



MAKING YOUR ORGANIZATION CARBON NEUTRAL WITH RENEWABLE NATURAL GAS

AN AMERESCO WHITE PAPER

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INTRODUCTION

The growing importance of sustainability is cultivating demand for comprehensive energy solutions that can help organizations achieve their environmentally focused goals. Low-carbon alternatives in recent years have been more focused on electricity from intermittent renewable energy sources, such as wind and solar PV, in addition to some base load sources such as landfill gas and biomass-fueled power generation. However, demand for addressing the thermal side of the equation is gaining momentum.

For many organizations, a substantial portion of their carbon footprint is generated from the combustion of fossil fuels. Even those organizations who have leaned on electrification of the grid should look upstream to determine if the ultimate generation resources providing the supply for such electrification is coming from fossil fuels. Now that many organizations are on a mission to reduce their carbon footprint, rather than offset after it has been reported, the solution is renewable natural gas (RNG).

Given that RNG is interchangeable with conventional natural gas, adding RNG to a corporate or institutional portfolio of energy sources is often easier and more cost-effective than many realize. A well-developed ecosystem of providers in the RNG industry, from project developers and operators to energy traders and utilities, can provide RNG through short- and long-term contracts and by using a wide range of instruments that take a customer's unique financial position into account and are balance sheet-friendly. With a range of flexible financing structures, organizations interested in procuring RNG can find a solution that satisfies their sustainability and carbon goals without investing any capital.

RNG has been leveraged for decades in transportation. The RNG market has grown steadily in recent years thanks to programs such as the federal Renewable Fuel Standard and state-level policies such as California's Low Carbon Fuel Standard Program. We are on the verge of experiencing exponential growth for RNG thanks to new state-level incentive programs, stakeholders' desire to address thermal sustainability, and a proactive drive by natural gas utilities to decarbonize their pipelines.

This white paper provides an educational overview of RNG, the opportunities it offers, resources detailing how to implement it as part of your organization's energy strategy, and concrete examples of successful RNG projects that can serve as a blueprint for interested companies and institutions.



"RNG production facilities epitomize sustainability – and [Ameresco] is a leading voice in the sustainability movement to make RNG mainstream, to be considered alongside wind and solar as standard renewable energy resources. Ameresco, the operator of the largest wastewater treatment biogas-to-RNG plant in the United States (Phoenix, AZ), is helping municipalities, industry and utilities increase RNG adoption."

*- Johannes Escudero, CEO of **The Coalition for Renewable Natural Gas***

I. OVERVIEW OF RENEWABLE NATURAL GAS

DEFINITION OF RNG

Renewable Natural Gas (RNG) is an alternative to natural gas (primarily methane) that makes use of resources that are already in our environment and are typically generated from human activities. Instead of voluntarily extracting natural gas that is already sequestered in the earth, we can capture biogas in its raw form that is a result of the decomposition of biomass (i.e., organic matter) and process it into a usable form of energy. Biogas is processed until it meets local distribution pipeline specifications. Because RNG is interchangeable with conventional natural gas, it can be distributed through the existing natural gas grid and used for identical applications.

FREQUENTLY USED TERMS

Landfill gas (LFG) is biogas captured specifically from landfills; it must also be processed to meet pipeline standards before becoming RNG.

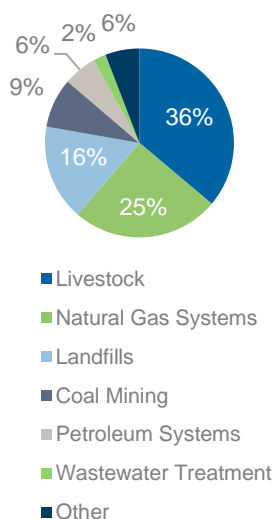
Compressed natural gas (natural gas that has been compressed for use in natural gas vehicles) and **liquefied natural gas** (supercooled natural gas that enters a liquefied state) can both be produced using RNG.

