2G Energy Combined Heat and Power System

A Renewable Energy ***Force Multiplier*** at the Largest Food Waste Diversion and Energy Recovery Facility in North America

Leaders in Green Energy

As the largest food waste to energy facility in North America, the Rialto Bioenergy Facility (RBF) is revolutionizing green energy—and it's using 2G Energy's combined heat and power (CHP) system to ensure a stable power supply, reduce energy costs, decrease environmental impact, and increase energy reliability.

CHP is an efficient and clean way to generate electric power and thermal energy from a single fuel source. As the energy sector transitions to a decentralized, stable, and sustainable power grid, this kind of system is becoming increasingly important—and 2G Energy is leading the way.

2G's Highly Efficient CHP System

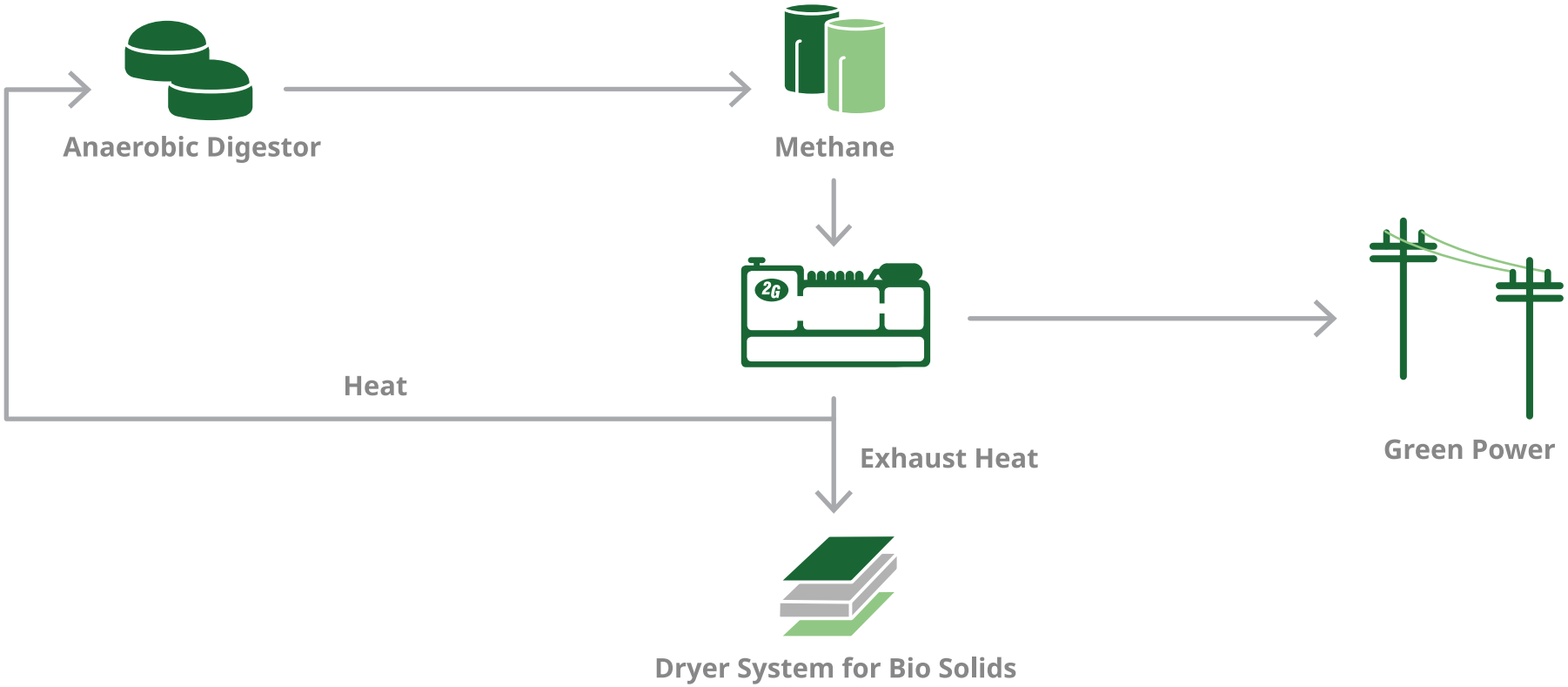
Traditional energy systems only harness 38% of the energy they produce; the rest is lost in the conversion process. CHP systems reclaim some of the lost energy by using the "waste" heat. 2G harnesses around 90% of the energy the 2G CHP systems produce by using combined heat and power energy.

Rialto Bioenergy Facility is a resource recovery facility designed, built, owned, operated, and financed by Anaergia. The site provides organics diversion and energy generation solutions for the Southern California region mandated by California law SB 1383.

The RBF project harnesses Anaergia's advanced anaerobic digestion technology in combination with 2G's avus CHP system to extract and generate energy from organic material. The 2G CHP system is a force multiplier, powering the renewable natural gas system and improving the environmental and economic benefits of the facility.

How Does It Work?

- Anaergia's anaerobic digestion technology eats the organic food waste
- Methane gas is produced and cleaned of impurities
- The 2G CHP system drives the generator, producing electricity (green energy)
- Green energy is injected to feed the power grid
- The residual heat created during this process (thermal energy) is recaptured and used to heat the (2) 3.5 million small footprint digester, which are unique in the biogas industry, providing a significant savings in natural gas costs.



The 2G CHP Systems are modular-built in an enclosure with all components to ensure ease of installation.

The systems are customized for RBF's specific project needs, delivered to the site fully tested and ready to connect to the corresponding electrical, mechanical, and communication points.

Leading Edge Expertise and Service

2G's engineers and technicians are instrumental in the planning and management of all projects. The team provides engine technology expertise and professional assistance in project planning, component design, onsite communication, piping installation, and integration.

"The team knows how to maximize every advantage of the technology. Over the course of the project, Anaergia and 2G went above and beyond to get the maximum out of the waste heat generated by our Combined Heat and Power units (CHP) to maintain the needed temperatures for Anaerobic Digestion for Anaergia's unique (2) 3.5 Million Gallon small footprint Digesters at the Rialto Bioenergy Facility. Anaergia also identified use for the exhaust gases coming from the CHP's, these are now redirected and used for our (300TPD) Biosolid Drying system, 2G worked very closely with Anaergia to implement this new use of exhaust heat. Using this unique solution provided big advantages and significant cost savings."

Daniel Lausch
Project Manager, Anaergia

The RBF project is designed with four 2G CHP systems: two avus1500c (1500kWe) CHP systems and two avus800c (800kWe) CHP systems for a total of 4.6MW. The avus systems are dual fuel (biogas and/or natural gas) with active blending. They are also equipped to interconnect multiple units, which allows for higher electrical output. A master control system enables synchronization and load sharing for up to five modules.

Why CHP?

Cut Carbon Emissions, Increase Power Reliability, Save Money

Combined Heat and Power systems achieve energy efficiency goals, reduce emissions, and increase business and grid resiliency.

- 10+ CI point reduction
- Additional RNG Revenue of $2.10 per MMBtu
- Extra revenue of $1,113/day or $406,245 per year
- An equipment payback of 3.26 years on just the CI reduction value
- Reduced cost for electricity and free thermal energy
- Redundancy and Resiliency for project utilities

2G Energy is a global leader in the manufacturing of combined heat and power (CHP) systems.

To learn more about 2G Energy's smart, reliable energy solutions visit **2g-energy.com** or call **904-579-3217.**