Michigan State University
Lansing, MI, USA

agenitor 212
Biogas

Fast Facts:

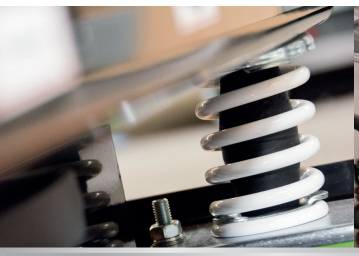
Location: Lansing, MI, USA
Generating Capacity: 400 kW
Configuration: Container module
Extras: Biogas Treatment System, Flare System

About the Site:

This application is the largest college campus-based anaerobic digester system in the United States and is located at the Dairy Cattle Teaching & Research Center on the South Campus Farms at the Michigan State University (MSU) in East Lansing, MI. The facility is designed by UTS, an Anaergia Group company, and converts 16,800 tons of food waste per year from campus dining halls, manure from MSU's dairy farm and food processing waste from the local community into renewable energy. The methane rich biogas produced in the digester will be used to generate clean energy using a CHP system.

Application

A fully containerized agenitor 212 thermodynamically optimized MAN-based engine with 400 ekW/h or 3,320 MW p.a. electrical power and 474 kWh/th thermal power output is used on this site. The renewable electricity is used on campus while the natural fertilizer created through the process is utilized on agricultural land. In addition to the engine a 2G Gas Treatment system was supplied consisting of biogas dehumidification for moisture removal as well as a Biogas Flare system. The payback and ROI for this project comes from the energy produced, the fertilizer sales and also from tipping fees. The organic waste is fed into a complete mixed digester (CSTR) where the material will be naturally broken down. The nutrient rich liquid will be separated from the leftover solids and used as natural fertilizer on the surrounding agricultural land. The remaining fibrous solids can be composted for use as renewable bedding material for local dairy cows or sold to the public as fertilizer. MSU's anaerobic digestion project and 2G Energy Inc. advanced biogas CHP reduces the dependence on the University's coal-fired power plant and also reduces greenhouse gas emissions.



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