

From cowpats to clean energy

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Harmful emissions from the agriculture sector are increasingly scrutinized as the climate changes. Now, energy companies want to help New Mexico dairy farmers reduce emissions. Virginia-based Dominion Energy and Vanguard Renewables Ag of Massachusetts have announced a \$200 million partnership to convert methane from cow manure into renewable natural gas.

The money will fund projects at dairy farms in New Mexico, Colorado, Utah, Nevada and Georgia.

“This is a huge win for the environment, for family farms and for our customers,” Ryan Childress, director of gas partnership business development at Dominion Energy, told the Journal. “It’s exciting to cross industries to team up agriculture and energy.” Agriculture produced 11% of New Mexico’s greenhouse gas emissions in 2018, according to the state’s climate change task force report released in November.

As manure breaks down, it produces methane, a greenhouse gas with a greater warming potential than carbon dioxide. Instead of allowing methane to escape into the atmosphere, the companies capture the gas on the farms by placing manure in anaerobic digester tanks with large inflatable “bladders” on top.

Low-pressure pipes transport the gas to a nearby Dominion-run processing facility, where it is cleaned to industry standards and goes into existing distribution systems as a power source for homes and businesses. Natural gas collected from each cluster of dairy farms could power 2,800 to 4,000 homes.

Dairy farmers will receive payments from Dominion and Vanguard for the manure they place into the digester tanks, which the companies praised as a way to provide another revenue stream to local farmers.

“This allows the next generation of dairymen to focus on sustainable practices and better nutrient management,” said Kevin Chase, CEO of Vanguard Renewables Ag. “This is a 100% investment by our companies, at no cost to dairy owners.”

After methane is removed from the manure, the dairy farmers can use the nutrient-rich waste on their farms for fertilizer. The companies worked with the Dairy Farmers of America to identify where dense clusters of dairies would make transport to processing facilities more efficient.

Final locations of the farm projects haven't been announced, but Chase did say southeast New Mexico is ideal for methane capture. Nearly 40 regional dairies supply milk to the Southwest Cheese Plant in Clovis.

"We're excited to collaborate on this opportunity with Dominion Energy and (to be) helping our family farm owners in their commitment to sustainability and renewable energy," the Dairy Farmers of America said in a social media statement.

Vanguard has five anaerobic digesters on dairy farms in Massachusetts and one under construction in Vermont. Dominion and Vanguard will soon file for project permits with the New Mexico Department of Agriculture, and Chase said the goal is to break ground on the digesters this year.

The \$200 million could fund projects at 10 to 20 farm clusters, depending on the size of each dairy. Theresa Davis is a Report for America corps member covering water and the environment for the Albuquerque Journal.