



A partial view of the Vanguard Renewables anaerobic digester at Bar-Way Farm in Deerfield, Massachusetts, monitors system performance on July 19, 2017. The digester, which extracts methane from manure and food waste, is similar in design to the one under construction in Salisbury, Vermont. The Massachusetts facility burns methane to generate electricity for the grid. The Salisbury plant, on the other hand, will inject purified methane (also known as renewable natural gas) into a Vermont Gas Systems pipeline. VANGUARD RENEWABLES

‘Renewable natural gas’ from manure and food waste heats up Addison County

BY JOEL BANNER BAIRD • AUGUST 21, 2019

The Goodrich Family Farm in Salisbury will soon become Vermont’s first local source of pipeline-ready methane, or natural gas.

The payload, refined from a mixture of manure and dairy factory food waste, will be pumped about five miles north to a Vermont Gas Systems distribution line.

Most of the “biogas” will wend its way to the Middlebury College boiler plant, which has until now relied partly on fossil fuels.

The methane that Middlebury College doesn’t use will reach other customers, displacing some of the utility’s natural gas that is extracted in Canada.

When completed in April 2020, the \$20 million Goodrich farm’s enclosed digester will



An undated aerial photograph of the Goodrich Family Farm in Salisbury, viewed from the east. An anaerobic digester is scheduled to go online in April 2020, on land south and west of the barn structures, at top left. VANGUARD RENEWABLES

be the largest of its kind in New England and will serve as “a call to action” for more regional producers of energy, said John Hanselman, CEO of Wellesley, Massachusetts-based Vanguard Renewables.

Is biogas greener than ‘natural’ gas?

Methane, whether it is pumped from underground deposits or “digested” from manure- and food-sources, releases carbon dioxide into the atmosphere when it is burned.

But there are some important differences:

- Unlike fossil-fuel methane, the amount of carbon released from farm-fresh sources (in this case, manure and leftovers from the nearby Cabot cheese plant) is the same that would be released naturally from landfills or compost facilities, Hanselman said.
- Biogas production avoids the risks associated with drilling wells for rock-bound natural gas. The latter has historically been a source of leaked methane – a greenhouse gas more potent than carbon dioxide – and in the hydraulic-fracturing process (“fracking”), of groundwater contamination. Improved methods for extraction reduce those risks.
- Today, natural gas from any source is viewed by many scientists as a “transition” fuel because it heats more efficiently, more cleanly and more cheaply than fuel oil, propane or kerosene.

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