Synonyms to RNG: **Biomethane** and **green gas**.

HOW RNG LOWERS GREENHOUSE GAS EMISSIONS

The key benefit of RNG compared with fossil fuels is that it is a carbon neutral fuel. Livestock, landfills, and wastewater treatment account for 54% of U.S. methane emissions (chart below). Given these sources' natural presence, the RNG produced contributes no net increase in greenhouse gas emissions.

**U.S. Methane Emissions
by Source, 2017**



(Source: U.S. EPA)

By contrast, burning virgin feedstocks of natural gas extracted from the earth add carbon dioxide that would otherwise have been remained sequestered underground.

RNG is accordingly considered carbon-neutral under best-practice carbon accounting methodologies, and organizations can use it to achieve carbon neutrality in their Scope 1 emissions (related to on-site equipment and vehicles). RNG provides further benefits when used as a fuel for natural gas vehicles because they tend to have lower carbon emissions than petroleum-based vehicles. Encouraging a shift from petroleum to natural gas vehicles yields additional carbon reduction benefits.

Moreover, methane is approximately 28x more potent at trapping heat in the atmosphere than carbon dioxide (the reference gas for global warming) according to the EPA, so using methane captured from the environment to displace sequestered fossil fuel reduces the harmful contributions of this methane to climate change. Biogas capture and combustion at landfills and wastewater treatment plants as well as from livestock therefore serves as an effective means of reducing greenhouse gas emissions.

SOURCES OF RNG

Landfills

As organic matter decays in landfills, landfill gas is produced as a byproduct. To capture biogas as it is produced, a system of wells is installed into the landfill. Raw biogas typically has a methane content around 45% to 50%. It is then directed to a treatment plant, where a series of steps convert it into RNG. Once processed, the RNG is then injected into a natural gas pipeline at a methane content typically around 96% to 98%.

Wastewater

Treatment Plants

Millions of gallons of wastewater enter treatment plants every day. Anaerobic digesters, which use microbes to process and clean the wastewater, create significant amounts of methane as a byproduct, which can be captured and upgraded to RNG following a somewhat similar process as described for landfill gas.

Livestock

Operations

According to the U.S. EPA, livestock was responsible for 36% of the U.S. methane emissions in 2017 (chart on page 3). Animal manure can be collected and delivered to an anaerobic digester to stabilize and optimize methane production resulting in biogas, which can be processed into RNG and injected into the natural gas network.

NATURAL GAS GRID

The natural gas grid in North America allows for natural gas resources to be inserted and consumed from the grid throughout the system across the lower 48 states and Canada. Large energy consumers with natural gas-burning equipment for heating, power generation, or industrial production connect to this grid for their natural gas supply. RNG injected anywhere within this natural gas grid can participate in programs such as the RFS and LCFS or be sold to corporate and institutional customers that are also connected to the grid. In addition, this network allows RNG suppliers and consumers to use the existing natural gas grid infrastructure system to deliver RNG.

U.S. Natural Gas Grid Map



(Source: U.S. Energy Information Administration)

II. BENEFITS OF RNG

CARBON NEUTRALITY AND INSTITUTIONAL SUSTAINABILITY

Major corporations are facing pressure from consumers and shareholders to contribute meaningfully to decarbonization efforts. Large institutions, such as universities, are also pursuing aggressive targets to affirm their commitment to sustainability (and to their student population). Many of these organizations have made commitments to procure renewable energy and in some cases are achieving 100% of their electric needs through purchases of carbon-free energy from large wind and solar PV plants. However, natural gas remains a primary fuel source for many organizations. Full electrification can prove difficult for most applications and does not necessarily address the carbon footprint as most grid-produced electricity is supplied from baseload fossil-fueled power plants.

By contrast, RNG offers a carbon neutral alternative to conventional natural gas that can be readily used by natural gas-fired equipment with no interruption to operations and can often help organizations achieve carbon neutrality more effectively and economically than electrification. As more companies and institutions set clear climate agendas, the demand for RNG will grow.



