

RENEWABLE NATURAL GAS

The Oil and Gas Conference

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Coalition for Renewable Natural Gas

- ▶ 501 (c) 6 Non-Profit
- ▶ RNG Industry Trade Association
- ▶ 15 Full-Time Staff, 11 Advisory Boards
- ▶ Federal, State & Provincial Policy Advocacy
- ▶ Public Education; Best Practices; Networking
- ▶ 315+ Member Companies
- ▶ Full Value Chain of RNG Represented
- ▶ Producers of 98% of RNG Supply in North America



LEADERSHIP



✓ **Developers**

✓ **Utilities / Pipeline**

✓ **Technology**

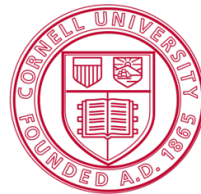
✓ **Marketers**

GENERAL MEMBERSHIP



✓ Finance ✓ Consultants / Law Firms ✓ Fueling ✓ EPC ✓ Labor

ACADEMIC MEMBERSHIP



CLEAN CITIES PARTNERS



MISSION

- ▶ Advocate and educate for the sustainable development, deployment and utilization of renewable natural gas so that present and future generations will have access to domestic, renewable, clean fuel and energy

PHILOSOPHY

- ▶ Advocacy and education informs public policy.
- ▶ Public policies influence markets.
- ▶ Markets drive demand.
- ▶ Demand determines value.
- ▶ Value impacts revenue.
- ▶ Revenue correlates with sustainability.

POSITION

- ▶ **We support RNG/RH2 produced from:**
 - ▶ All sustainable feedstocks
 - ▶ All sustainable and competing technologies
 - ▶ For all sustainable end-use applications

WHAT IS RNG?

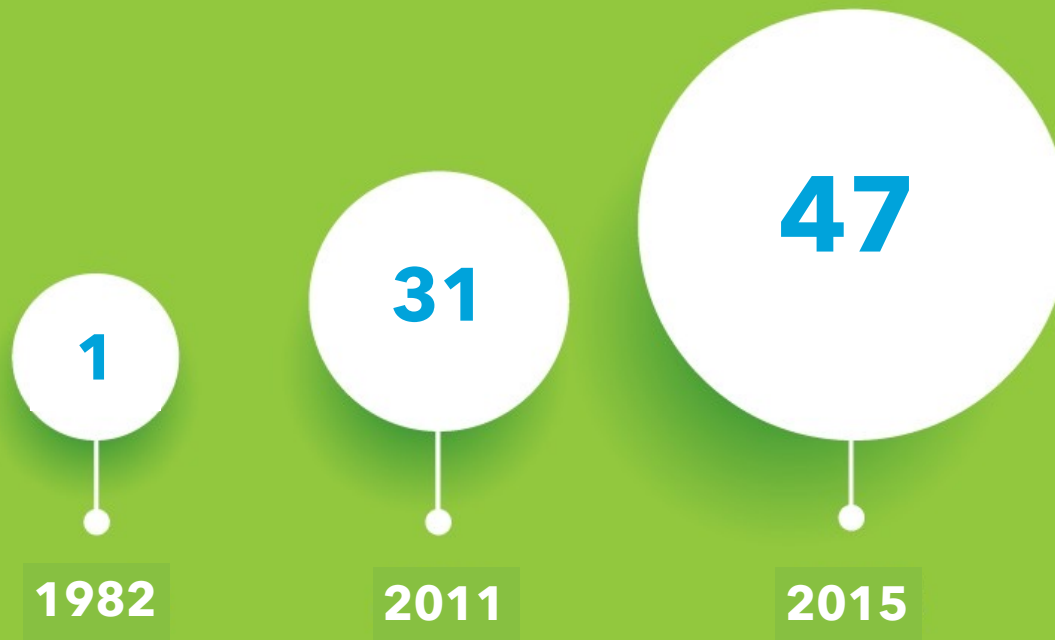
- RNG is short for Renewable Natural Gas.
- It is methane, or raw biogas, that has been captured and conditioned so that it can be transported via existing pipeline infrastructure and substitute for conventional natural gas to fuel, heat and power vehicles, homes and businesses.
- RNG is a clean, affordable and reliable energy option that is available today and requires no adjustments or upgrades to existing appliances - including cooktops, furnaces or boilers.

WHAT IS RNG DERIVED FROM?

- ▶ As organic waste materials decompose naturally, it emits methane - a short-lived climate pollutant and greenhouse gas many times more potent than carbon (CO₂).
- ▶ RNG production facilities capture methane from society's waste streams - food waste, animal manure, wastewater - redirecting it away from the environment, removing harmful contaminants from the atmosphere.
- ▶ Solid waste is expected to increase 70% by 2050.
- ▶ RNG from food and green waste can provide 125% reduction of CO₂; dairy manure to RNG can result in a 400% reduction (transport fuels).

