

Office of Management and Budget

Volume Requirements for 2023 and Beyond Under the Renewable Fuel Standard Program Proposed Rule

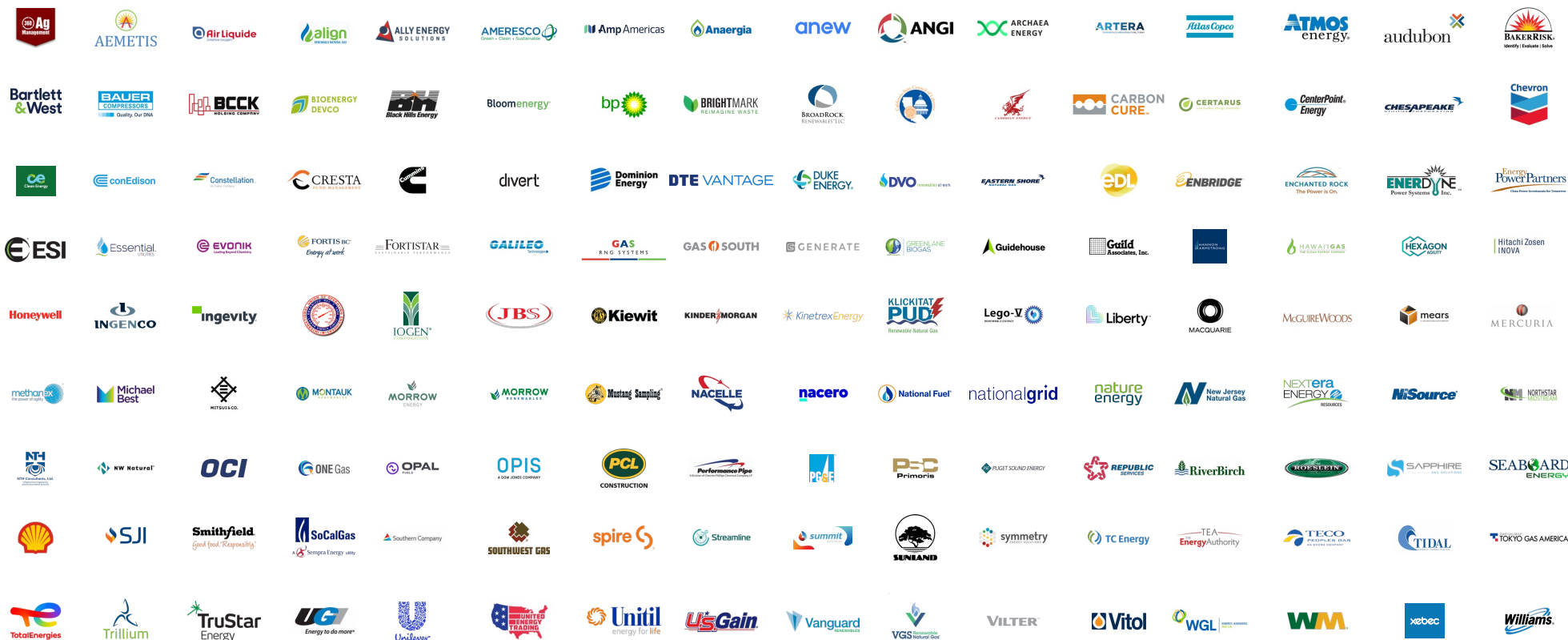
November 28, 2022

RNG Coalition

- 501 (c) 6 Non-Profit
- 380+ Member Companies
- Full Value & Supply Chain of RNG
- RNG Industry Leadership
- Policy Advocacy in the United States & Canada
- RNG Best Practices & Public Education & Events
- Sustainable Solutions, Markets & Growth
- 99% of Cellulosic Biofuel Category under RFS



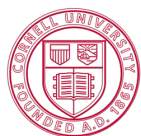
LEADERSHIP



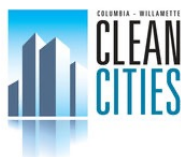
GENERAL



ACADEMIC



CLEAN CITIES PARTNERS



Renewable Natural Gas (RNG)

- Under the Renewable Fuel Standard (RFS) program, the RNG industry grew from 138 Million net D3 RINs in 2015 to 562 Million net D3 RINs in 2021 –an over 300% increase.
- In 2021, over 99% of the cellulosic biofuel D3 RINs generated were for renewable natural gas.
- RNG D3 RIN generation in 2022 is estimated to exceed EPA's projection.
- Capacity of operational RNG facilities exceeds 1 billion ethanol equivalent gallons.

