

Are you flaring gas that you could be making a profit on?



A typical WWTP Purifier Design

The Problem:

Wastewater treatment plants with anaerobic digesters generate a methane-rich biogas. Many plants use some of this gas to provide their digester and process heat. This requirement consumes only a fraction of the total gas generated, and in most cases, the excess gas is either flared or used for generating on-site electrical energy.

Flaring the gas rejects to the atmosphere millions of BTUs that might otherwise be sold for profit. Electrical generation is costly and maintenance intensive due to the complexity of the generator systems and the presence of impurities in the digester gas, such as siloxanes, water, and H₂S, which if not removed beforehand, negatively impact the operability of the generator engine.

The Solution:

There is now a profitable alternative to these two options, which enables the WWTP to generate significant revenue while also being environmentally proactive by upgrading the gas for sale to the local pipeline. The Guild systems are well proven to deliver pipeline quality gas and remove water, CO₂,

siloxanes and H₂S contaminants present in the biogas in a single processing step to produce high purity methane for pipeline sales.

Enriching the biogas to pipeline specifications raises the gas to its highest value, and enables the WWTP to supply gas to their service pipeline, conveniently located at the site.

It eliminates wasteful flaring and troublesome and inefficient electrical generation. What is more, with today's natural gas prices, sales of a ready commodity can provide the WWTP, with much needed revenue.

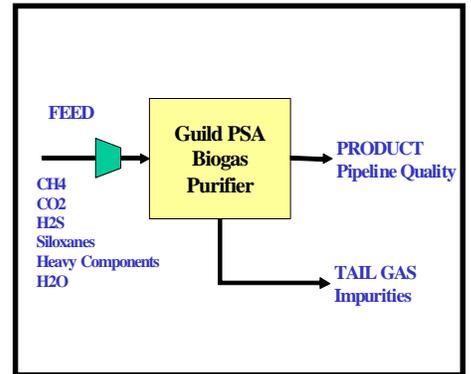
Guild is now partnering with WWTPs to achieve this goal. Guild will install, at its expense, the complete compression and gas cleanup system and maintain it throughout its life. The WWTP provides the biogas, sharing the revenue from the sales of pipeline gas with Guild. The WWTP has little, or no capital investment. Alternately systems are offers for purchase by the WWTP.

Guild Technology:

Biogas is compressed to 60-100 psig, before being introduced to Guild's adsorption system. This system removes the water, CO₂, siloxanes and H₂S, to yield a product gas meeting pipeline specifications.

Gas Upgrade Installations:

Guild has been installing gas upgrade systems for many years. To date, thirty projects are underway. These systems are noted for high reliability and safety, consistent



high-quality gas production, and environmental friendliness. What is more, they do not affect the operation of the digester or other WWTP functions.

The systems are designed for flow rates ranging from 0.1 MM SCFD (70 scfm), or less, to 10 MMSCFD (7000 scfm). The systems follow the digester load, with turndown to zero flow

About Guild Associates

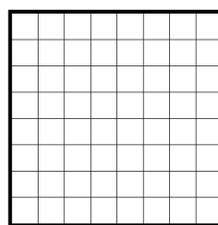
Guild provides adsorption and catalyst systems as well as shop fabricated engineered systems. Guild Associates is the licensee of the Molecular Gate™ technology originally developed by Engelhard Corporation (now a part of the BASF Group) and has provided all systems to date.

Contact

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You can also visit us on the Internet at www.moleculargate.com.

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