

Community-driven renewable natural gas (R-CNG) vehicle fuel project is first to harness landfill gas in Louisiana

Location:

St. Landry Parish Landfill
Washington, Louisiana

Partners:

St. Landry Parish Solid
Waste Commission
BioCNG, LLC
GT Environmental Finance
RPH Engineering
Aucoin & Associates
Progressive Waste

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Feedstock:

Landfill biogas

Maximum Annual Fuel Production:

175,000 GGEs

Vehicles Fueled:

20 municipal utility vehicles
+ 15 private refuse trucks

Pay Back Period:

7-10 Years

Plant Cost:

Phase 1: \$750k
Phase 2: \$2.7M

Received Funding:

Yes

Technology Providers:

BioCNG, LLC



Summary: In April 2012, at the St. Landry Parish landfill, the Town of Washington, Louisiana, opened a fueling station to supply its municipal fleet with landfill gas-derived renewable natural gas (RNG) fuel. This first RNG project in Louisiana to fuel fleet vehicles on-site was inspired and guided by the community's leaders. In 2009, the St. Landry Parish Solid Waste Commission (SLPSWC) began exploring the potential for an economically viable RNG vehicle project that could reduce its GHG emissions by utilizing the landfill gases generated at their municipal solid waste facility.

Since January of 2011, with the help of consultants and contractors including GT Environmental Finance, RPH Engineering, Aucoin & Associates, and BioCNG, LLC, SLPSWC began work on a biogas upgrading facility, which removes moisture, carbon dioxide and other impurities from the biogas, and fueling station. The facility initially began supplying fuel to 15 light-to-medium duty police vehicles retrofitted with CNG engines by Control Tech of New Iberia, LA.

Due to the success(es) of the first phase, in 2015, SLPSWC expanded the project by installing a larger biogas upgrading system (BioCNG 100) and signing a fuel purchase agreement to sell RNG to Progressive Waste, who committed to using the local ultra-low-carbon fuel in its regional waste hauling operations.

The landfill, which accepts waste from approximately 40,000 households, now generates 630 gasoline gallon equivalents (GGEs) of RNG per day, or 175,000 GGEs per year, which is enough fuel to power 20 municipal utility vehicles plus 10-15 refuse trucks. Because of the EPA's Renewable Fuel Standard (RFS2), the project generates lucrative environmental credits that bring the total per-gallon cost of RNG down to \$0.85, considerably less than the cost of diesel fuel.

Financing: The first phase of the project was funded through a \$551,000 grant from the Louisiana Department of Natural Resources, plus \$250,000 in State Tax Incentives given for renewable energy projects. The second phase was financed via a municipal bond offering.