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# Stellar manufacturing systems that turn trash into energy

Jacksonville Business Journal - by [Dave Strupp](#) Staff Writer

JACKSONVILLE — A Jacksonville design-build company is manufacturing renewable energy systems that will allow businesses to convert biogas into electricity they can use or sell back to an electric utility.

**Stellar** recently started manufacturing modular biogas renewable energy systems and other renewable energy systems at its 60,000-square-foot facility on the Northside.

To produce biogas, businesses must pretreat, separate and store their waste in anaerobic digesters, which are enclosed tanks that decompose organic matter by excluding oxygen. Landfills, wastewater facilities and food and beverage manufacturers are good prospects for biogas production.

Natural decomposition then takes place, producing a biogas that can be converted into a stable and more efficient energy source. The units can produce from one to 20 megawatts of power. A three-MW landfill power plant could provide energy for more than 1,900 homes.

Stellar is hoping to market the systems as a way for businesses to comply with federal and international regulations while adding a new line of revenue, said Kurt Liebendorfer, senior vice president of Stellar.

Florida introduced the Renewable Energy Production Tax Credit and the \$12.5 million Renewable Energy Technologies Grant Program. The REP tax credit is equal to \$0.01 per kilowatt-hour, which is the measure of energy produced by electric utilities.

Florida recently passed legislation that requires investor-owned utilities, such as JEA, to continuously offer a contract to buy renewable energy.

Stellar is working with St. Augustine-based Caterpillar manufacturer **Ring Power Inc.** and New Jersey-based engineering firm Energenic. Stellar will provide design, construction and project management services and will manufacture the units. Ring Power will provide the engines and emergency repair and prevention maintenance programs for the units. Energenic will provide specialty metering and engineering analysis.

Energenic has already installed a Stellar modular unit at a New Jersey landfill, where it already had two self-fabricated biogas systems. The Stellar model is a much cleaner unit and is getting much better availability, said Fred Eckert, senior vice president and managing director of Energenic.

The company has been acting as a developer for the biogas opportunities with landfills, as the landfills are often smaller or county-owned operations that have little expertise to implement the biogas systems on their own.

“Landfills are focused on putting trash in a mound,” Eckert said. “Biogas is not the core of their business. So what we’ve seen in the industry is the landfills have been going to developers like us because they’re not used to dealing with biogas.”

Larger national companies, such as **Waste Management Inc.** (NYSE: WMI), which operates 108 landfill gas projects, are more likely to deal directly with companies like Stellar and implement the biogas units themselves, Eckert said.

Stellar has about a dozen landfills it is in the process of bidding with to implement the energy systems, which Liebendorfer said will be between \$50 million and \$100 million worth of work for



Dave Strupp

Stellar assembled this portion of a heating hot water skid at its Northside facility. The facility also manufactures modular biogas renewable energy systems.

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the company.

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Stellar is approaching the new endeavor carefully, and Liebendorfer said success will require a lot of development and market growth.

“If the market takes off, we hope to expand the facility and double it in size” and staff, he said. The facility has about 40 employees.

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