

The Truth of the Matter

Activist Claims Against RNG Projects are Full of Contradictions

Renewable Natural Gas Projects are a Win-Win for the Farmers, the Environment and the Community

FIFTEEN YEARS AGO, THE idea of generating renewable energy from animal manure was an unfamiliar and unconventional concept. But when the North Carolina legislature passed a landmark renewable energy bill in 2007, it included a provision requiring utilities to generate a portion of their electricity from renewable energy projects involving swine and poultry waste.

The mandate, the first of its kind in the nation, slowly began to spur activity. By 2011, a pig farm in Yadkinville was producing renewable energy from swine waste using a commercial scale anaerobic digester. That project, at Loyd Ray Farms, was the result of a partnership involving Duke Energy, Duke University and Google.

The \$1.7 million, award-winning project became the first farm in North Carolina to produce Renewable Energy Credits. Along the way, it earned rave reviews for reducing greenhouse gas emissions and substantially eliminating odor on the farm. The project has also been praised for its positive impact on air quality and water quality.

The NC Sustainable Energy Association highlighted the project as “an example of how one farm has turned swine waste

into something that can positively impact the community.” A Duke Energy executive described the project as “a showcase for what others can do,” and a Duke University official wrote that digesters “help communities, farms and the environment by reducing pathogens and odors, keeping waste out of floodwaters and reducing greenhouse gas emissions.”

Since Loyd Ray Farms, more than a dozen renewable natural gas projects on pig farms across the state have followed. The largest of these projects, Optima KV, came online in 2018. It uses covered digesters to collect methane from five pig farms in Duplin County, then pipes the gas to a central refinery where it is cleaned and injected into the natural gas pipeline for use by Duke Energy. Together, the farms generate 11,100 megawatt-hours of electricity annually — nearly 20 times the output of Loyd Ray Farms. It’s enough energy to power about 880 homes each year, more than twice the number of homes in the Kenansville community where it is located.

Today, North Carolina produces more renewable energy from pig manure than anywhere in the United States. The EPA’s AgSTAR program touts the benefits of digester systems that enable farmers to capture methane gases, and

North Carolina’s Clean Energy Plan highlights the state’s potential to produce biogas (NC ranks third in the nation for biogas potential).

For years, biogas projects on North Carolina farms were consistently viewed as a positive step forward that offered significant environmental benefits. In the past decade, about two dozen farms received modified permits to generate biogas — with no opposition. But things began to change in 2018. That’s when Smithfield Foods and Dominion Energy announced a joint venture called Align RNG to expand the production of renewable natural gas on farms. The companies announced plans to invest \$500 million in RNG projects located in North Carolina, Virginia and Utah.

“Our partnership is revolutionizing the future of sustainable energy and agriculture in this country,” said Diane Leopold, President & CEO of Dominion Energy’s Gas Infrastructure Group, in an October 2019 press release. “We’re not only reducing greenhouse gas emissions, we’re also turning a waste product into a clean energy resource. We’re capturing 25 times more greenhouse gas emissions from the farm than are ever released when the gas is used to heat homes or power businesses.”

Align RNG's first North Carolina project, called the Grady Road Project, will capture renewable natural gas from 19 farms in Duplin and Sampson counties. The projected output is enough clean energy to heat 4,500 homes. It will have the same environmental impact as taking 36,000 cars off the road or planting 2.7 million new trees each year.

All homeowners impacted by the Grady Road pipeline have given their consent and received compensation for their involvement.

But surprisingly, the Align RNG project and the benefits it offers have come under intense opposition from activist groups, including organizations like the Southern Environmental Law Center (SELC) that typically support positive climate change initiatives.

OPPOSITION BASED ON UNFOUNDED, MISGUIDED FEARS

Farmers have a hard time understanding why activists oppose a project with a long list of proven, tangible benefits — from a significant reduction in greenhouse gas emissions to covered lagoons that minimize odors and reduce the potential for flooding.

