



## Las Gallinas Valley Sanitary District

### Wastewater Treatment Facility San Rafael, CA

**BioCNG™, A Tetra Tech Company, provided design, grant submittal, and management services for a Biogas Energy Recovery System (BERS) facility at the Las Gallinas Valley Sanitary District (LGVSD) wastewater treatment plant, located in San Rafael, California**

Tetra Tech designed the pre-commercial BERS to recover 100 percent of the biogas produced from anaerobic digestion of wastewater sludge and condition it on-site for combined heat and power (CHP) generation and renewable compressed natural gas (CNG) transportation fuel use.

System design includes the integration of a BioCNG™ gas conditioning system, microturbines, hydronic boiler, and renewable natural gas fueling station to achieve 100 percent utilization of the conditioned digester gas, and to generate power for the facility, as well as provide a heating source for the digester sludge. LGVSD will be utilizing the renewable CNG to supplement natural gas for their own CNG vehicle fueling requirements.

Tetra Tech also assisted in preparing and successfully receiving several grants through the California Energy Commission and the California Alternative Energy and Advanced Transportation Financing Authority. This included receiving \$999,000 in California Energy Commission funding for the project.

Tetra Tech provided design engineering services during construction, which included submittal and request for information (RFI) review, and answering contractors' questions and providing design changes where needed.

#### **Project Manager:**

Jessica Bernardini, PE  
Paul Stout, PE

#### **Client Contact**

Mike Cortez, PE  
Tel # 415.472.1033 ext. 18

#### **Start/End Date:**

November 2014 - May 2018

#### **Key Project Activities**

- Biogas recovery system design
- Integration of BioCNG™ and other equipment
- Energy grant preparation assistance
- Civil design services



#### **For more information:**

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## Specifications

### Biogas Source

WWTP

### Size

14,500 GPD processed

### Gas Collected

35-50 scfm

### Gas Quality

Methane (CH<sub>4</sub>) –53%

### Other Gas Use

Microturbines

### Size of BioCNG Unit

BioCNG™ 50

### Components

H<sub>2</sub>S removal, chilling, VOC/  
Siloxane removal, CO<sub>2</sub> removal,  
skid-mounted

### Fueling Unit

Time Fill RNG station

### Start-Up Date

July 2018

### Fuel Production Capacity (DGE)

Up to 175 DGE/Day

### Waste Gases

Re-routed into the BioCNG™  
and destroyed in the  
microturbines

### Back up for CNG Fueling

NG available on site

### Vehicles Fueled

Municipal Flusher Truck

### Outside Users

None at this time

