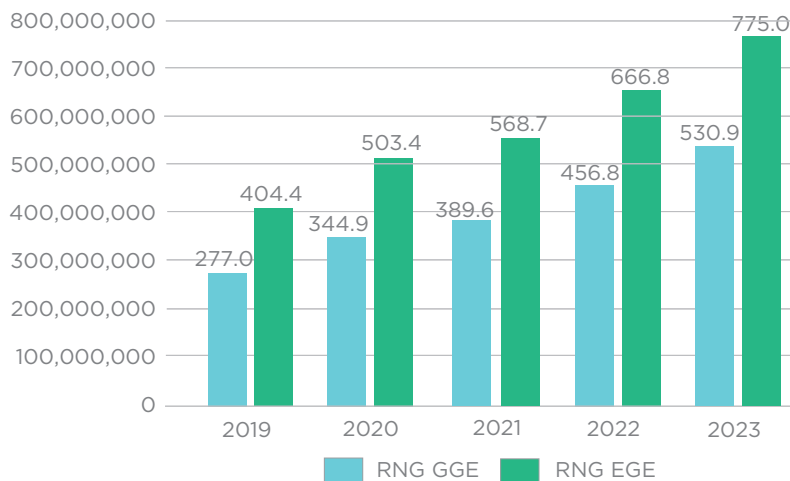
Sequestered carbon equal to growing **115,146,800** tree seedlings for ten years



or **8,130,425** acres of U.S. forests for one year

Note: Assumes 6,963,786 metric tons of CO<sub>2</sub>e eliminated in 2023 through RNG usage calculated using CARB's LCFS carbon intensity numbers. GHG equivalency calculated using the U.S. EPA's calculator.

## RNG Growth



RNG use as a transportation fuel grew **16% over 2022** volumes, increasing **92% over the last five years**. RNG offset a total of **6.96 million tons** of CO<sub>2</sub>e in 2023.

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 (CO<sub>2</sub>e) 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 44 percent of all RNG use with the remainder sold outside of California.

THE COALITION FOR  
**RENEWABLE  
NATURAL GAS**

This 2023 on-road RNG use report was issued by The Transport Project and the Coalition for Renewable Natural Gas, April 2024.

Find out more at  
[RNGCoalition.com](http://RNGCoalition.com) or [transportproject.org](http://transportproject.org).