A 2018 study by Navigant Consulting concluded that replacing 16% of California's traditional natural gas supply with RNG could achieve greenhouse gas reductions equivalent to electrifying 100% of building loads in California by 2020. In addition, the study found that the RNG-based approach would be three times as cost-effective in achieving those greenhouse gas reductions as building electrification.

NATIONAL ENERGY INDEPENDENCE & SECURITY

In the past few decades, the U.S. has significantly expanded its natural gas supply through the adoption of techniques to extract shale gas. In doing so, it has become more economical to switch to natural gas as the fuel for certain end uses, such as natural gas-fired power plants and natural gas vehicles/trucks. By shifting these and other end uses to on-shore natural gas, the U.S. has reduced its reliance on foreign imports of oil, improving the country's energy independence and security. Locally based, RNG adds diversity to the domestic natural gas fuel supply, further bolstering efforts to reduce imports of foreign oil.

REVENUE GENERATION FOR SITE OWNERS

Facilities where RNG plants are located, such as wastewater treatment plants and landfills, can also benefit through the revenue or royalties received for the RNG produced. For municipalities, the revenue opportunity for selling RNG and associated credits often measures in the hundreds of thousands (in some cases millions) of dollars annually that can be used to fund community initiatives or reduce local taxes. And by structuring the project as a public-private partnership (PPP) or similar vehicle, the municipality can shift the capital/operating costs and risk to a third party while retaining the core revenue benefits. In addition, property tax income for RNG plants delivers investment into the local economy.

CREATION OF GREEN-COLLAR JOBS

Renewable natural gas projects are complex and require a high degree of engineering sophistication, relying on the expertise of contractors, technicians, construction workers, and plant operators in the process. Each new RNG project creates dozens of local skilled job opportunities. Investments in RNG infrastructure, therefore, create sustained job growth in a growing and innovative industry—not only in the design and construction phases but also for long-term operations and maintenance.

LOCAL ENVIRONMENTAL BENEFITS

Fugitive methane emissions from landfills and other sites can contribute to odor and smog challenges on a local level. By capturing this methane (and transporting it to an end user), municipalities can eliminate a source of air pollution in their communities while also taking advantage of the other aforementioned benefits. In addition, natural gas vehicles often emit fewer air pollutants than petroleum-based vehicles, leading to improved air quality, so RNG used as a transportation fuel provides local air quality benefits on city streets and highways as well.

Ameresco RNG Project Highlight

SAN ANTONIO WATER SYSTEM RNG FACILITY



The San Antonio Water System (SAWS) provides water and wastewater services to 1.8M people in San Antonio, TX. In 2010, Ameresco opened a facility with the utility that upgrades the biogas and pipes 900,000 cubic feet of RNG into the natural gas network every day. This project was the first time in the U.S. that a large wastewater utility partnered with a private company to sell its RNG on the market. The project was structured as a 20-year DBOOM contract, with Ameresco investing its capital to upgrade the facility's biogas and prepare it for pipeline injection.

Through the partnership, Ameresco pays SAWS annual royalties on the sales of the RNG, providing additional value to local ratepayers. Previously, the facility had flared the biogas produced through the anaerobic digestion process. Switching to RNG has contributed to improved air quality in the region and delivered an annual reduction of 19,739 metric tons of CO₂ from entering the atmosphere.

"SAWS is constantly improving its operations to become more sustainable... By reusing biogas instead of burning it off, we are helping protect the city's air quality and developing a renewable energy source."

*- Robert R. Puente, President/CEO
San Antonio Water Supply*

III. MARKETS GOING GREEN WITH RNG

A range of institutions and companies have turned to RNG to improve their sustainability record. These are typically large organizations with distinct sustainability/climate targets and significant natural gas consumption for on-site equipment that cannot readily be replaced with electricity-based equipment.

