

VANGUARD RENEWABLES

JORDAN DAIRY FARMS Rutland, MA



FARM FACTS

- 950-acre dairy farm
- 800 Holstein cows/300 milked 3X daily
- 700 Hybrid Double Breasted White Turkeys
- Founded in early 1885
- Located in the Rutland, Mass.
- Member of Dairy Farmers of America (DFA) Cooperative



Dairy Farmers of America

DIGESTER FACTS

- Built in 2011, Expanded in 2016
- 500,000-gallon capacity

FARM BENEFITS

- Income diversification
- Low carbon fertilizer to increase crop yields and protect area soils
- Odor reduction
- Reduction in chemical fertilizer use
- Enhanced nutrient management plan
- Heat reuse

Jordan Dairy Farms in Rutland, Massachusetts, founded in 1885, has been operated by the Jordan family for six generations. The farm is a member of Dairy Farmers of America (DFA). Operated by brothers Randy and Brian Jordan, the farm has survived despite an extraordinary decline in dairy farm numbers across Massachusetts.

The sustainability of the anaerobic digester coming into our facility has tremendously helped. We certainly enjoy having the ability to capture the electricity off of the methane gas. And then we use the byproducts for fertilizer purposes

— Randy Jordan

Prior to becoming a part of the Vanguard Renewables partnership, Jordan Dairy Farm's monthly electric cost alone was more than \$2,400. Partnering with Vanguard on the Farm Powered anaerobic digester project, the farm now receives low-cost energy, hot water, and heat for reuse.

Nearly 20,000 tons of food waste and beverage waste is collected annually from food processors and users is combined with more than 9,125 tons of manure a year from the farm in a 500,000-gallon digestion tank. Manure and food waste are mixed and microorganisms convert sugars, fats, and other compounds into biogas annually producing 4,200 MWh of renewable energy and low-carbon, liquid fertilizer to enhance soil health and increase crop yields. The anaerobic digester has revolutionized how the farm gets power, while fitting seamlessly into this quintessential New England dairy farm.

PROJECT PARTNERS



VANGUARD RENEWABLES



ANNUAL DIGESTER INPUTS

20,000 tons of food waste

9,125 tons of manure

ANNUAL DIGESTER OUTPUT

Powers two engines producing 800kW

4,200 MWh of renewable energy

Offsets 770 tons of CO2 emissions*

*The equivalent of taking 170 cars off the road for one year

**Provides energy
via net metering
credits to area
businesses
including Polar
Beverages
and Wachusett
Brewing Company**

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