

VANGUARD RENEWABLES

CRESCENT FARM Haverhill, MA



FARM FACTS

- 650 acres of produce, pumpkins, gourds, hay and corn
- Operated by third and fourth generations of Davidowicz family
- Raises dairy cows, goats, sheep, ducks, and rabbits
- Farm activities include farm tours and special events
- Located in Haverhill, Mass.

DIGESTER FACTS

- 660,000-gallon capacity
- 160,000-gallon hydrolyzer
- 3M gallon effluent storage tank
- Constructed in 2018

FARM BENEFITS

- Income diversification
- Odor reduction from replacing raw manure with odorless digestate
- Liquid, low-carbon fertilizer to increase crop yields and protect area soils
- Reduction in chemical fertilizer use

Crescent Farm is taking huge steps to increase farm sustainability and enhance relationships with their community by hosting a Vanguard Renewables Farm Powered Anaerobic Digester at the farm.

Approximately 3,650 tons of manure and 36,500 tons of organics annually are combined in the Haverhill anaerobic digester. Methanogenic bacteria break down the manure and organics to produce biogas which powers a 1 MW engine to produce renewable electricity. The digestate material byproduct of the process is a highly potent, low carbon liquid fertilizer used by the farm to reduce commercial chemical fertilizer use and increase crop yields.

The engine powered by the biogas produced in the Farm Powered anaerobic digester generates more than 8,000 MWh per year of renewable energy, which is provided via net metering credits to the City of Haverhill schools and public facilities.



PROJECT PARTNERS



**VANGUARD
RENEWABLES**



ANNUAL DIGESTER INPUTS

3,650 tons of manure

36,500 tons of organics

ANNUAL DIGESTER OUTPUT

Offsets 1,000 tons of CO2 emissions

Produces 8,000 MWh of renewable energy from a 1 MW engine

**Provides energy
via net metering
credits to the
City of Haverhill
schools and
public facilities**

Crescent Farm: 140 Willow Ave, Haverhill, MA 01835



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