MAJOR CORPORATIONS

Major corporations have been among the key purchasers of RNG. Many of them are experiencing pressure to pursue aggressive sustainability goals, both internally (from employees, board members, etc.) as well as externally (from consumers, investors, supply chain partners, and other key stakeholders). In order to maintain a competitive edge amongst discerning consumers, shareholders, and employees, some have made commitments to procure a portion of all of their energy supply from renewable energy or low-carbon alternatives. Whereas the options for switching to renewable electricity are relatively diverse, corporations with significant natural gas consumption can only claim to be carbon neutral in their Scope 1 emissions through the use of RNG.

*The **Climate Action 100+** is an investor initiative that aims to leverage its shareholder power with large corporations to urge them to reduce their carbon emissions. Since inception in 2017, the Climate Action 100+ has grown to encompass more than 370 investors with over \$35 trillion in assets under management. It is pressuring “systemically important greenhouse gas emitters” (identified as 100 major corporations including companies across multiple sectors and major brands) to curb emissions, improve governance, and strengthen climate-related financial disclosures. As campaigns by Climate Action 100+ and others continue to pressure large emitters to reduce their carbon emissions, those emitters will likely turn to solutions such as RNG to claim carbon neutrality for their Scope 1 emissions.*

HIGHER EDUCATION

Colleges and universities are key beneficiaries of RNG. As students and faculty demand action on climate change and competition for environmentally aware students intensifies, higher education institutions have set ambitious renewable energy and carbon reduction targets.

Natural gas is used on many university campuses to fuel equipment, provide hot water or steam, and provide an affordable and resilient electricity source if the campus has a natural gas-fired power plant or combined heat-and-power (CHP) facility. By purchasing RNG, colleges and universities can achieve carbon neutrality in their natural gas consumption. In addition, RNG allows universities to produce their own green electricity that can be used to provide reliable power on campus not only for their own needs but also to supply EV charging stations for others.

Several universities have made investments in RNG. For example, the **University of California System** has set a carbon neutrality target for 2025 for its buildings and vehicle fleet and is in the process of procuring a supplier that will help it achieve that target in part through RNG. It even owns its own RNG plant that allows it to secure RNG supply for its operations while also providing revenue for the local municipality. **Duke University** has also pledged to become carbon neutral by 2024 and is working to develop local biogas resources from North Carolina’s hog industry that it can use to displace its natural gas demand and foster the growth of an RNG market in the state.

In 2019, **Middlebury College** in Middlebury, VT and a team of partners broke ground on an anaerobic digester combining cow manure and food waste that will produce RNG for the college as part of its goal of procuring 100% of its energy from renewable sources. With hundreds of universities signing pledges such as the **American College & University Presidents' Climate Commitment** (ACUPCC), the need for carbon neutral solutions for higher education is likely to continue to grow.

TRANSPORTATION SECTOR

The Renewable Fuel Standard (RFS) is a federal program that requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum-based transportation fuel in the U.S. RNG qualifies as a renewable fuel under the RFS program and can generate Renewable Identification Numbers or “RINs” which serve as the credits that RFS obligated parties use to demonstrate compliance with the RFS.

In 2018, 32% of all on-road fuel used in natural gas vehicles (NGVs) was RNG. The majority of RNG production serves the transportation market, and the appetite for RNG in the transportation industry is largely responsible for the size and growth dynamics of the RNG market as a whole.

“Transportation is the largest source of greenhouse gas emissions that negatively impact air quality for so many. RNG provides companies the opportunity to significantly reduce their transportation-related emissions. Leading trucking, school district, transit and refuse fleets across the country have transitioned to RNG thanks to proven vehicle technology, established infrastructure and economics they can afford.”

- Mike Koel, President of U.S. Gain

Demand for RNG in the transportation sector has important implications for corporate and institutional customers because those organizations can create and sell RINs from their own RNG resources to the transportation industry, thereby providing a means by which they can generate income or improve the economics of their RNG procurement efforts. In some cases, selling a portion of an RNG project's output as RINs to the transportation market is a key component in paying for a project's associated costs.

