



FAIRVIEW SWISS CHEESE ANAEROBIC DIGESTER/CHP FACILITY



John Koller and Son, Inc. operates Fairview Swiss Cheese, which is the largest Swiss cheese producer in Pennsylvania at 8 million pounds per year. Fairview was recently awarded the “Green Power: Turn it On! Award from Citizens for Pennsylvania’s Future for implementing an anaerobic digester project that improves local water quality, while generating renewable energy, reducing carbon emissions, and reducing dependence on foreign oil.

The project utilizes whey, which is a byproduct of the cheese production process, as a feedstock for an anaerobic digester. The digester, operating since 2009, converts organic material in the whey into methane gas, which is then used to fuel a 290 kW engine generator set. The system provides enough renewable electricity to supply over 50% of the facilities electric needs.

Installation of the heat recovery system is being completed to capture 1.5 mmBtu/hr of heat from the engine which will be available in 60,000 gallons of thermal storage. This will replace 50,000 gallons of fuel oil annually. Once the ability to capture the heat is added, this combined heat and power project will reduce carbon dioxide emissions by over 500 metric tonnes annually.

In addition to energy cost savings and renewable energy benefits, the project reduces permitting and removal costs associated with the whey. By turning the organic matter into gas, the system provides effective treatment of the effluent stream for biological oxygen demand (BOD). This along with additional treatment allows Fairview to discharge clean water. This has reduced the volume of land applied effluent by 90%, solving potential nutrient management issues and improving local water quality.

PROJECT AT A GLANCE

Project Cost: \$3.1 million

Estimated Annual Value: \$250,000

% Grant Funding: 30%

Project Size:

290 kW_e, 1.5 mmBtu/h process heat

Status: Operational

Additional Benefits:

- >500 Mg CO₂/y emissions reductions
- 90% reduction land applied waste
- Local water quality benefits
- Renewable Energy Credits (RECs)