



## Jordan Dairy Farms, Inc., Rutland, Massachusetts Farm Powered® Anaerobic Digester Project



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

### FARM BENEFITS

- Liquid, organic fertilizer to increase crop yields
- Reduced energy cost
- Odor reduction
- Reduction in chemical fertilizer use
- Enhance nutrient management plan
- Heat reuse

### FARM FACTS

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

### DIGESTER FACTS

- Built 2011/Expanded 2018
- 500,000-gallon capacity

### Annual Digester Input:

- 9,125 tons of manure
- 20,000 tons of waste

### Annual Digester Output:

- Powers an 500kW engine
- Produces more than 5,000 MWh of renewable energy/year
- Offsets 20,000 lbs. of CO<sub>2</sub> emissions daily
- Produces renewable energy equivalent to the needs of 1,600 homes
- Provides renewable energy via net metering credits to area businesses

More than 20,000 tons of food waste annually from food processors and users is combined with more than 9,000 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 more than 5,000 MWh of renewable energy and odor-free, organic, liquid fertilizer to increase crop yields.

