

## LAWNHURST FARMS JOINS OTHER DAIRIES IN PRODUCING RENEWABLE ENERGY

### **Methane Digesters are a Sustainability Success Story for the Dairy Industry - EnviTec Biogas USA Inc. Introduces German Technology for the Benefit of NYers**

New York's dairy industry today welcomed one more dairy farm to its growing list of farms that produce milk – and now, renewable energy. A brand new, state-of-the-art methane digester was unveiled today at Lawnhurst Farms in Stanley, New York where industry representatives and community members gathered to celebrate the advancement of and investment in sustainability on this family farm. The digester will produce electricity utilizing manure from the farm and waste from a nearby yogurt plant.

Don Jensen, Co-Owner of Lawnhurst Farms with his family, said, "As farmers we are always looking for ways to do better by the environment. Biogas digesters provide many positives for not only our farm, but for our land, our community and our neighbors too. With two of my children now working as the fourth generation on our farm, this digester is also an investment in our family's future and will help ensure a viable and sustainable business for them to take over and continue with their own children. We are really pleased to add this technology to our farm and thank all who helped make this a reality."

Lawnhurst Farms contracted with EnviTec Biogas USA Inc., a German-owned company, to design and construct a methane digester that would produce electricity from the manure of their 1,400 cows, along with other organic waste on and off their farm. The digester, when at full capacity, is designed to produce 12,984 kW hours of electricity per day, or enough electricity to power 420 households per year. This electricity is used to power the farm with excess energy sold to the local utility company.

Tom Lawson, Technical Director-Vice President of EnviTec Biogas USA Inc., said, "The cradle of the biogas industry in Europe has been in the agricultural sector and the majority of the worldwide EnviTec digester facilities have been built on farms. For EnviTec to build our first digester facility in the U.S. on a dairy farm was a wonderful opportunity. To be able to partner with the Jensen family in building this digester facility for them was a rewarding experience. Not enough can be said for the Jensen Family vision, patience and help throughout this project."

The digester system at Lawnhurst Farms biologically breaks down a variety of organic waste products, mostly manure, but also feed refusals. Manufacturing waste and whey is also being accepted from siggi's dairy yogurt plant in Penn Yan. Biogas is produced and collected in the digester, and then piped underground where it is cooled. The biogas then enters the new Technical Building at Lawnhurst where it is pressurized, metered and fed into the new combined heat and power (CHP) unit, which produces both electricity and hot water. Hot water (at 210°F) is recovered from the engine and circulated to a heat exchanger to provide heat for the digester, farm buildings and the farm's milking parlor.

Siggi Hilmarsson, founder of siggi's dairy, said, "We are thrilled to partner with Lawnhurst Farms to make both siggi's production process and their farm more sustainable. Using the run-off from our yogurt production to make electricity reduces waste and creates an eco-friendly energy source."

Patrick Hooker, Governor Cuomo's Deputy Secretary for Food and Agriculture, said, "This project, which meets multiple environmental and economic objectives on both the production and processing side, increases sustainability for the dairy industry and is exactly the type of project Governor Cuomo envisioned at the New York State Yogurt Summit last year. New York dairy farmers have long been known as innovation leaders in the dairy world and I congratulate Don Jensen and his family for continuing this tradition with this state-of-the art digester."

During the anaerobic process, the digester creates two other by-products that are valuable for the farm. The digestate,

which is the liquid material from the digester, is separated into solid and liquid components. The liquid is a nutrient-rich, nearly odor-free fertilizer that can be applied to fields. The solid is a dry, odor-free material that can be used as bedding for the cows, or compost for gardens.

The most valuable product of the digester is renewable electricity. The biogas produced from the Lawnhurst digester is converted to electricity via a GE Jenbacher engine generator, saving the farm several thousand of dollars per year in electricity costs. Lawnhurst Farms plans to sell any excess energy produced on the farm back to the grid via New York State Electric and Gas (NYSEG), under New York's net metering law.

The electricity produced by Lawnhurst Farms will further the goal of New York State to have 30 percent of its electricity generated from renewable sources by 2015. The electricity produced is considered renewable because it is produced by a non-consumptive source and is environmentally friendly. It will also reduce the production of greenhouse gases.

John B. Rhodes, President and CEO of the New York State Energy Research and Development Authority (NYSERDA), said, "The event today at Lawnhurst Farms is symbolic of the type of projects that Governor Cuomo called for at the Yogurt Summit last year. Through the use of biogas-to-energy technology, the State is assisting dairy farmers and yogurt producers in reducing their operating expenses and energy costs while increasing the production of clean energy. We applaud Lawnhurst for undertaking this project, and hope it serves as a model for other dairy farmers to install anaerobic digester technology." NYSERDA contributed \$1 million toward this project.

Digesters represent a significant investment by dairy farms, including Lawnhurst. There are several agencies interested in supporting farm investment in this technology. In addition to the NYSERDA investment, USDA Natural Resource Conservation Service (NRCS) and the U.S. Department of the Treasury have provided support for the construction of manure handling and renewable energy installations like the Lawnhurst Farms digester. Farm Credit East, ACA, Lawnhurst's agriculture cooperative bank, also provided both financial and consultative assistance in the development of this project.

Donald Pettit, USDA NRCS State Conservationist, said, "The anaerobic digester is one of many conservation practices that the Natural Resources Conservation Service can assist farms with to help farmers help the land. We were excited to help Lawnhurst Farms as they implemented this conservation practice to extract energy, reduce pathogens, and control odors as they recycle their manure through a nutrient management plan back to the land."

Bill Lipinski, CEO of Farm Credit East, said, "Farm Credit East supports our member's investments in new capital projects that improve profitability and contribute to the environmental stewardship goals of their farm enterprise. We congratulate Lawnhurst Farms, Don and his family on the commissioning of their new digester and look forward to working with them as their farm evolves through continuing generations. This is great example of the tremendous economic and community value of New York agriculture."

EnviTec Biogas USA Inc. is a U.S. Corporation headquartered in Rochester. It is wholly owned by EnviTec Biogas AG, a German company, headquartered in Lohne, Germany and founded in 2002. The Lawnhurst digester is EnviTec's first fully commissioned facility in the U.S. Worldwide, EnviTec Biogas has installed over 550 digester systems, most of which have been placed on farms like Lawnhurst.

Lawnhurst Farms is a multi-generation working family dairy farm in Ontario County. The farm was started by Neils Jensen in 1925, and is operated today by the third and fourth generations of Jensens – Don and Ann, and two of their children, Kelley and Don III. Together, they milk 1,400 dairy cows and ship their milk to Upstate Farms.

With this announcement, New York now has 21 operating biogas digesters at dairy farms that produce over 7,000 kW of

renewable energy from cow manure as the primary source. The potential to increase the production of renewable energy in New York is significant since the state has over 600,000 dairy cows and every cow produces over 100 pounds of manure a day.