For years, North Carolina farmers have heard critics point to lagoon covers as a practical solution to address community concerns. A prominent Democratic legislator, Rep. Billy Richardson, published a letter in the Fayetteville Observer in 2018 pushing for changes that would require pig farmers to cover lagoons. He called it the “right thing to do.”

“Doing so would give much needed relief to our environment, as well as to the folks who live next to these operations,” Rep. Richardson wrote.

Now, critics of North Carolina's pork industry are reversing course and raising unfounded concerns about biogas projects.

One example: overblown concerns about the safety of the lines that transport the biogas from the farms. The reality is that methane gases are not combustible, pipelines are constructed with no joints where leaks might occur, and pipelines are operated at very low pressure to mitigate risks.

Another example: false claims about increased nitrogen levels that overlook the science behind these projects.

While there may be higher concentrations of nitrogen on farms that cover existing lagoons (since there is no rainwater to provide dilution), pig farmers must continue to follow strict rules and regulations that limit the amount of nitrogen that can be applied to their land, based on laboratory testing of soils at individual farms. The agronomic rate that nitrogen can be applied to the soil is determined by an analysis of lagoon water samples submitted to the State Agronomic Laboratory in Raleigh. That means if a farm has a higher concentration of nitrogen in its lagoon, it may result in fewer land applications.

On farms that construct a new digester to capture biogas and use a secondary storage pond, there is little change in nitrogen dynamics. In fact, early data suggests that there may be a slight reduction in the nitrogen content.

A MISGUIDED ARGUMENT AGAINST BIOGAS

The most frequent and vocal critics of renewable natural gas projects on North Carolina farms are those who highlight concerns that have nothing whatsoever to do with the projects themselves. Instead, they oppose biogas efforts because they fear it will “entrench” the existing lagoon and sprayfield system used by most pig farms in North

Carolina. As the Fayetteville Observer reported, “a large concern among environmental activists about the general permit for biogas and animal waste projects is that it will not remove the current lagoon and sprayfield system.”

That misguided attitude represents a false choice — and overlooks the positive improvements that biogas projects bring to the community. The development of these projects is not a choice between generating renewable natural gas or replacing the lagoon and sprayfield system with alternative systems.

In an OpEd article published by the Fayetteville Observer in May 2021, NC Pork Council CEO Roy Lee Lindsey described opposition to RNG projects as a short-sighted strategy that diminishes the pursuit of incremental improvements.

“Mark Twain told us, ‘Continuous improvement is better than delayed perfection.’ Our pig farmers are committed to continuous improvement. Opposing innovation, whether small steps or giant leaps forward, only prevents further advancement....It’s a shame that critics of pig farming continue to oppose incremental improvements that benefit our environment.

The truth of the matter is that North Carolina pig farms are here to stay, and renewable natural gas projects will deliver valuable benefits to local communities. In addition to the well-documented reduction in greenhouse gas emissions, RNG projects minimize odor



from farms and reduce the potential for flooding during heavy rain events.

RNG PERMIT MODIFICATIONS STIR UP OPPOSITION

To implement a digester system capable of generating renewable natural gas, farms must receive a modification to their existing swine permits. Prior to the Align RNG project, this was a relatively simple process. But the first four farms involved in the Grady Road project faced a permitting process that was arduous and lengthy, dragging on for more than a year — compared with a typical turnaround of 30 days or less — and included public hearings that weren't required. The additional scrutiny generated fears that other farmers would be dissuaded from seeking a RNG permit modification in the future.

The NC Farm Act of 2021, passed by the NC General Assembly with bipartisan support, included a provision to simplify the permitting process for existing farms that want to install a digester system. The new law requires the NC Department of Environmental Quality (DEQ) to develop a general permit for these systems rather than issue individual permits for each farm. In addition, the law requires a permit to be processed in 90 days or less.