RNG Facilities

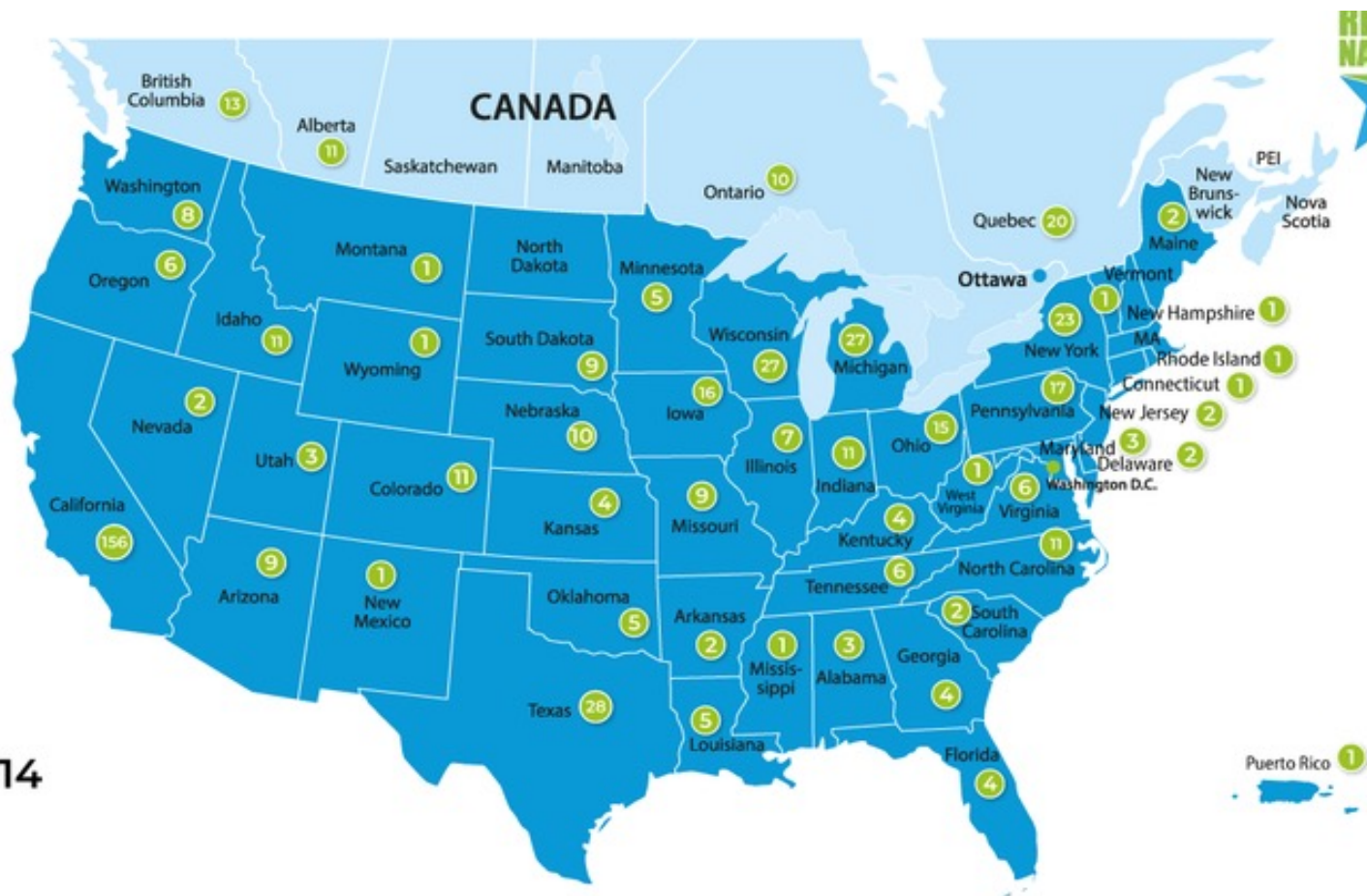
Operational: 276

Under Construction: 114

Planned: 150

Total: 540

Source: Coalition for Renewable Natural Gas (last visited November 26, 2022)



RNG Use as a Transportation Fuel Continues to Grow



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 dealer member reporting. Total greenhouse gas emissions and associated carbon dioxide equivalent (CO₂e) metrics 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 50.44 percent of all RNG use with the remainder sold outside of California.

SMART Initiative

- Sustainable Methane Abatement & Recycling Timeline (SMART) is our initiative to capture and control methane produced from the 43,000+ aggregated organic waste sites in North America by 2050.
 - SMART benchmarks:
 - 500 projects by 2025
 - 1,000 projects by 2030
 - 5,000 projects by 2040
 - 43,000 projects by 2050
 - RNG production volumes: *
 - 2015 - 13.5 BCF/yr (~160 million ethanol equivalent gallons)
 - 2020 - 60 BCF/yr (~700 million ethanol equivalent gallons)
 - 2025 - 230 BCF/yr (est.) (~2.7 billion ethanol equivalent gallons)
- *Total RNG production volumes (e.g., transportation fuel, electricity, heating)

"Set" Criteria Supports Growing Volumes

- RNG furthers the goals of Congress – reduces GHG emissions, promotes energy independence, and supports rural economies

**In 2021, RNG as a
Transportation Fuel...**



Lowered GHG
emissions equivalent to
9,426,002,333
miles driven by the
average passenger car

Note: Assumes 3,797,430 metric tons of CO₂e eliminated in 2021 through RNG usage calculated using CARB's LCFS carbon intensity numbers. GHG equivalency calculated using the U.S. EPA's calculator.

