

BANGOR DAILY NEWS

Exeter farm uses poop to produce energy



Alex Barber | BDN

Adam Wintle (left), managing partner for Biogas Energy Partners, and Travis Fogler, Stonyvale Farm dairy operations manager, speak to a crowd about the unveiling of their anaerobic digestion system at Stonyvale Farm in Exeter on Thursday, June 7, 2012. The farm is capable of turning cow manure and food waste into biofuel that is burned to produce electricity. That electricity is sold to Bangor Hydro.

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By Alex Barber, BDN Staff

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EXETER, Maine — One rural Maine business has unveiled a way for it to not only make money, but also help protect the environment.

Three state commissioners and several legislators toured Stonyvale Farm, a fifth-generation, family-owned dairy farm, to view its anaerobic digestion system, which turns animal and food wastes into energy.

Commissioners Patricia Aho of the Department of Environmental Protection, Walter Whitcomb of the Department of Agriculture and George Gervais of the Department of Economic and Community Development were at the farm Thursday.

“Anaerobic digestion is a clean biological process where animal and food wastes are converted to energy, heat and other sustainable products,” said Adam Wintle, managing partner for Biogas Energy Partners, which manages assets for Stonyvale Farm and Exeter Agri-Energy, a subsidiary of the farm. “Digestion also dramatically improves nutrient management practices and local watershed impacts to a significant degree.”

The dairy farm, which has 1,800 livestock, produces a lot of waste. The waste is piped to two big digestion vessels where it is mixed with food waste. The biogas given off by the mixture fuels a 16-cylinder, 1,500 horsepower engine. The engine produces about 4 million Btu of heat per hour — enough to replace 700 gallons of heating oil per day.

“If we were to use the energy here on site, we would probably consume about 5 percent of that on an annual basis,” said Wintle. “So that gives you a relative scale of production of Stonyvale Farms.”

The farm sells all of its electricity to Bangor Hydro-Electric Co. Whatever electricity the farm needs it buys back from Bangor Hydro.

The total construction cost was \$5.2 million, said Travis Fogler, Stonyvale Farm’s CEO and dairy operations manager. He added that grants paid for about half the total.

Each digestion vessel has walls that are 20 feet tall and measure 62 feet in diameter. Both have rubber roofs that are inflated by the biogas created from the mixture.

“It’s Firestone rubber,” said Fogler, referring to the tire maker.

Fogler said that excess biogas that isn’t consumed by the engine is burned through a flare valve.

None of the animal or food waste is wasted.

“We use it all,” said Fogler. “The only thing we don’t utilize all of is the heat. We’re looking for ways to utilize more [heat generated from the engines] than we do.”

The solid waste that is left over is used as bedding for the cows, he said.

Aho was supportive of the farm’s innovation.

“It’s not a win-win. It’s a win-win-win-win,” she said. “It is a wonderful project for this community. It shows the leadership, the courage and the innovation that can happen when

folks sit down and say, ‘What is right for us in regards for making sure our natural resources are protected?’”

Whitcomb commented that Stonyvale Farms’ method for producing electricity was more efficient than some other alternative sources.

“One of the major benefits of this is it’s not like the wind,” said Whitcomb. “It doesn’t stop and start. We wouldn’t be getting much wind power generation today in this area. These cows never stop. It’s a very constant source of power.”

Whitcomb said states such as Vermont, New York and California have similar anaerobic digestion systems.

Rep. Kenneth Fredette, R-Newport, said he was encouraged to see a business in rural Maine invest in innovative practices.

“We can do it in rural Maine,” said Fredette. “You drive a dirt road to come here. You have people [affected] who are not only working on the farm, but indirectly [as well]. You have Lyle Peirce [Inc. of Newport]. His company comes and gets the milk. That’s another company that’s able to thrive in rural Maine because people like this are willing to take these risks.”

The first day of operation was Dec. 29, said Fogler. The system has been running continuously since mid-March, he added.

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