RNG DEVELOPMENT HISTORY

MARKET SIZE - RNG PROJECTS



2015 INITIATIVE

- ▶ Through effective advocacy and education, create market opportunities that enable the RNG industry to double the number of production facilities in operation from 47 to 100 by 2025

RECENT GROWTH TRAJECTORY

MARKET SIZE - RNG PROJECTS



SMART INITIATIVE

- ▶ **Sustainable Methane Abatement & Recycling Timeline** – our industry initiative to capture and control methane produced from 43,000 aggregated organic waste sites in North America by 2050, achieving meaningful benchmarks by 2025, 2030 and 2040.

CURRENT DEVELOPMENT STATE

MARKET SIZE - RNG PROJECTS

190

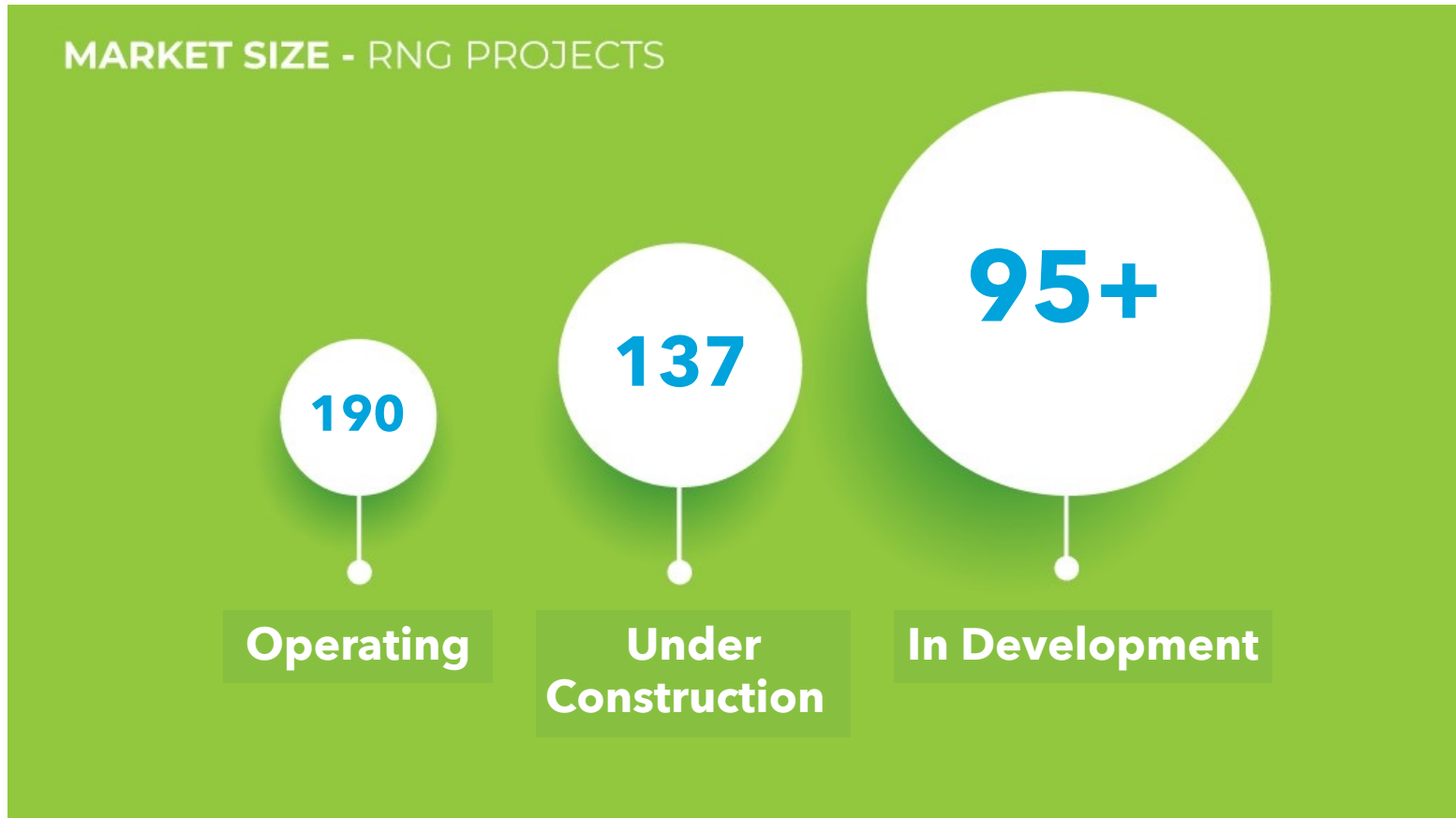
Operating

137

Under
Construction

95+

In Development



MARKET POTENTIAL

MARKET SIZE - RNG PROJECTS

321

2025

796

2030

4,926

2040

RNG SUPPLY AVAILABILITY

- ▶ Sufficient RNG could be developed from organic waste to cover 13%+ of current gas demand in the United States.
- ▶ This could be used to supply ALL current commercial gas demand nationwide OR 75% of current residential demand OR 45% of industrial demand.