Establishing a general permit for biogas projects is logical, the NC Pork Council's Angie Maier told legislators.

"The technology is well understood, and the digester systems are similar. This is not new technology," she said. The state has issued 24 permits over the past decade allowing farms to cover lagoons or construct a methane digester to capture biogas, she noted, and prior permits had received no opposition.

The General Permit must be developed by DEQ by July 2022.

DÉJÀ VU: ANOTHER TITLE VI COMPLAINT

Recent efforts to develop RNG projects in Eastern North Carolina have stirred up increased opposition among activist groups. In September 2021, the Duplin County Branch of the NAACP and the NC Poor People's Campaign filed a Title VI Civil Rights Complaint with the US Environmental Protection Agency. The complaint alleges that issuing RNG permits for the four farms involved in the Grady Road project violated the civil rights of minority communities that are disproportionately impacted by North Carolina pig farms.

Sound familiar? It should.

This is the second Title VI complaint alleging discrimination related to North Carolina swine permits.

In 2014, a trio of activist groups — the Waterkeeper Alliance, the North Carolina Environmental Justice Network (NCEJN), and the Rural Empowerment Association

for Community Help (REACH) — filed a similar complaint with the EPA. (Read more about that complaint [here](#).)

It was a novel approach, the brainchild of an attorney at Earthjustice. Her name was Marianne Lado.

A civil rights claim, she explained at the time, brings opponents of hog farms together and provides them language and framing to use in their efforts against the farms. It "increases the visibility of the issue of race" as part of their advocacy agenda, and the claim itself provides "leverage" in concert with other tactics against the farmers. She characterized the claim as a "lever."

"When you file the civil rights suit," Lado told an audience in Washington, DC, "people will sit down and talk to you in a way that if you didn't file a civil rights suit, they may not."

Marianne Lado no longer works for Earthjustice. After a stint at Yale Law School, she took a position earlier this year as Deputy General Counsel for Environmental Initiatives with the US Environmental Protection Agency, where she will may be directly involved in issues like this civil rights complaint.

2014 COMPLAINT SETTLED WITH NO FINDING OF DISCRIMINATION

As for the 2014 complaint, it was settled with no finding of discrimination.

HOW RNG PROJECTS WORK

When animal manure breaks down, it naturally produces methane gas. When released into the atmosphere, methane is a powerful greenhouse gas. By capturing this methane and converting it into clean energy, RNG projects significantly reduce emissions from pig farms. Here's how it works:

NC PORK COUNCIL



Capturing Methane on the Farm
As pig manure breaks down, it produces methane gas. Instead of allowing methane to enter the atmosphere, it's captured in a covered anaerobic digester. An initial cleaning removes condensation and other impurities.



NC PORK COUNCIL



Converting Methane to RNG
The methane captured from multiple farms is sent via low-pressure pipes to a central conditioning facility, where it's refined to 99% pure methane, the same as traditional natural gas. The gas goes through a two-step testing process before entering the natural gas pipeline.



SEAN PAVONE, ADOBE STOCK



Delivering to Homes & Businesses
Once in the pipeline, renewable natural gas is then put into the existing distribution system to serve homes, businesses, power plants and other natural gas consumers.

In sworn testimony, the DEQ strongly refuted the allegations that its permitting process was discriminatory. “DEQ’s position is that the 2014 Swine Permit did not discriminate on the basis of race, color, or national origin on its face, in its implementation, by its impact, or in any other way...”

What’s changed since then? Well... nothing.

“We are perplexed by any effort to thwart sustainable farming practices to address the threat of climate change, a top priority for North Carolina and our nation,” Jim Monroe of Smithfield Foods said in response to the new Title VI complaint. “Turning methane from hog farms into clean energy is an innovative, sustainable practice and an absolute win for North Carolina, the communities where Smithfield operates and the environment.”

