

MOO-VE OVER

GREENHOUSE GAS EMISSIONS



NORTHWEST IOWA RNG SITE DESIGN

PROJECT Northwest Iowa RNG Site Design
Northwest Iowa

FIRM Merrick & Company
Greenwood Village

CO CLIENT Gevo
Englewood, CO

The Northwest Iowa Renewable Natural Gas (RNG) Plant creates RNG at three sites in Iowa using something the area has in abundance: manure from dairy farms. The project was conceived by **Gevo**, a renewable chemicals and advanced biofuels company, as a source for low-carbon intensity (CI) thermal energy. The RNG thermal energy from the plant will fuel the fermentation process for alcohol-to-jet and other advanced-renewable-fuel pathways at Gevo's fuels production facilities.

The **Merrick & Company** team provided Front End Loading-3 (FEL-3), detailed engineering, and total project integration for three separate dairy sites and one common biogas upgrading site. The team blended agricultural and industrial best practices to create individualized solutions for each dairy site that minimized land use and impact on existing operations. The project began injecting RNG into the natural gas pipeline in June 2022 and, with a facility upgrade due to be completed

in late 2023, is expected to produce more than 400,000 MMBtu of RNG annually.

The project seamlessly incorporated numerous environmental, social, and economic benefits, including reducing methane emissions; providing an economic boost to the dairy owners through compensation for the manure and potential increased profits for sustainably sourced products; minimizing valuable agricultural land use; and creating a cost-effective template for future multi-site agricultural RNG projects and easily scalable blueprint for adding future dairy sites. **Sustainability starts from the ground up—and everyone from the dairy owners in Iowa to RNG users in different states will reap the rewards of this unique RNG cluster project.**



Gas upgrading vessels



Dairy sites leading to one RNG upgrading site



Gas upgrading system