FACT SHEET

CleanWorld

Sacramento South Area Transfer Station
Sacramento, CA

BioCNG uses biogas from a food waste digester to fuel Atlas Disposal's clean-fuel fleet and vehicles from area jurisdictions and agencies.

BioCNG, LLC developed the BioCNG system for CleanWorld's Sacramento BioDigester at the Sacramento South Area Transfer Station (SATS), in Sacramento, CA. The patent-pending BioCNG system uses about 100 scfm of gas from the food waste digester, which will yield up to 600-GGE/day in fuel.

BioCNG provided fabrication, materials, and startup of a biogas conditioning skid for use with an existing compressed natural gas (CNG) fueling station. Work also included site equipment layout and piping design, integration with CleanWorld's digester equipment, and integration with the CNG fueling station.

Site expansion completed

Site layout, piping, condensate management, waste gas flaring, and controls were originally designed to accommodate an additional BioCNG unit, and expansion of the facility is now complete.

The BioCNG 200 has the capacity to produce an additional 1200-GGE/day in fuel.

Project Manager:
Steve Wittmann

Client Contact:
Kathryn Chapman
Tel # 916.853.0385

Start/End Date:
October 2012 – December 2014

Key Project Activities

- Development of small scale biogas-based fuel process to power CNG vehicles
- Site design
- Integration assistance

BioCNG™

For more information:
630.410.7202
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Specifications

Biogas Source
Food Waste Digester - Clean World Partners

Size
25-100 TPD

Other Gas Use
Reciprocating engine

Available Gas for BioCNG
100-300 scfm

Size of BioCNG Units
BioCNG 100 and BioCNG 200

Equipment
H_2S removal; gas compression and conditioning including: moisture VOC/Siloxane removal, CO_2 removal

Components
Two low pressure, 275 psi, 18,000 gallon water capacity storage vessels; waste gas and backup flare connection to natural gas fueling station for additional capacity

Fueling Station
Equipment by Clean Energy

Start-Up Date
March 2013

Fuel Production (GGE)
450-1350 GGE/Day

Waste Gases
Power generation and/or flare

Back up for CNG Fueling
Natural Gas

Fleet Size/Type
Atlas Disposal refuse trucks, buses and other third party users

BioCNG Sizing and Cost Information

System Size	Biogas Inlet Flow (scfm)	Typical Fuel Production (GGE/day)	Budget Price ($million)	O&M Estimate ($/GGE)		Estimated Fuel Production Cost without RINS	
				Fueling Station	Without Fueling Station	Fueling Station	Without Fueling Station
BioCNG 50	50	200-300	1.2	0.74	0.61	2.16	1.42
BioCNG 100	100	375-600	1.5	0.59	0.44	1.40	0.92
BioCNG 200	200	775-1200	2	0.96	0.31	0.98	0.60

1 Fueling station options available from BioCNG at additional cost.
2 Grants, subsidies, tax credits not included
3 Assumes 10 year depreciation
4 BioCNG is qualified to receive D3 and D5 Renewable Fuel Standard Credits. Financial impact will depend on the project-specific operating scenario, and can be up to $1.20 per/GGE
5 Does not include road tax
6 Assume 60% methane

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