**In 2021, RNG as a
Transportation Fuel...**



Reduced CO₂
emissions equal to
427,301,698
gallons of gasoline
consumed

Note: Assumes 3,797,430 metric tons of CO₂e eliminated in 2021 through RNG usage calculated using CARB's LCFS carbon intensity numbers. GHG equivalency calculated using the U.S. EPA's calculator.



RNG is created by capturing methane from existing sources of waste – such as food waste, animal manure or wastewater sludge – through anaerobic digestion, capturing methane and redirecting it away from the environment to be used as a clean energy source.

Local farmers, municipalities and businesses regularly use RNG production to reduce emissions from waste sources while simultaneously creating clean energy.

RNG production cleans the air in local communities by capturing and breaking down methane emissions and recycles the carbon that is already in the atmosphere.



Natural gas is a fossil energy source formed from the remains of plants and animals buried over long periods by organic matter like sand, silt and rock. Added pressure and heat turn the remains into oil and natural gas, which is then pulled from the ground and distributed by natural gas purveyors.

Natural gas is typically sourced and distributed by geologists and energy companies as abundant, reliable energy.

Natural gas use results in fewer emissions than other similarly sourced fuels, making it a cleaner energy alternative for many operations that have historically been fueled by petroleum.

"Set" Criteria Supports Growing Volumes

- RNG is derived from organic wastes, providing an important and no-regrets waste management solution
- RNG provides environmental benefits to local communities, while also providing economic resources
- RNG utilizes and decarbonizes existing infrastructure
- RNG is estimated to contribute 22,600 jobs, \$2.6B in GDP, and \$5.4B in total business sales for operations and capital expenditures in 2021
 - Coalition for Renewable Natural Gas, Economic Analysis of the US Renewable Natural Gas Industry (December 2021),
<https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/61ba25c889b4fb7566404e6c/1639589328432/RNG+Jobs+Study.pdf>

Congress Sought at least 16 Billion Gallons of Cellulosic Biofuels

- Compressed natural gas/Liquified natural gas
- Cellulosic ethanol
- Cellulosic heating oil (D7)
- Pathways/fuels that should be accounted for under “Set”
 - Corn kernel fiber ethanol
 - “E-RINs” (Renewable Electricity)
 - Biointermediates
 - RNG as feedstock for other fuels (e.g., sustainable aviation fuel, hydrogen)

Setting Post-2022 Volumes

- EPA must incentivize growth in RNG
 - RNG projects require substantial capital and long-term investments
 - Certainty and predictability is needed to support investments
 - New pathways/fuels must increase volumes, not undermine existing pathways/fuels
- EPA must provide a mechanism to address oversupply
 - EPA has mechanisms to address undersupply (e.g., cellulosic waiver authority)
 - EPA should send a signal to industry participants to continue investing without concern of adverse economic impacts from underestimated volumes
 - This would address the uncertainties inherent in the difficult task of setting aggressive and achievable RFS goals as Congress intended
 - This will support increased cellulosic biofuel production and use, create more jobs, and provide greater environmental benefits

THANK YOU

- On behalf of the Renewable Natural Gas industry in North America, thank you for your time and attention. If we can be a further resource, please do not hesitate to reach out directly to either of us:
- Johannes Escudero, Founder & CEO (RNG Coalition): Johannes@RNGCoalition.com
- Sam Wade, Director of Public Policy (RNG Coalition): Sam@RNGCoalition.com
- Anne Steckel, Federal Affairs Lobbyist (RNG Coalition): Anne@RNGCoalition.com
- Sandra Franco, Legal & Regulatory Counsel (RNG Coalition): Sandra@RNGCoalition.com
- Harrison Clay (Mercuria Energy Americas), Chair - Advocacy LAB: hclay@mercuria.com
- Jay Hopper (Archaea Energy, Member - Advocacy LAB SET Committee): jhopper@archaea.energy
- Michael Jensen (WM), Member - Advocacy LAB SET Committee: mjensen1@wm.com
- Pat Foody (IOGEN), Member - Advocacy LAB SET Committee: pat.foody@iogen.ca
- Susan Lafferty (Holland & Knight), Member - Advocacy LAB SET Committee: susan.lafferty@hklaw.com