RNG BENEFITS LOCAL COMMUNITIES AND ENVIRONMENT

Renewable natural gas projects represent a substantial financial commitment from the pork industry to continue making improvements that will better protect the environment and benefit the surrounding community. These benefits include:

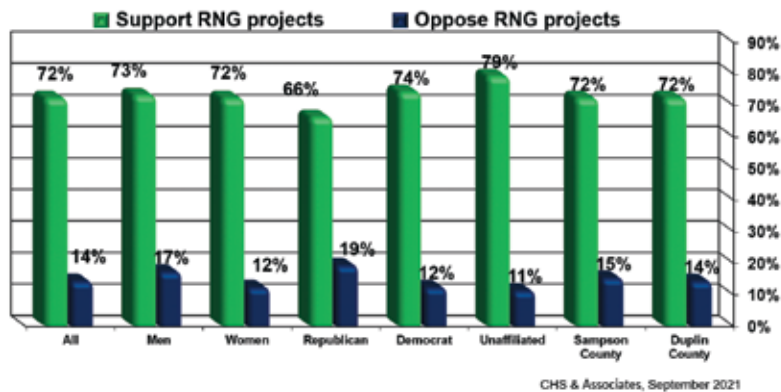
- **Reducing Emissions:** There’s no dispute that capturing methane is a positive development that reduces greenhouse gas emissions. The NC Clean Energy plan states: “RNG can play an important role in reducing methane emissions, a potent GHG with global warming potential 25 times greater than carbon dioxide. Reducing methane emissions can have a larger impact on the environment than other carbon reduction initiatives....RNG projects in the State have the potential to significantly reduce these emissions.”
- **Minimizing Odors:** While the Southern Environmental Law Center claims that biogas projects do “little to address noxious odors that plague neighbors,” the EPA’s AgSTAR program tells a different story. It highlights “odor reduction” as one of the primary benefits of biogas systems on livestock farms. Farmers and their neighbors agree.

SURVEY SHOWS RESIDENTS STRONGLY SUPPORT RNG PROJECTS

What does the public think about renewable natural gas projects on pig farms? Multiple surveys show that North Carolina residents are overwhelmingly supportive.

When the NC Chamber of Commerce conducted a statewide poll on a variety of issues in January 2021, 74% of voters said North Carolina should do more to encourage the development of renewable and alternative energy sources. When asked specifically for their thoughts about how “some North Carolina hog farms are turning animal manure into renewable natural gas,” 67% said it enhanced their opinion of the industry. Only 10% said it diminished their view of hog farms.

A more recent survey of Duplin and Sampson County residents, conducted in October 2021, found similar support for renewable natural gas on hog farms. Overall, residents support the development of these projects by a margin of 6-to-1. That type of widespread support is consistent across all demographics in these communities.



On North Carolina farms that have installed lagoon covers, it’s estimated that they block 85% of odor from the lagoons.

- **Preventing Flooding:** Record-breaking hurricanes, including Hurricane Matthew and Hurricane Florence, dumped massive amounts of rain in eastern North Carolina and fueled concerns about the potential for flooding on pig farms. While North Carolina has closed hundreds of lagoons located in flood-prone areas over the past 20 years, lagoon covers provide additional protections. The covers keep rainwater out, helping maintain low lagoon levels and minimizing the potential for flooding on farms.
- **Income Opportunities for Family Farmers:** The growth of the biogas industry is making technology more

affordable. Farmers who invest in the infrastructure needed to generate renewable natural gas on their farms can share in the steady, long-term revenue that RNG projects can produce.

Generating renewable natural gas on pig farms is clearly a win-win for farmers and their neighbors, the environment, and the State of North Carolina. Unfortunately, while other states are embracing these projects and offering financial incentives for livestock farmers to add digesters, North Carolina continues to deal with activists who oppose any step forward for the pork industry.

Embracing renewable natural gas projects allows North Carolina pig farmers to continue doing what they do best — making continuous improvements on their farms and in their communities.