EDUCATION & RESOURCES

ABOUT RNG

INFOGRAPHICS

PRESENTATIONS & VIDEOS

DATA, REPORTS & ADDITIONAL RESOURCES

CALCULATORS & COMMON CONVERSIONS

RNG PRODUCTION FACILITIES

PIPELINE TARIFF DATABASE

MAJOR PIPELINE LOCATIONS

FEDERAL, STATE & PROVINCIAL POLICIES

RNG JOBS AND INTERNSHIPS

TUDOR WILLIAMS SCHOLARSHIP AWARD

DATA, REPORTS & ADDITIONAL INFORMATION

WHITE PAPERS & REPORTS

LEGISLATION SEARCH TOOLS

GOVERNMENT DATA CENTERS

FEDERAL LAWS & REGULATIONS

STATE LAWS & REGULATIONS

INT'L LAWS & REGULATIONS

PRESS RELEASES

ADDITIONAL RESOURCES



Economic Benefits of Renewable Natural Gas

Renewable Natural Gas (RNG) is an economic driver and job creator in communities across the country, bringing millions of dollars in capital investment to local economies while simultaneously providing a waste management solution.

RNG provides a unique opportunity for communities to turn their waste – something that every community manages – into a source of independently-created, clean energy.

Whether partnering with local farms, wastewater treatment plants or landfills, RNG provides an opportunity to remove harmful greenhouse gases from the atmosphere while creating new jobs and business opportunities in the community.

Furthermore, while other green energy options often involve major, costly structural changes to homes and businesses, RNG offers consumers and businesses the ability to utilize current gas infrastructure for natural gas. Meaning, they can make the switch to RNG now. So why wait?



RNG production facilities can result in increased revenue for communities when operational costs are shifted away from local governments.



RNG production facilities create 5-7 times more jobs than equivalently sized petroleum refineries.



RNG production facilities create up to 172 direct and indirect jobs per project.

WHAT IS RNG?

As waste breaks down, it emits methane – a potent greenhouse gas. RNG projects capture this methane from food waste, animal manure, wastewater sludge and garbage, redirecting it away from the environment and removing harmful contaminants from the atmosphere.

By converting the captured bi-methane into a renewable fuel that looks and acts like natural gas, RNG provides a practical, cost-efficient and replicable solution that turns waste into clean energy for our homes and businesses.

RNG facilities support hundreds of thousands of clean energy-sector jobs in construction, operations, maintenance, manufacturing and engineering.



Benefits of Renewable Natural Gas for Communities

Every community in America produces waste. Renewable Natural Gas (RNG) is an innovative solution for turning that waste into clean, affordable and reliable fuel.

While some families have the resources to leverage clean energy sources such as solar panels, others are unable to afford significant infrastructure changes to their homes and utilities.

RNG provides a solution. As a true drop-in fuel, RNG doesn't require updates to existing appliances, equipment or infrastructure. Instead, RNG can easily make-use of current natural gas systems and provide residents with a renewable source of fuel, heat and power.



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HOW DOES RNG HELP YOUR COMMUNITY?



Clean Energy. RNG is an important part of the clean energy solution. Hand-in-hand with other green energy sources, RNG can help to reduce carbon emissions at the local level. By being accessible to residents and small businesses, RNG has the potential to benefit local air quality in cities around the country and the world.



Reliability. As climate change increasingly leads to natural disasters and events that result in power outages or rolling blackouts, the benefits of RNG become even more critical. RNG is a storable, reliable energy source that, in addition to being used as a primary fuel source, can be relied upon when other sources of fuel are inaccessible. Especially for those living in rural areas, RNG helps to diversify local energy options, ensuring people always have access to clean power.



Affordability. The cost of RNG is comparable to other energy sources and doesn't require changes to the average home's infrastructure. By switching to RNG, individual households can reduce their carbon footprint without significant lifestyle changes.



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THE COALITION FOR
**RENEWABLE
NATURAL GAS**

WEBINAR SERIES

Nearly every week at 1:00pm Eastern our webinars feature expertise from RNG Coalition members and partners on a variety of industry relevant topics, intended to help educate the public about the environmental and economic benefits of RNG, and to promote industry best practices.



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