

# Dairy Manure Anaerobic Digester Program Enhances Farm Income Diversification and Manure Management

*Fully Funded – 20-year Contracted Rates  
Committed Offtake Agreements – Operational Expertise*



**“We knew this project would really mesh well with our business. It’s really important for our generation to continue farming in the future.”**

*– Chase Goodrich,  
Goodrich Family Farm*



## Opportunities Across the U.S.

### Why participate?

- Vanguard Renewables’ proven performance in farm-based anaerobic digestion
- Funding available today for anaerobic digester projects—no farm capital investment required
- Two platforms: manure-only to RNG and food waste and manure codigestion to RNG
- Long-term partnerships with dairy cooperatives and farm organizations
- Programs available for farms of all sizes
- Professional operation and management of all RNG facilities
- Solves dairy manure management and water management challenges
- 20-year guaranteed annual fee program contract with host farms – enhances farm income and operations. Not subsidy based.
- Established long term RNG offtake agreements with major utilities to source locally produced renewable energy

### INDUSTRY AWARDS



# Why Choose Vanguard Renewables?

*No Farm Capital Investment Required*



**“The anaerobic digester significantly reduces farm expenses for energy, cow bedding, and heat, and minimizes smells on the farm which makes us better neighbors.”**

– Peter Melnik,  
Bar-Way Farm Inc.

Vanguard Renewables is a national leader in the development of farm-based food and dairy waste-to-renewable energy projects. We are committed to working alongside the dairy industry now to solve greenhouse gas emissions challenges and enhance long-term operational and economic benefits for farmers. Our established Farm Powered anaerobic digestion program reduces on-farm greenhouse gas emissions by more than 85% and supports regenerative agriculture best practices on partner farms.

*We have seven operating projects in the Northeast and we're expanding nationwide with plans to have 100+ Farm Powered anaerobic digesters operating over the next 5 years.*

## Farm Benefits

Each of our farm partners is carefully selected based on herd size, available acreage, and location. No farm capital expenditure is required to participate in the Farm Powered program and farms receive a 20-year guaranteed lease contract to diversify their income. Farms also receive tangible benefits including highly potent, low odor liquid organic fertilizer to support regenerative agriculture practice and boost crop yields, dry fiber bedding material to increase cow comfort.

## Vanguard Renewables' Farm Powered Commitment

Vanguard's two sustainable models for the treatment of manure support American agriculture. Working alongside farms, Vanguard commits to:

- Recycle dairy manure into RNG utilizing manure-only farm-based covered lagoon or continuous mix tank anaerobic digesters
- Recycle dairy manure and food waste into RNG at farm-based anaerobic co-digestion facilities
- Support regenerative agriculture best practices, improve soil health, and increase crop yields
- Protect watersheds by controlling the constituent values of the low-carbon fertilizer byproduct of the anaerobic digestion process
- Significantly reduce farm-generated greenhouse gas emissions



# Two-Anaerobic Digestion Platforms: Manure-only and Codigestion

*National leader in the development of dairy waste-to-energy projects*



A 20,000-cow dairy manure to RNG project produces approximately 760 MMBtu/day of renewable natural gas – the equivalent of 9.25 MW of power.



**“Manure is gold these days.”**

– Randy Jordan,  
Jordan Dairy Farms



## Vanguard Renewables Ag Manure-only to RNG

A typical dairy waste-to-renewable energy project consists of a cluster of multiple farms totaling 10,000-plus dairy cows. The methane produced from dairy manure is captured through a process known as Farm Powered® anaerobic digestion and is then transported either by truck or pipeline to a conditioning facility. Once the gas is processed and cleaned of any impurities, it is then delivered to the existing underground gas distribution network.

## Vanguard Renewables Anaerobic Codigestion

Vanguard Renewables' anaerobic codigestion program converts food and farm waste to renewable energy. The process begins with the collection of feedstock consisting of inedible or unusable food and beverage waste. Once the feedstock arrives at one of our Farm Powered anaerobic digesters, the waste is combined with manure collected at the farm in a sealed biodigester tank where microorganisms that naturally occur in manure digest the feedstock, converting sugars, fats, and other compounds into biogas. This biogas is captured and converted into clean renewable energy and low-carbon fertilizer along with other valuable byproducts.



“We need everyone to step up and aim big... the Alliance brings together companies to develop solutions to effectively and substantially combat climate change.”

– Niki King, Sustainability Director  
– Unilever North America

“There isn't a reason in the world not to join the FPSA and be part of the solution.”

– Jed Davis, Director of Sustainability,  
Cabot Creamery



## Vanguard Renewables launches the Farm Powered Strategic Alliance alongside national farm and food industry leaders

The Farm Powered Strategic Alliance, created in December 2020 by founding partners Vanguard Renewables, Unilever, Starbucks, and Dairy Farmers of America, is a national collaborative movement to boost food waste reduction and recycling, and expand renewable energy production across America. The Alliance enables U.S. food manufacturers and retailers to recycle unavoidable food and beverage waste on farms, where it is combined with farm manure in Vanguard's Farm Powered anaerobic codigestion facilities to generate renewable natural gas (RNG). The Alliance is a circular approach that reduces the detrimental environmental impacts of CO2 emissions, diverts food waste from landfills and incineration, and offers a pathway to a carbon-neutral footprint.



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“We are building a coalition of like-minded companies that is committed to our country's low-carbon future. There are many alliances and sustainability targets; this alliance offers a tangible road map with action steps to fulfill sustainability targets and make a real difference. Join us!”

– John Hanselman, Founder  
and Chief Strategy Officer,  
Vanguard Renewables

**FOR MORE INFORMATION, PLEASE CONTACT:**



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