



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

Biogas equipment integration

St. Joseph Water Protection Facility

Client background

The St. Joseph Water Protection Facility (WPF), which treats domestic and industrial wastewater for the City of St. Joseph, Missouri, contracted Schneider Electric Advisory Services (SE) to fulfill their energy conservation measures. Organizations across industries rely on SE to reduce energy use, lower carbon emissions, and lead sustainable transformation. They combine engineering, advisory services, and digital tools to deliver measurable energy, cost and ESG outcomes.

Project background

By replacing the equipment in the aeration, anaerobic digestion mixing, and digester gas collection systems, the WPF could reduce operating costs and improve energy efficiency. New biosolids equipment would advance mixing and volatile solids destruction to increase biogas production. SE requested that Alliance Master Partner Enterprise Automation integrate this equipment with the plant control system. With a 20+ year history of successful delivery and deployment across water and wastewater, EA was the intuitive choice for this project.

EA solution

Enterprise Automation consulted on skids from three different manufacturers for the digester: a mixing system, gas booster, and gas flare. With this new equipment, WPF could reuse digester gas in its boilers and thermal sludge dryer as a fuel source and flare the excess. EA engineers ensured the mixing system would receive readings from the inlet and outlet biogas temperature and tank pressure, which the system would use to control the biogas compressor, control air compressors, and gas valve module.

For the ease of use and consistency, EA engineers mirrored the designs of the each local HMI screen. Once added to the SCADA system, operators could access information from a centralized location, able to easily check critical signals or alarms and monitor faults, running status, temperature readings, or pressure readings.

Project Manager



**Matt
Avila**

Project Technical Lead



**Adrian
Leon**

Key Insights:

- Integrated controls for digester equipment that would facilitate use of biogas as an alternative fuel source

Key Technologies:

- Allen-Bradley PLCs
- PanelView OIT
- Studio 5000
- RSLogix 500
- FactoryTalk