

ENERGY

Tech Review

WASTE TO
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EDITION



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FLUENCE CORPORATION

Spearheading Biogas Generation Through Industrial Wastewater Treatment

The food and beverage industry generates significant waste, including wastewater with high levels of organic matter like proteins, fats, and oil. This wastewater can be difficult to treat and contributes a substantial carbon footprint, but it also contains a great amount of potential energy. In fact, it is estimated that wastewater sent to treatment utilities contains five times the energy needed to treat it.

To unlock this energy, anaerobic digestion solutions promise the perfect solution. Anaerobic digesters treat high-load wastewater streams, while generating biogas - a renewable energy that can be used to generate electricity, thermal energy, or biomethane for injection into the grid. The leftover solids can be used as a beneficial agriculture product.

Fluence Corporation is at the helm of these advances, bringing over 30 years of experience in the design, construction, and operation of waste-to-energy plants. Fluence offers customized anaerobic treatment solutions that help food and beverage companies stay compliant with environmental regulations, while producing biogas from wastewater and other by-products. The company has a strong track record in the meat industry as well as fish and dairy, confectionary, and other facilities where sugars, proteins, and fats are processed.

"We focus on extracting value from organic waste, typically discharged into landfills or wastewater treatment plants, by turning it into fertilizer and renewable energy. Our approach is a shift away from traditional wastewater disposal methods and aims to reduce carbon emissions by repurposing waste into usable products," says Rick Cisterna, Chief Commercial Officer of Fluence Corporation.

Fluence prides itself in providing solutions that require less infrastructure and a lower footprint compared to most of the other suppliers, while being robust enough to handle highly polluted streams that typical plants cannot process without the aid of co-digestion.

Installing a profitable biogas reactor requires not only the technology, but also the expertise to create a tailor-made, efficient design. The Fluence process begins with multiple laboratory analyses to determine the biogas potential of the wastewater or other by-products. Based



Rick Cisterna,
Chief Commercial Officer

on the results, engineers evaluate potential solutions regarding capital costs, operating cost reductions, and return on investment.

For instance, Fluence Corporation catered its solution to Amadori, one of the major players in Italy's poultry industry. The client had a wastewater treatment plant (WWTP) and needed to increase production while reducing disposal costs without affecting existing operations. Fluence restructured the existing WWTP with dissolved air flotation, anaerobic digestion, and a Nitro-Denitro system, allowing Amadori to turn their cost center into renewable energy production.

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“Before our plant was implemented, they paid millions per year to treat wastewater at each site, but now they can generate revenue through renewable gas and electrical energy production. They also reduced the amount of waste they dispose of by 70 percent and use it as fertilizer,” elaborates Fabio Poletto, VP of Industrial Wastewater and Biogas at Fluence Corporation.

Fluence has since completed multiple projects for the client, and they are working on three new plants.

Bringing decades of experience in the European and South American market, Fluence Corporation is now storming the U.S. market with its expertise. In addition to the usual ROI from waste-to-energy projects, industrial companies in the United States can tap into the tax-credit funding program associated with the Inflation Reduction Act of 2022.

Leaning on its strong track record of successful projects and satisfied customers, Fluence Corporation is well-positioned to continue its growth and contribute to the transition to a more sustainable future in the United States and around the world. **ET**



Fabio Poletto,
VP of Industrial Wastewater & Biogas

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The annual listing of 10 companies that are at the forefront of providing Waste to Energy solutions and transforming businesses