Ameresco RNG Project Highlight **WOODLAND MEADOWS LANDFILL, MICHIGAN**

Ameresco opened an RNG facility at the Woodland Meadows Recycling and Disposal Facility in Canton, MI in 2017.

The RNG facility operates on a continuous basis and converts about 6,600 standard cubic feet per minute of landfill gas to 3,500 dekatherms of RNG per day.



IV. HOW TO ADD RNG TO YOUR ENERGY PORTFOLIO

RNG SUPPLIERS

Given the complex nature of energy supply markets, the process of navigating the options for RNG procurement can be unfamiliar to new customers. Parties interested in RNG to supply their natural gas needs have numerous paths available, some of which are summarized below.

RNG Project Developers & Suppliers

The companies that develop and operate RNG facilities and sell RNG are important stakeholders in the RNG landscape. In addition to providing potential project owners with the design and engineering expertise to build high-performance RNG plants, they also offer a wide range of products and services to help customers procure RNG or participate in new project origination. Customers can shift as little or as much of the operational burden and development risk to project developers and suppliers as desired while gaining access to the benefits of RNG.

Energy Traders & Marketers

A host of energy trading and marketing firms serve as a bridge between the output from RNG projects and potential customers, from natural gas distributors to large corporate and institutional purchasers. These firms ensure compliance with the RFS, LCFS, and other programs, and provide corporations, institutions, and other customers with a certifiable supply of RNG.

“Sustainability programs are beginning to address the reduction of Scope 1 emissions from thermal loads. Corporations have long included renewable power purchase agreements or on-site renewable power generation to reduce emissions from fossil electricity. To reduce emissions in natural gas usage, companies can now replace fossil-based natural gas with renewable natural gas. RNG can be purchased under a standard industry contract with no change to equipment or operations required. Purchasing RNG is the only way for companies to claim full carbon neutrality for their Scope 1 emissions.”

*- Angela Schwarz, President & CEO
Element Markets*

Natural Gas Utilities

Several natural gas utilities across the U.S. and Canada have started to offer RNG incentives to their customers. Utilities are integrating RNG through a variety of approaches. **DTE Energy** allows customers to support the development of landfill gas through a payment on their bill. **Vermont Gas** allows customers to sign up to receive a specified percentage of RNG in their gas supply. **FortisBC** allows ratepayers to designate a portion up to 100% of natural gas consumption to be supplied by RNG.

SoCalGas offers an incentive for customers with RNG production potential in which SoCalGas builds, owns, operates, and maintains a biogas conditioning and upgrading facility on a customer's behalf which is repaid through their utility bill. **NW Natural** (Oregon) built an RNG vehicle filling station at one of Portland's wastewater treatment plants that is providing the City of Portland with \$3 million in revenue per year while reducing the carbon intensity of vehicle transportation in the city. As the RNG market grows, utilities will likely continue to expand their product and service offerings in order to integrate more RNG into the fuel they supply and offer customers more choice.

Additionality in RNG Procurement

Large energy users with aggressive sustainability objectives may place critical importance on expanding the volume of RNG in the overall natural gas supply in order to claim to have an impact on global carbon emissions. This concept, known as **additionality**, means that an organization plays a proactive role in developing new carbon-reduction projects that would not have come to fruition via business-as-usual.

In the renewable energy sector, the importance placed on additionality has led to the development of dozens of large wind and solar projects through the investments of large corporations, and, as those corporations expand into RNG, they are starting to ask similar questions. Playing a role in financing and/or developing a new RNG project can provide RNG buyers with the ability to claim additionality.

L'Oréal USA spearheaded the development of a landfill gas project in Kentucky as part of its strategy to become carbon neutral in all its U.S. facilities. It signed a 15-year agreement with the developer to purchase ~40% of the RNG produced, providing an important underwriting component that enabled the project to move forward. The project will also sell the environmental attributes of its production to the transportation sector for five years to generate revenue that can offset the price of RNG it buys from the project in the long term. In doing so, L'Oréal USA was able to claim additionality while leaving the bulk of the project development to a third party.

