PRESS RELEASE





June 4, 2024

BIO-CNG-FUELED FLEETS IN CALIFORNIA ACHIEVING CARBON-FREE FOOTPRINT TODAY, BETTER THAN ANY OTHER CLEAN FUEL OPTION

Bio-CNG Achieved Annual Average Carbon Intensity Score of -126.42 gCO2e/MJ for 2023

WASHINGTON, DC – The Transport Project (TTP) and Coalition for Renewable Natural Gas (RNG Coalition) – with partner California Renewable Transportation Alliance – today announced that California fleets fueled with bio-CNG achieved carbon-negativity in their transportation operations last calendar year for the fourth straight year.

Renewable natural gas (RNG) accounted for 97% of all on-road fuel used in natural gas vehicles in California in 2023. According to data from the California Air Resources Board (CARB) the annual average carbon intensity score of bio-CNG in that mix was -126.42 gCO2e/MJ. [1]

In fact, bio-CNG holds the lowest average carbon intensity of any clean fuel option on California's roadways today and is the only fuel producing a negative carbon intensity fleet outcome in the California Low Carbon Fuel Standard (LCFS) Program, which includes ethanol, biodiesel, renewable diesel, bio-CNG, bio-LNG, electricity, alternative jet fuel, and hydrogen. [2]

Even more, while RNG made up just 5.1% of all on-road alternative fuels dispensed by volume, it generated 19.2% of all carbon dioxide equivalent (CO2e) emission reductions of on-road alternative fuels reported under the California LCFS in 2023. [3]

Captured above ground from organic material in agricultural, wastewater, landfill, or food waste, RNG can produce carbon-negative results when fueling on-road vehicles like short- and long-haul trucks, transit buses, and refuse and recycling collection vehicles.

"When used as a transportation fuel, RNG displaces gasoline and diesel in applications that are difficult – if not virtually impossible – to electrify," said Daniel Gage, President of The Transport Project. "California's commercial fleets deploying trucks fueled by RNG are achieving a cost effective, carbon-negative transportation outcome today without compromising existing business operations."

TTP and RNG Coalition report that in 2023 a total of 209.9 million gallons (DGE)[4] of natural gas were used as motor fuel in the state. Of that, 203.10 million gallons (DGE) were from renewable sources. [5]

"RNG facilities address methane emissions from society's inevitable waste streams, mitigate the environmental impacts of those emissions and convert captured methane into domestic, renewable, clean fuel and energy," said Johannes Escudero, Founder & CEO of RNG Coalition. "These numbers highlight the critical role that RNG plays in decarbonizing the transportation sector today."

In addition to their negative greenhouse gas (GHG) emissions, ultra-low NOx medium- and heavy-duty

RNG-fueled trucks and buses perform at levels that are 90% below the federal nitrogen oxide (NOx) standard and 90% below the federal particulate matter (PM 2.5) standard. [6] NGVs virtually eliminate criteria pollutant emissions that contribute to asthma, heart disease, and poor air quality.

Aggressive goals to decarbonized transportation over the next decade will only be achieved by prioritizing the transition of heavy-polluting, high mileage commercial fleets to cost-effective carbon-negative solutions like RNG fueled trucks. These trucks are commercially available now, accruing and compounding significant clean air and carbon reductions today.

Unlike developing heavy-duty ZEV options including battery electric and hydrogen, RNG-fueled trucks and buses have access to an established California public fueling infrastructure and a mature network of servicers and suppliers. RNG trucks are affordable and scalable, meeting range and operations requirements for any commercial medium- and heavy-duty application. And RNG fueled trucks and buses do not rely on components sourced and controlled overseas.

Details of today's report – including graphics – can be accessed at: TTP's website<u>HERE</u> and RNG Coalition's website <u>HERE</u>.

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The Transport Project is a national coalition of roughly 200 fleets, vehicle and engine manufacturers and dealers, servicers and suppliers, and fuel producers and providers dedicated to the decarbonization of North America's transportation sector. Through the increased use of gaseous motor fuels including renewable natural gas and hydrogen, the United States and Canada can help achieve ambitious climate goals and greatly improve air quality safely, reliably, and effectively without delay and without compromising existing commercial business operations. Find out more at: <u>transportproject.org</u>.

