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Waste to energy using anaerobic digestion

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Abstract

The University of Wisconsin Oshkosh is a leader in development of renewable energy production infrastructure. As a signatory and charter member, of the ACUPCC and ACORE, UW Oshkosh has demonstrated its commitment to reaching carbon neutrality by 2025. Installations include geothermal heating and cooling systems, rotating photovoltaic panels for electricity generation, solar thermal panel systems for hot water, but most importantly the nation's and the America's first commercial sized dry fermentation anaerobic digester. Since commissioning this digester in 2011, the campus has also undertaken a project that will install a wet digester next to the largest cow farm (9,000 cows) in Wisconsin which will produce 1.5 megawatts of energy as well as recycle the digestate for use as mulch and fertilizer at homes and in communities. The digester will be in operation by December, 2013. Yet a third style of digester, a small <100 kw unit for us on dairy farms has been installed on a local farm and began production in March of this year.

Our goal is to be a "living learning laboratory of renewable energy infrastructure" so that our students, faculty and staff can experience and use these facilities as laboratories for curriculum and research. The University has partnered with the leading renewable energy company in Germany, the Viessmann Corporation, a 2.3 billion euro company, in both the construction and management of these biodigesters, but also in the support of the academic mission of the University through internships, exchange programs and an endowed chair.

Biography

Thomas G. Sonnleitner is Vice Chancellor for Administrative Services at the University of Wisconsin Oshkosh. In his duties as Vice Chancellor at UW Oshkosh, Mr. Sonnleitner is the chief financial and facilities officer and reports to the chancellor on financial management, budget, business services, facilities management and human resources. He began his position at UW Oshkosh in March 2000. Previously, he served as Director of Finance and Facilities for the State College and University Systems of West Virginia from 1995–2000 and was the assistant Vice President-- financial administration at the University of Wisconsin System offices where he had worked since 1967. He is a certified public accountant and a Navy veteran.