

SUPPORT – Senate Bill 935
Establishing a Renewable Natural Gas Pilot Program in the Department of General Services
Senate Education, Energy and the Environment Committee

Columbia Gas of Maryland, Inc., a natural gas utility providing energy to more than 34,000 customers in Maryland’s western counties of Allegany, Garrett and Washington, strongly supports Senate Bill 935. Columbia supports public policies promoting an environment of innovation, research, development and deployment needed for greenhouse gas emissions reductions in Maryland that maintain customer affordability and system reliability.

The legislation requires the Maryland Department of General Services, in consultation with the Maryland Public Service Commission (PSC) to establish a Renewable Natural Gas (RNG) Pilot Program in the Department. The purpose of the program is to procure RNG for use as a fuel in Maryland’s transportation and building sectors and to evaluate the economic benefits and costs of replacing fossil natural gas with RNG, on a short-term and long-term basis, in furtherance of the state’s net-zero statewide greenhouse gas emissions reduction goals.

RNG is a cleaner, affordable and reliable waste-derived fuel that can be used to power homes, businesses and even vehicles. RNG is made by capturing and refining biogases released from decomposing organic waste material. Every community in Maryland produces waste. As that waste breaks down, it emits methane, which is a naturally occurring greenhouse gas (GHG). RNG projects capture this methane from existing food waste, animal manure, wastewater sludge and garbage, and redirect it away from the environment, repurposing it as an ultra-low to zero carbon renewable energy source.

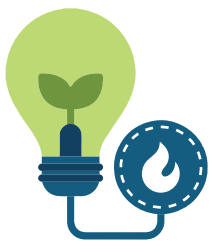
Because RNG uses methane emissions that would otherwise just be emitted into the atmosphere, RNG is considered a carbon neutral fuel. RNG is ready to use in existing natural gas infrastructure and can be injected into pipelines to immediately begin reducing natural gas carbon content. In high feedstock availability scenarios, RNG production could be enough to cover 59 percent of industrial or 93 percent of residential natural gas demand. Use of RNG can make meaningful progress towards decarbonization, especially in hard-to-decarbonize sectors such as heavy-duty transportation or industrial facilities that require high-temperature heat for industrial processes. Such industries could use RNG to reduce their carbon footprint. Attached to this testimony is a one-page fact sheet on RNG.

Columbia Gas of Maryland believes the requirements of Senate Bill 935 are appropriately and reasonably crafted policies related to the creation of a Renewable Natural Gas Pilot Program. Adding an RNG Pilot Program to determine if RNG can be a cost-effective reasonably priced addition to Maryland’s energy mix creating an even larger “all of the above approach” to reduce greenhouse gas emissions to meet Maryland’s ambitious climate goals is an idea worth examining. Columbia strongly supports the legislation.

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RENEWABLE NATURAL GAS

Renewable natural gas (RNG) from biomass helps to meet America's growing demand for a low-carbon, affordable and reliable fuel. RNG is fully compatible with conventional natural gas and the existing pipeline infrastructure.



RNG

RNG is made by capturing and refining biogases released from decomposing organic waste material. RNG is considered a carbon neutral fuel, with even greater benefits when it is produced from organic waste that would otherwise decay and create methane emissions.¹ Since RNG is ready to use in existing natural gas infrastructure, it can be injected into pipelines to immediately begin reducing natural gas carbon content.



Agriculture accounts for 36% of methane emitted annually in the U.S.²



FEEDSTOCKS AND PROCESSES

RNG is derived from various biogenic feedstocks, including wastewater sludge, animal manure, food waste, agricultural residues, forest product residues, municipal waste and energy crops. Three processing systems can produce RNG:



1. Anaerobic digestion uses microbes to break down organic matter and converts the resulting organic acids into methane gas.



2. Thermal gasification is a high-temperature process that completely dries biomass, converting it into gas and char.



3. Power-to-gas technologies use electrolysis to convert renewable electricity into hydrogen or methane for natural gas pipeline injection.



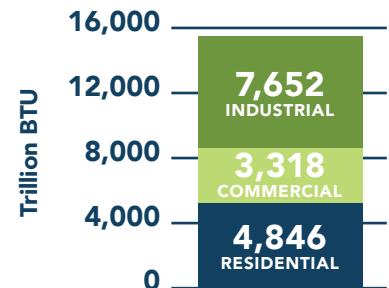
IMPACT OF RENEWABLE NATURAL GAS

RNG is interchangeable with conventional natural gas and can be used in residential, commercial, industrial and transportation applications. Use of RNG can make meaningful progress toward decarbonization.



RNG production could be enough to cover 59% of industrial or 93% of residential natural gas demand.³

RNG RESOURCE POTENTIAL



RNG IN THE TRANSPORTATION SECTOR

Using RNG in the transportation sector has the dual benefit of reducing greenhouse gas emissions and significantly improving air quality.



Compared to diesel, RNG can reduce 95% of GHG emissions on a lifecycle basis⁴



NEXT STEPS FOR RNG

Demand for RNG is growing as industries can use this fuel to reduce emissions across their entire supply chain. RNG will play an important role in decarbonization strategies across the United States, but resources are likely to be limited compared to the demand for carbon-neutral fuels.



1. SoCalGas, What is Renewable Natural Gas?

2. U.S. EPA, Methane Emissions in the United States: Sources, Solutions, & Opportunities for Reductions, 2019

3. American Gas Foundation, Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment, 2019

4. U.S. EPA, Greenhouse Gas Equivalencies Calculator, 2022