



ABC RNG Purity Recommendation – Pipeline

Renewable natural gas (RNG) is fully interchangeable with natural gas ([click here for definitions](#)). Today, more and more gas utilities want to encourage RNG production and injection into their pipelines, but the quality each utility requests can vary greatly, based on the utility’s experience with RNG, perceptions, and other factors. This variation increases the cost and time it takes to connect an RNG producer to the gas grid. To help gas utilities, utility commissioners and RNG producers drive to a more uniform gas quality specification, the American Biogas Council (ABC) has developed this RNG purity recommendation. The ABC’s members include more than 230 organizations and 2,700 individuals representing all players in biogas industry, including RNG producers and gas utilities. To develop this recommendation, the ABC surveyed the many dozens of US RNG production facilities, some that have been operating for more than twenty years, plus dozens of gas quality specifications, and aligned this recommendation with the most typical natural gas quality requirements in the US.

The American Biogas Council also [helped develop](#) the [Interconnect Guide for Renewable Natural Gas in New York State](#). The objective of this document is “to provide the technical framework and guidance necessary for the introduction of renewable natural gas (RNG) into the natural gas distribution pipeline network” not just in New York, but anywhere across the country. The first project to inject RNG into a natural gas pipeline was the Fresh Kills landfill, Staten Island, NY in 1982.

Physical Property	Units	Lower Limit	Upper Limit
Heating Value	BTU/ft ³	960	1100
Carbon Dioxide	mol %		2
Oxygen	mol %		0.4
Total Inerts	mol %		5
Hydrogen Sulfide	gr./100 ft ³		1/4
Total Sulfur	gr./100 ft ³		1
Water	lbs/mmSft ³		7
Siloxanes	ppm(v)		1
Hydrocarbon Dew Point	°F		-40
Temperature	°F	50	120
Dust, Particulate			commercially free*
Biologicals			commercially free*
Heavy Metals			commercially free*

*Commercially free is defined as equal or less than the levels present in conventional natural gas

ABC Purity Recommendation – CNG Vehicles

For CNG vehicle projects where the gas does not have to enter a conventional natural gas pipeline.

Physical Property	Units	Lower Limit	Upper Limit
Heating Value	BTU/ft ³	940	1100
Carbon Dioxide + Nitrogen	mol %		4
Oxygen	mol %		1
Hydrogen	ppm(v)		300
Total Sulfur	wt%		0.001
Hydrogen Sulfide	ppm(v)		6
Siloxanes	ppm(v)		3
Liquids			commercially free*
Dust, Particulate			commercially free*
Chlorine Additives			commercially free*
Heavy Metals			commercially free*

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Find these specifications online at: <https://americanbiogascouncil.org/resources/rng-purity-recommendation/>