

Tap into Energy You Never Thought You Had!

Investing in a study will give you the clarity and decision-making tools to save hundreds of thousands of dollars in annual energy!



Biogas Flare that produces 2.5 MMBtu/hr of energy that is not being utilized and the associated testing equipment to track methane concentration



Project and Baseline

Recuperation of Biogas to Offset Natural Gas Costs

Operations and Management identified that the biogas from their anaerobic digester being flared off into the atmosphere represented wasted energy and profits.

This consumer beverage manufacturing plant has the technology in place to produce and capture biogas and a study was conducted by Firebridge Inc. to determine the feasibility and best use for harnessing the energy contained in the biogas.

Baseline:

A biogas consumption baseline was developed to benchmark the digester operating efficiencies. This included the analysis of biogas flow rates and chemical compositions.

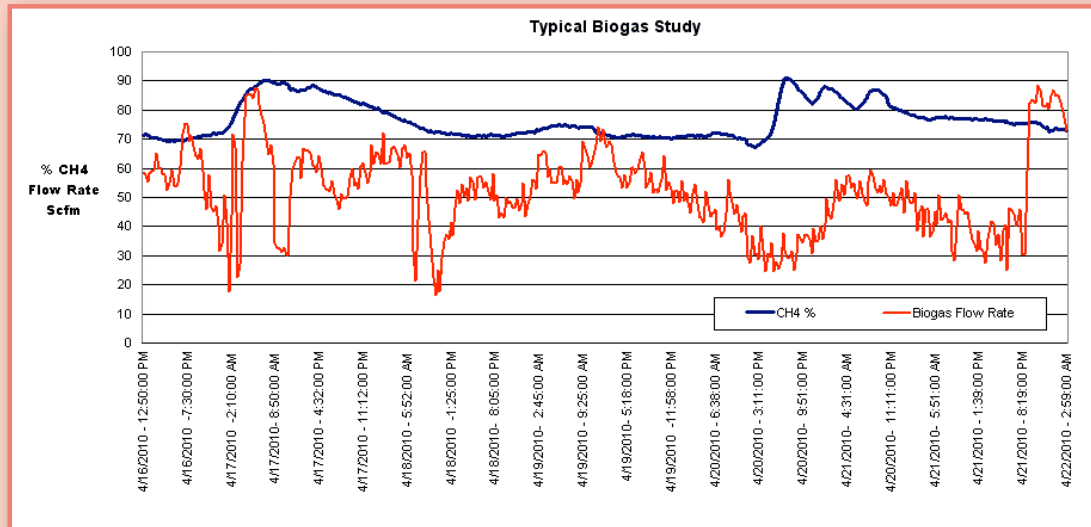
Energy utilization strategies and priorities were determined through a systematic analysis of the existing equipment. The framework which was used to identify energy savings was based on the following:

Heat/Energy Generation – Operational/Process Strategy

Diagnosis:

- Determination of biogas flow rates and energy content determined that approximately 2.5 MMBTU/hr of usable heat was available
- Quality of gas and analysis of chemical impurities identified applications for biogas as a fuel

Biogas Quantity and Quality Profile



Solutions Implemented:

- Firebridge provided several options and systems solutions for the use of the biogas as a fuel
- Possible use in boiler applications to generate high quality steam
- Possible use as a fuel in electric generation/co-generation

Improvements:

- ✓ Annual fuel savings of \$225,000
- ✓ Payback period of 1.8 years
- ✓ Ability to eliminate all biogas from being flared and by displacing the equivalent natural gas and thus reducing green house gas emissions
- ✓ The customer is currently weighing the possibility of generating electricity and charging back to the power grid at higher rates vs. the ability to increase available capacity of plant process steam