

RENEWABLE NATURAL GAS

The impact of rising customer demand for natural gas coupled with federal and state initiatives for decarbonization has led many natural gas utilities to look for innovative ways to satisfy both without breaking the bank.

The use of **Renewable Natural Gas (RNG)** solutions is quickly becoming one of the preferred methods to meet increasing supply needs while also reducing the carbon footprint of utilities. RNG is a clean, affordable and reliable alternative for utilities to efficiently address future demand needs while also meeting greenhouse gas reduction goals.

According to the American Gas Association's RNG Activity Tracker, some of the largest natural gas utilities in the United States (Duke Energy, Southwest Gas, TECO, Consumers Energy) have RNG projects planned, under construction, or already in service.



Magnolia River and CEM Engineering have formed a strategic partnership to provide natural gas utility clients with comprehensive turn-key services to help successfully plan, design and manage construction of RNG solutions to deliver pipeline-quality natural gas that can be safely used by natural gas customers.



ABOUT MAGNOLIA RIVER

Magnolia River provides inspection, engineering, GIS, and technology solutions for utility and natural gas pipeline infrastructure and operations.

Magnolia River's Engineering team provides services ranging from permitting and replacement programs to turn-key engineering and project management.

ABOUT CEM ENGINEERING

CEM Engineering is a leader in North America's energy transition with a focus on three distinct areas: power and utilities, biogas and renewable natural gas (RNG), and hydrogen.

CEM develops and designs custom engineered systems and provides services ranging from consulting, schematic design, and detailed engineering while also delivering projects on an EPC/turn-key or design-build basis.



RENEWABLE NATURAL GAS USE CASE

Magnolia River and CEM Engineering teamed up to support one of the largest natural gas distribution utilities in the southeast region in the implementation of a comprehensive turn-key Renewable Natural Gas (RNG) Facility.

This project, which was the **first of its kind in its state**, included engineering design analyses for the on-site capture and upgrading of biogas, as well as an engineering design for the transport and injection of pipeline quality natural gas from the RNG facility into the utility's active supply pipeline.

For the on-site capture and upgrading of biogas, CEM Engineering designed a comprehensive RNG upgrading facility solution that processes raw biogas generated through the anaerobic digestion process from dairy manure from over 6,000 cows to pipeline-quality natural gas. The design for this RNG facility included a RNG upgrading system capable of processing 600 scfm of biogas, as well as a biogas pre-treatment system, blower and gas conditioning system, and 3-stage membrane system for removing CO₂.

For the transport and injection of processed biogas to the utility's existing natural gas supply pipeline, Magnolia River provided comprehensive engineering designs, including a route selection analysis for the **construction of a 2.6 mile 4" PE natural gas pipeline**. In addition to the pipeline design, Magnolia River provided engineering design for both a metering and compressor station to support the newly constructed pipeline.

This project, when fully constructed and operational, is **expected produce over 105,000 MMBtu of renewable, clean, pipeline quality natural gas** for thousands of customers in the utility's service area.

**Contact us today to learn more about our
comprehensive RNG solutions.**

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