

University of Wisconsin Oshkosh Foundation Rosendale Biodigester (BD2)** Pickett, WI

Owner: University of Wisconsin Oshkosh Foundation
Rosendale Biodigester, LLC.

Developer: BIOFerm™ Energy Systems*

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The UW-Oshkosh Foundation, Rosendale Biodigester, LLC has constructed a large, wet anaerobic biodigester/biogas production facility adjunct to the site of Wisconsin's largest dairy farm. Rosendale Dairy, Pickett Wisconsin is operated by MilkSource, LLC. BIOFerm™ Energy Systems, a member of the Viessmann Group of Allendorf, Germany, oversaw design, build and construction of the facility as a turnkey provider. The plant is comprised of two 5,000 square feet continuous flow anaerobic digestion tanks, slurry bins, components for desulphurization and biogas drying. The facility uses up to 110,000 tons of separated manure slurry and solids to produce biogas. The combined heat and power unit (CHP) rated at 1.4MW will generate up to 12,492 MW of electricity per year plus a nearly equivalent amount of thermal heat used for space heat. In its first full year of operation the facility produced over 9,300 MW of electricity.



Pickett, WI

The Rosendale Dairy Biodigester project not only utilizes manure from Wisconsin's largest dairy to generate renewable biogas it is also an innovative collaboration between the dairy and the University of Wisconsin Oshkosh in education and training. The demonstration facility will be designed as an education center for the development of technicians, scientists and engineers for the biogas and renewable energy industry.

The relationship between the University of Oshkosh Foundation and MilkSource's Rosendale Dairy represents the ideal for both parties.

Organizations involved: *University of Wisconsin-Oshkosh**, *University of Wisconsin-Oshkosh Foundation**, *MilkSource*, *BIOFerm™ Energy Systems**, and *the Viessmann Group**,

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American Biogas Council Member

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ABC Biogas Institutional Project of the Year 2015

Inputs and Outputs

Biogas production:	The biodigester has a biogas production capacity of 200,000,000 – 250,000,000 scf/year at 55% CH ₄ content with 100% of the biogas used for energy generation.
Feedstock(s):	Dairy manure (8500 head)
End use:	Electricity, thermal energy (from CHP)
Additional byproduct(s):	Liquid and fiber fertilizer

Finances, Beneficiaries, and Expansion

Project financing:	University of Wisconsin Oshkosh Foundation, and a combination of loans and grants. Loans consist of a \$10M Midwestern Disaster Area Revenue Bond issued by the Town of Rosendale and grant funding of \$2M from the U.S. Treasury Section 1603 program.
Customer(s):	Electricity is purchased by the utility
Environmental and economic beneficiary:	University students and faculty, UWO Foundation Inc, Alliant Energy, Rosendale Dairy, LLC, Milksource, LLC, Town of Rosendale, and local communities. The University of Wisconsin Oshkosh is receiving environmental benefits of carbon offset through the sale of biogas back to the grid. MilkSource, owner of Rosendale Dairy, is also receiving the environmental benefit of dairy odor reduction and fertilizer.
Long term plans?	Plans at the biodigester site include the establishment of a University of Wisconsin Oshkosh public education center. The center will focus on the education of K-12 students and as a learning laboratory for UW Oshkosh students.

