



Microgy's Digester Equipment

## Environmental Power Corporation (Microgy) United States



Microgy's Huckabay Ridge Facility in Texas

### About Microgy

Microgy, a subsidiary of Environmental Power Corporation, develops facilities to efficiently and reliably produce clean, renewable gas from agriculture and food industry wastes. Through anaerobic digestion, where methane-rich biogas is extracted from waste to produce electric power, Microgy helps farms and businesses responsibly manage the wastes they generate.

Biogas production through manure digester technology not only renders fuel used in a variety of applications; it reduces manure odor and creates significant quantities of marketable carbon credits. Biogas is utilized in internal combustion engines to generate electric power and heat, used as-is to offset fossil fuels, or is captured and further refined to pipeline quality Renewable Natural Gas.

*"ICONICS WebHMI provided a tangible, competitive advantage due to its efficient use of bandwidth. Efficient data transfer was critical as the sites were located in remote areas only accessible via satellite technology."*

**Michael Norman**  
Operations Manager  
Wunderlich-Malec Engineering

Considered "carbon neutral," RNG® is purchased by customers to address various renewable energy portfolio requirements and reduce carbon emissions.

Since 1982, Environmental Power Corporation has contributed to environmentally responsible energy operations, owning and operating hydroelectric plants, municipal waste projects, coal-fired generating facilities, clean gas generation and energy recovery facilities.

### ICONICS Software Deployed

GENESIS32™, along with GraphWorX™, TrendWorX™, AlarmWorX™ are used to monitor and control systems at Microgy's facilities. AlarmWorX MMX provides paging for alarms. At Microgy's corporate level, ICONICS' WebHMI™ provides internal access and visibility to all sites.

### Project Summary

ICONICS automation solutions are applied in four of Microgy's renewable energy facilities through the United

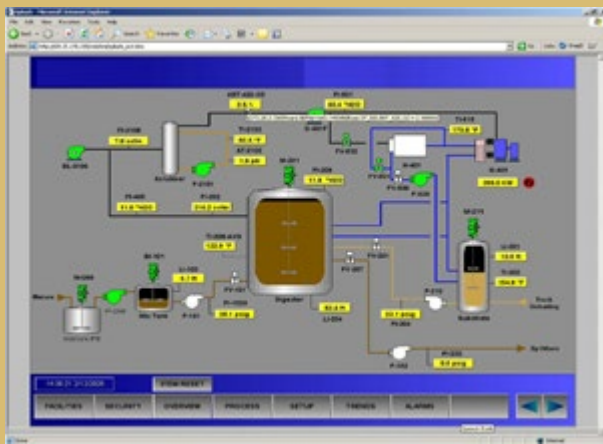
State's Western and Midwestern regions: Five Star Dairy and Wild Rose Dairy in Wisconsin, Norswiss Dairy in South Dakota, and Huckabay Ridge in Texas. For Microgy's biggest facility, targeted production is enough RNG to heat over 13,500 homes annually.

A typical Microgy facility is comprised of a manure mix tank, digester vessel, substrate tank, biogas-fired boiler, an internal combustion engine and electric generator that is enclosed in a noise attenuating building, and a small utility substation that steps-up the electricity generated to the same voltage level as the existing electric distribution lines the facility connects to.

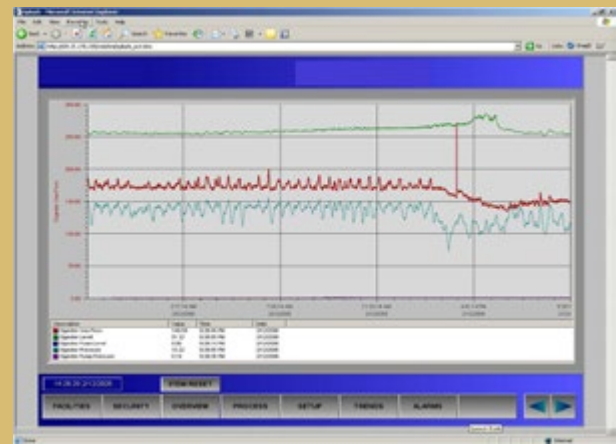
## Benefits of the System

Visualization solutions for Microgy's sites required satellite connectivity due to limited Internet access in remote locations. ICONICS' efficient transfer of data was appealing for this reason. When Microgy's sites migrated from satellite to DSL and cable, the switch-over proved to be simple and successful.

Apart from the complete visualization and automation solution, ICONICS provides connection of remote locations to a centralized, corporate location. Complete batch-transfers and access to data is available at the corporate level, allowing decision-makers key insight.



*Production Display*



*Trending for a Microgy Facility*

Over the course of three months per facility, Wunderlich-Malec Engineering integrated ICONICS' monitoring and control systems. Wunderlich-Malec's control design from the instrument level combined with ICONICS software provides Microgy with real-time monitoring and control, on a 24-hour basis with historical data collection. The control system is designed to provide automatic operation of all systems components with built-in fail to safe modes in the event of an upset.

Data is conveyed from remote locations to a corporate location in Tarrytown, New York via WebHMI, providing data collection, batch-transfer, and trending from all sites.

## Conclusion

ICONICS and Wunderlich-Malec Engineering have worked to provide Microgy with a complete visualization and automation solution. Enabling Microgy's novel digestion technology assists with animal waste management and generates environmentally responsible energy.