



Bar-Way Farm, Inc., Deerfield, Massachusetts Farm Powered® Anaerobic Digester Project



Vanguard Renewables Farm Powered Anaerobic Digester at Bar-Way Farm, Inc. in Deerfield, Massachusetts was constructed in 2016. It features a 660,000-gallon capacity anaerobic digester tank and will co-digest 9,125 tons of manure and 36,500 tons of organic food waste annually. This offsets 5,500 lbs. of CO₂ emissions daily. The 7,700 MWh of renewable energy produced by the Deerfield AD system is equivalent to the needs of 1,600 homes.

Bar-Way Farm, Inc. is a multi-generational dairy farm founded in 1919 and operated by Steven Melnik and his son, Peter. The farm encompasses 600 acres of cropland. More than 250 cows are milked each day producing an average of 1,700 gallons of milk daily.

Manure from the dairy operation and organic food waste are combined in the anaerobic digester and microorganisms convert sugars, fats, and other compounds into biogas to produce renewable energy and odor-free organic, liquid fertilizer. The farm also receives low-cost energy and free hot water and heat.

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

- 600-acre dairy farm
- Founded in 1919
- 250 cows milked daily
- Produces more than 1,700 gallons of milk daily
- Located in Deerfield, Mass.

DIGESTER FACTS

- Construction 2016
- 660,000-gallon capacity

Annual Digester Input:

- 9,125 tons of manure
- 36,500 tons of food waste

Annual Digester Output:

- Produces 7,700 MWh of renewable energy/year
- Offsets 5,500 lbs. of CO₂ emissions daily
- Produces renewable energy equivalent to 1,600 homes
- Provides energy via net metering credits to food companies