Coalition for Renewable Natural Gas is the non-profit association providing leadership, public policy advocacy and education for the sustainable development, deployment, and utilization of renewable natural gas. Membership is comprised of 400+ companies committed to supporting RNG Coalition's mission and Sustainable Methane Abatement & Recycling Timeline (SMART). RNG Coalition represents industry, including leading companies, municipalities, ports and airports, colleges, and universities throughout the United States and Canada. Find out more at: <u>www.mgcoalition.com</u>.

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[1] California Air Resources Board, Low Carbon Fuel Standard Program Reporting Tool Quarterly. Available at: <u>https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-reporting-tool-guarterly-summaries</u>.

[<u>2]</u> Ibid.

[<u>3]</u> Ibid.

[4] DGE = diesel gallon equivalent.

[5] Total Natural Gas in Transportation Figure derived from U.S. EIA's Annual Energy Outlook (2023) and RNG numbers derived from U.S. EPA Renewable Fuel Standard Program reporting with adjustments made based on fueler member reporting.

[6] Cummins, Inc. Available at: <u>https://www.cummins.com/sites/default/files/2022-12/cummins-natural-gas-engines-ebook.pdf</u>.

Decarbonizing California Fleets

with Renewable Natural Gas Transportation

For the fourth consecutive year, California fleets fueled with in-state bio-CNG were carbon-negative in 2023, based on an annual average carbon intensity score of -126.42 gCO2e/MJ. Biomethane sourced from dairy digesters, local landfills, wastewater treatment plants, commercial food waste facilities, and agricultural operations provides the most affordable and proven solution to decarbonize medium- and heavy-duty transportation today.

Note: gCO2e/MJ = grams of carbon dioxide equivalent per megajoule of energy. Data from California Air Resources Board (CARB) Low Carbon Fuel Standard (LCFS) Reporting Tool Quarterly Summaries

The only motor fuel with negative carbon intensity



Fuel Up on Fact: At -126.42, bio-CNG holds the lowest average carbon intensity of any clean fuel option on California's roadways today and is the only fuel with a negative carbon intensity Note: Data from CARB LCFS Reporting Tool Quarterly

Note: Data from CARB LCFS Reporting Tool Quarterly Summaries (calculated weighted average)



CA LCFS 2023 Renewable Fuels Average CI Score (gCO2e/MJ)



Note: Baseline conventional diesel carbon intensity = 100.45. Data from CARB's LCFS Reporting Tool Quarterly Summaries

Report produced June 2024 by:



Supporting Partner:



Decarbonizing California Fleets with Renewable Natural Gas Transportation

By the numbers...



RNG use as a transportation fuel in California has increased **46%** over the last five years.

In 2023 alone, California's RNG motor fuel use resulted in the displacement of **5.3 million metric tons** of carbon dioxide equivalent (CO2e) emissions.





RNG use in 2023 accounted for

over 23% of all the emission reductions generated by motor fuels or 17% of all credits generated under the program including credits for on-road and off-road electric use, electric infrastructure, and refinery improvements.

RNG's 2023 GHG

emissions reductions are the equivalent of removing **1,267,484 gasoline-**



powered cars from California roadways for one year.

Note: Natural gas volumes and emission reductions calculated using figures available from CARB LCFS Reporting Tool Quarterly Summaries

Packing a big punch

While RNG made up just **5.1%** of all on-road alternative fuels dispensed by volume, it generated **19.2%** of all CO2e reductions of on-road alternative fuels reported under the California LCFS in 2023.

2023 On-Road Alternative Fuels Volumes & Emission Reductions



Die

Note: Includes all biomethane (bio-CNG + bio-LNG). Treats all renewable diesel reported in program as on-road fuel. DGE = diesel gallon equivalent. Data from CARB LCFS Reporting Tool Quarterly Summaries

Sustainable and available



2023 CA NGV Fuel Use 209.90 million DGE total

In 2023, 97% of all on-road fuel used in natural gas vehicles in California was RNG



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