Source: L'Oréal Press Release (Jan. 2018)

PROCUREMENT OPTIONS

Large energy users' objectives and priorities in pursuing RNG will play a significant role in determining which product or service is best suited. Some companies want a turnkey solution with minimal change in operations; others will pursue larger projects to meet more aggressive sustainability goals. Procurement pathways described below outline the key products and services available in the market today.

Option 1: Direct Procurement via RNG Project Developer/Operator

By negotiating directly with the developer or operator, a customer can tailor the terms to their specific priorities around pricing, contract length, and other considerations backed by a physical asset. Developers/operators can sell supply from existing projects or develop new projects. Customers that place a high priority on additionality often choose to engage with RNG developers early in project origination to claim most effectively that fossil fuel supplies were displaced as a result of their actions.

Option 2: RNG Supply Procurement via Energy Marketers

Energy marketers give potential customers who might be looking for more information a range of options to meet their goals around RNG procurement by helping them compare multiple available offers. Energy marketers can also help these clients incorporate RNG into a much broader sustainability approach while designing a hedge strategy to mitigate market volatility.

Option 3: RNG from Utilities' Green Gas Tariffs

There is a growing opportunity to purchase RNG directly from energy users' local natural gas utility. Switching to RNG may require little more than an amendment to the natural gas supplier agreement and adder; for example, VSG has an RNG Adder of \$1.2931 per CCF (*at the time of publication*). Although green gas tariffs may come at a premium over conventional natural gas, they provide a readily available pathway for interested customers to procure RNG without participating in new RNG project origination.

CONTRACTING MODELS

Given differences in objectives between RNG projects and potential customers, there are a variety of project structure and financing options. Several instruments exist to help customers access the benefits of RNG without the capital or oversight required to build the project under a customer-financed EPC.

RNG Project Financing Models

For site owners interested in developing an RNG plant, one of the most common financing models is **design-build-own-operate-maintain (DBOOM)**. Under a DBOOM arrangement, the customer contracts with a project developer to take over the primary development, permitting, design/construction, ownership, and operations & maintenance responsibilities for the plant and sells the output according to a predetermined set of criteria (e.g. fixed price, floating/ variable price, etc.). By using a DBOOM contract, the entity interested in RNG can shift many of the inherent risks in project development to a third party.

Public-private-partnerships (PPPs or P3s) are similar to DBOOM and used in cases where the site owner is a public authority. Public infrastructure projects can be funded while shifting many key risks and responsibilities in development and operation to a private sector player. In some cases, P3s are structured to provide other ancillary benefits to a customer, such as upfront or recurring payments over the contract period, and can turn a project that would otherwise have been a major capital investment into a cashflow positive structure for public agencies.

Ameresco RNG Project Highlight

CITY OF PHOENIX 91ST AVE WWTP BIOGAS-TO-RNG PLANT

The 91st Avenue Wastewater Treatment Plant (WWTP), one of the largest wastewater treatment plants in the Southwestern U.S., processes an average of 140 million gallons of wastewater each day. In 2017, Ameresco and the City of Phoenix broke ground on a biogas utilization project at the WWTP to deliver upon the city's sustainability targets.

In April 2019, Ameresco reached the commercial operation phase of the facility's RNG plant, which is the largest biogas-to-RNG facility of its kind in the U.S. and has the capacity to process up to 3,250 standard cubic feet per minute of raw digester gas and upgrade it to pipeline-quality RNG, reducing carbon emissions by 44,000 metric tons of carbon dioxide emissions per year.

The public-private-partnership between Ameresco and the regional consortium of government agencies responsible for the plant will generate a tremendous revenue stream for the City of Phoenix in payments from Ameresco. At the same time, the project will help Phoenix move closer to its goal of sourcing 15% of its energy needs from renewable energy by 2025.



