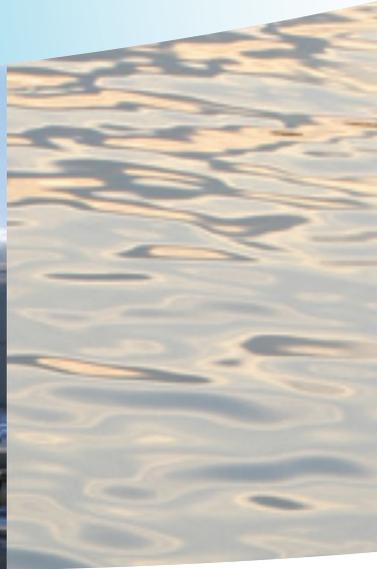




**eVOQUA**  
WATER TECHNOLOGIES



## **BIOGAS TREATMENT AND UTILIZATION**

**TAP INTO RENEWABLE ENERGY FROM ANAEROBIC DIGESTION**

## WASTE-TO-ENERGY SOLUTIONS

Biogas, a byproduct of the anaerobic digestion process, is rich in valuable methane, a high-energy fuel with incredible money-saving potential. With rising energy costs and growing concerns about climate change, biogas is an economically attractive green energy source. It can be used to replace conventional energy sources such as natural gas and electricity, while also reducing your plant's carbon footprint. Pipeline quality biogas can even be used as a vehicle fuel.

Evoqua's ADI Systems has extensive experience supplying complete biogas handling, treatment, and utilization systems for the recovery of this renewable energy from wastewater and organic waste.

### BENEFITS OF UTILIZING BIOGAS

- Reduce your plant's energy costs
- Replace conventional non-renewable energy sources
- Improve your company's carbon footprint
- Produce heat and/or electricity on-site under your company's control
- Sell excess electrical power from gensets to the local grid for profit
- Reduce sulfur emissions
- Create a reputation of being environmentally responsible
- Potential to receive financial incentives for green energy production



### BIOGAS APPLICATIONS

- Internal combustion engines
- Gensets
- Microturbines
- Boiler and steam generating systems
- Sludge dryers

## MAXIMIZE BIOGAS USE AT YOUR PLANT

ADI Systems' biogas treatment and utilization technologies have been used worldwide for many years, and have gained a well-deserved reputation for efficiency, low operating costs, and ease of use.

We engineer our systems to ensure maximum biogas utilization with minimum capital and operating costs. Several steps are required in order to tap into the many benefits of naturally-occurring biogas from the anaerobic digestion process. We can handle all of them for you, including:

### COLLECTION/TRANSPORTATION

Positive displacement blowers are used to withdraw biogas from the anaerobic digester and deliver it to utilization equipment at a controlled rate and requisite pressure.

### TREATMENT

Biogas often contains hydrogen sulfide ( $H_2S$ ), which must be removed prior to biogas utilization in order to reduce health risks, equipment corrosion, and harmful sulfur emissions to the atmosphere. ADI Systems' highly cost-effective BioGas Clean technology can handle any biogas flow and  $H_2S$  concentration with little to no chemical usage and very little power requirement. Furthermore, the residual product from the treatment is a valuable fertilizer.



### UTILIZATION

Existing natural gas boilers may be retrofitted to burn biogas or both natural gas and biogas. Alternatively, new equipment can be installed to utilize the biogas, including gensets, microturbines, sludge dryers, etc.

### CONTROLS AND MONITORING

The entire system is monitored and controlled through a programmable logic controller (PLC) to ensure the proper biogas withdrawal rate, flow, and pressure. This equates to efficient biogas utilization, minimum wastage, and maximum return on investment.



## WASTEWATER TREATMENT AND WASTE-TO-ENERGY SOLUTIONS

ADI® Systems, an Evoqua brand, is a world-leading wastewater treatment and waste-to-energy technology solution provider with over 35 years of experience treating industrial processing wastewater and organic waste. We understand the complex challenges and strive to engineer unique solutions for the industry. Sustainability is the foundation of our design and construction processes, and innovative clean tech research and development is the building block of our many successful projects around the world.

**ADI® Systems**  
an EVOQUA brand

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