alternative fuels

things to know about renewable natural gas

what renewable natural gas is

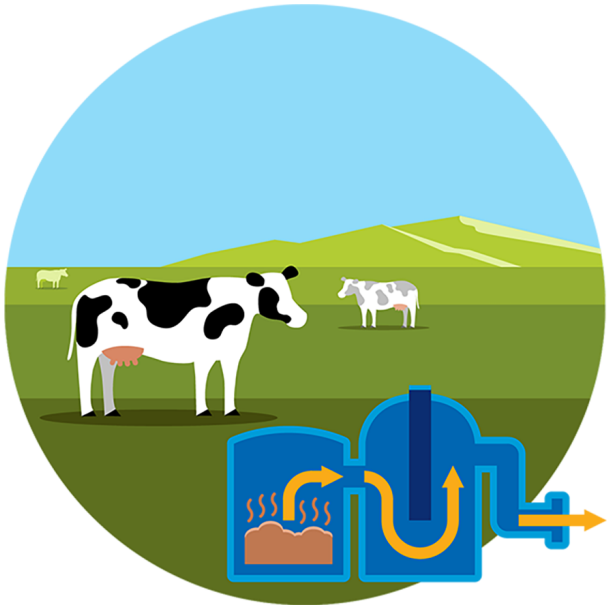
Renewable natural gas, or RNG, is biogas that has been upgraded and placed in the conventional natural gas system. It's produced from multiple sources, including livestock waste, landfills, wastewater sludge, food waste and other

organic waste operations. RNG can be used for electricity generation, thermal functions like heating and cooking, bioplastics and vehicle fuel.

Chevron works with our partners in the United States to convert methane from cow waste into RNG for use in heavy-duty vehicles.

"Chevron has the infrastructure, assets and capabilities to produce and distribute renewable natural gas [and other] fuels that offer lower carbon options for critical industries in search of solutions."

mike wirth
chairman and CEO



how RNG is made and distributed

Bacteria naturally break down organic waste and produce raw methane, carbon dioxide (CO_2) and other gases. The process is called "anaerobic

digestion.” The raw methane is between 45% and 65% pure, not quite ideal for commercial use. It must be treated, or “upgraded,” to remove contaminants and reach nearly pure levels, typically 95% or higher.

After RNG is upgraded, it can then be injected and transported through natural gas pipeline networks and used as a substitute that is virtually indistinguishable from natural gas. The difference is RNG is produced from biological materials instead of fossil fuel deposits.

why renewable natural gas matters

Renewable natural gas can, one day, help reduce the life cycle carbon intensity of transportation fuels while meeting the world’s growing energy needs. It’s essential for the growth of lower carbon fuel markets and can help reduce the impact of organic wastes.

Innovating methods to produce carbon-negative RNG from dairy cow waste is an integral part of Chevron’s portfolio of solutions.

benefits of RNG

- The U.S. and California classify RNG as an advanced biofuel for transportation
- It helps improve fuel security, economic revenues or savings, local air quality and greenhouse gas reductions
- Producing RNG helps reduce agricultural methane release in the atmosphere
- RNG could reduce yearly emissions from animal manure by 258 million tons
- RNG production may also reduce manure runoff into rivers and water supplies

~ 400%

Decrease in life cycle carbon intensity for RNG over conventional diesel under California standards

~ 50%

Capturing RNG from landfills to power a vehicle represents a decrease of nearly 50% in life cycle carbon intensity under California's Low Carbon Fuel Standard

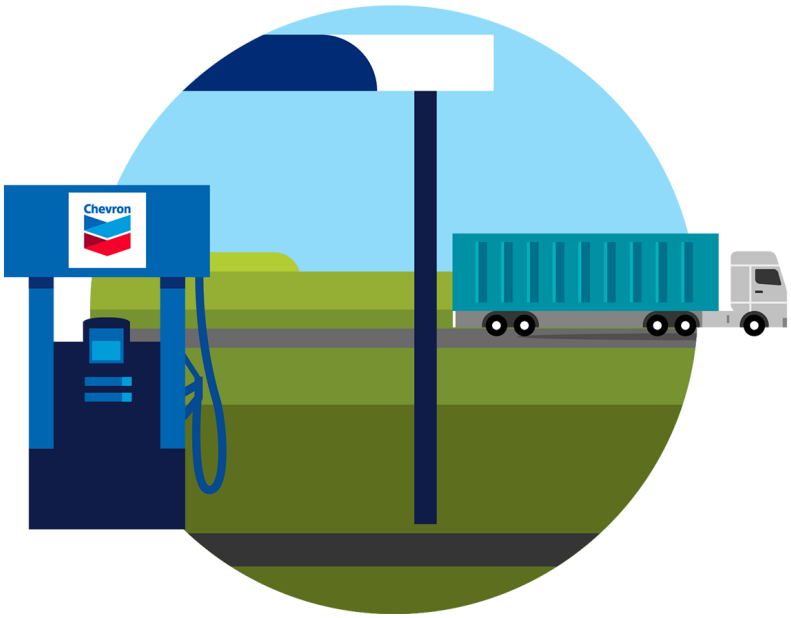
100+

100+ CNG-fueled trucks funded by Chevron through our Adopt-a-Port initiative with Clean Energy

first gas

First RNG achieved with partner CalBio (September 2020)

First RNG achieved with partner Brightmark (October 2021)



where the rubber meets the road

Renewable fuels like renewable natural gas can help lower the carbon emissions in transporting the things we need.

RNG will soon be available to heavy transportation operators, like truckers, in California. This will start with the rebranding of the Allied Clean Fuels Plaza retail station in Napa as Chevron's first compressed natural gas (CNG) station.

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