Energy Savings Performance Contracts (ESPC)

Another opportunity to finance RNG supply is through a comprehensive and holistic **ESPC**. Through an ESPC, an energy services company (ESCO) and a building owner agree to a portfolio of efficiency measures then the ESCO secures financing and executes the upgrades. Repayment is achieved with the savings generated from the project over time and ESPCs offer a high degree of flexibility for the scope and the contract term. When RNG is bundled with this broad portfolio of efficiency measures under a single contract, it can be procured in a budget-neutral manner. In addition, because an ESPC uses energy efficiency as the starting point for a broader scope of measures, it can lead to more efficient thermal loads, thereby reducing the overall volume of RNG needed to achieve carbon neutrality.

Engineer-Procure-Construct (EPC)

EPCs are a common delivery model for a wide range of construction projects, including RNG projects. Under an EPC, one engineering/construction contractor takes responsibility for the three key phases of the construction process: engineering design, procurement of equipment and materials, and construction of the facility itself. By combining these three often-separate functions into one contract, an EPC often leads to fewer risks in project delivery than conventional design-bid-build process and the customer receives a turnkey project at its conclusion. The customer typically takes responsibility for securing capital and managing operations and maintenance once the project is complete.

BRINGING RNG TO FRUITION

The process of switching to RNG may seem challenging given the complexities of the energy markets and competing priorities within organizations. Below are key principles to guide you through the process.

Identify a High-Level RNG Champion Within the Organization

Given that energy-related decisions often span multiple departments and functions (from operations to facilities, procurement, finance, and others), assigning a high-level RNG “champion” to see through the process of purchasing RNG can consolidate responsibilities within one function. For many large companies and organizations, the Chief Sustainability Officer or other sustainability-related function is a logical choice to be the RNG champion. However, other functions, such as Chief Financial Officer or Director of Procurement may be appropriate as well.

Determine Organizational Priorities & Financial Objectives Around RNG

Once the RNG champion has been identified, he or she can begin the process of seeking a pathway to RNG that suits the organization's objectives. Many organizations have established specific targets for carbon reduction or carbon neutrality (e.g., 100% carbon neutral by 2025). The scope and timeline of those ambitions can lead to the best-fit solution. Near-term carbon neutrality targets may guide an RNG buyer to procure supply from existing projects; however, a longer-term horizon can allow for more flexible or creative solutions, such as procurement of long-term supply from new RNG projects.

Another key determination is to assess priority levels for additionality in RNG procurement. If a high degree of additionality is required, the organization likely needs to engage a project developer to develop new RNG resources. Otherwise, purchasing RNG through existing supply options may be sufficient.



Partner with Experienced RNG Project Developer/Owner

Working with an experienced project developer creates several opportunities for organizations interested in RNG. Developers and owners of RNG projects have an incentive to produce RNG as economically as possible and have the expertise to do so. If an organization is merely interested in procuring RNG on a supply basis, going direct to the developer/owner of the project can potentially offer favorable pricing and contract terms as well as a wide range of products and services.



If an organization wants to participate in new project origination, partnering with an experienced RNG project developer offers the ability to shift much of the risk and effort in developing a project to the developer. The developer may even be able to secure project financing to reduce the customer's capital expenditures. In all cases, working with an experienced RNG project developer allows organizations to access the benefits of RNG while focusing on their core missions and priorities around sustainability.

V. CONCLUSION

The opportunities for procuring RNG are diverse and growing every year attributed to increasing interest from customers and support from federal and state programs. The benefits to organizations that switch to RNG – reductions in carbon emissions, a strong commitment to addressing climate change, energy security, improved air quality, and others – can often be accessed more easily than many realize.

By approaching RNG procurement with a strong stance on objectives and with an experienced RNG partner, companies and institutions looking to achieve carbon neutrality across their operations can do so readily and on strong financial terms. *What is your organization's next step?*

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