

#### **Solution Sheet**

#### Renewable Natural Gas

Renewable Natural
Gas (RNG) is a carbonneutral alternative to
conventional natural
gas that can be used as
a source of electricity,
heat, or vehicle fuel.

What do manure, sewage, agricultural crops, waste, food, garbage, and wood all have in common? They all naturally produce raw biogas that can be processed to generate a usable form of renewable energy.

Biogas is a mixture of gases (mostly methane and carbon dioxide), generated by the natural breakdown of this organic matter in landfills, wastewater treatment plants, farms, and food processing plants.

RNG is raw biogas that has been treated to be natural gas pipeline quality. This green gas makes use of resources already in our environment rather than voluntarily extracting natural gas sequestered in the earth.



## Turning Naturally Occurring Biogas Into Pipeline-Quality RNG

Raw biogas can be turned into RNG which can be distributed through the existing natural gas grid and displace conventional natural gas in identical applications.

Ameresco partners with public and private organizations to convert raw biogas from an environmental liability into an economic and environmental benefit by replacing fossil fuels with a renewable energy resource. Benefits of using RNG include:

- Carbon Neutrality: RNG is critical component to a clean energy future as one of the most effective ways to decarbonize existing natural gas pipelines.
- Environmental Impact: Capturing methane and processing it to make RNG significantly reduces greenhouse gas (GHG) emissions and decreases reliance on fossil fuels.
- Revenue Stream: Selling RNG into the natural gas grid delivers profits for owners of landfills, wastewater treatment plants, farmers, and food processors.
- Energy Security: Switching to RNG provides the gas grid with enhanced diversity of supply and market adoption.

## Turn Waste Into RNG: Transforming Wastewater Treatment Plants, Landfills, and Agricultural Waste

Turn biogas into a source of revenue while making a meaningful environmental impact. RNG plants create new revenue streams for municipalities, farmers, and industrial companies by selling into the natural gas grid. Ameresco designs, builds, owns, operates, and maintains renewable energy plants that convert otherwise wasted gas into useful forms of energy. These facilities process raw biogas that can be injected into the natural gas pipeline network and transported anywhere in the U.S. This Green Gas has been promoted under the federal Renewable Fuel Standard (RFS) program and by states that have adopted clean fuel programs such as CA, WA, OR, and NY.





# Biogas consists largely of methane, which is 28X more potent than CO<sub>2</sub> at trapping heat in the atmosphere.

The most common source of biogas is the breakdown of organic waste. By capturing waste methane and processing it to make RNG, we can avoid its negative environmental impact while also decreasing reliance on fossil fuels.

## Add RNG to Your Energy Portfolio: Purchasing RNG to Offset your Greenhouse Gas Emissions

Replacing conventional natural gas with RNG is a more responsible way to reduce your greenhouse gas emissions while allowing you to hedge volatile energy market risks. Ameresco helps organizations determine how to best incorporate RNG into your energy portfolio. Meet sustainability goals by changing from fossil fuel to renewable energy – thereby reducing GHG emissions. RNG can also impact Scope 1 emissions: direct GHG emissions generated by your organization's vehicle fleet. Ameresco is an expert and market leading RNG project developer helping define today's industry standards.



Ameresco's team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.