

**Staff Summary
Method 2B Application**

**Sacramento Regional Transit
Lachenaie Landfill Gas (Montreal, Quebec) to Compressed Natural Gas
(Pathway Codes: CNG051)**

Deemed Complete Date: June 16, 2015
Posted for Comments Date: November 20, 2015
Certified Date: December 1, 2015

Pathway Summary

Sacramento Regional Transit (Sac RT) has applied for a landfill-gas-to-biomethane fuel pathway. The landfill gas (LFG) for the pathway is extracted from the Lachenaie Landfill in Montreal Urban Community in Quebec, Canada. The pathway covers the compression of the biomethane for dispensing at CNG fueling stations. All fueling stations covered by this pathway are located in California.

Because Sac RT does not have two years of production data from the Lachenaie Landfill processing plant, the pathway discussed in this summary is provisional until the data has been received by staff and used to confirm that the pathway CI is less than or equal to the CI in the table below. SacRT is required to submit operational data quarterly (effective the quarter after the original data was submitted) until the two year requirement is fulfilled.

LFG from the Lachenaie Landfill is cleaned using grid electricity and propane. Purified LFG is used in the thermal oxidizer and flare pilot. The thermal oxidizer and flare are used to destroy LFG when the processing plant is not fully operational.

The Sac RT pathway utilizes the CA-GREET1.8b default values for LFG recovery. To determine combustion emissions from the consumed purified LFG and propane, the flare and the thermal oxidizer, the CA-GREET1.8b default values for natural gas combustion in a turbine were used. These emissions are more representative of operations at the Lachenaie Landfill plant than the emission factors for a compressor powered by a natural gas.

The biomethane Sac RT purchases from the Lachenaie LFG processing plant is injected into the interstate pipeline system for conveyance to fueling stations located in Sacramento, California. The pipeline transport distance is 3,312 miles. As such, Sac RT will be obligated to retain records that unequivocally demonstrate that the credits it earns under the pathways described in this summary correspond directly with the volumes of biomethane it purchases from the Lachenaie Landfill in Montreal Urban Community, Quebec, Canada.

Carbon Intensity of CNG Produced

As shown in table below, the applicant has calculated the CI of its pathway to be 8.32 gCO₂e/MJ.

Operating Conditions

1. Actual pathway energy consumption values shall remain at or below the levels specified in Sac RT's application. This pathway was calculated using LFG production data from September 14, 2014 to November 30 2014 and LNG liquefaction and CNG compression data covering calendar years 2011 and 2013. The recovery and processing efficiency levels at the Lachenaie Landfill in Montreal Urban Community, Quebec, Canada, shall remain at or above the levels specified in the Sac RT's application. In addition, the compression efficiency at the CNG stations shall remain at or above the levels specified in the application.
2. Because the biomethane supplied under this pathway is commingled with fossil natural gas both when it enters the interstate pipeline system and when it enters Sac RT pipeline system to CNG stations, Sac RT must maintain an accounting system that will enable it to demonstrate unequivocally at any time that every unit of biomethane-based transportation fuel sold and reported under the LCFS can be associated with an equal unit of biomethane purchased from the Lachenaie Landfill.
3. Because SacRT does not have two years of production data from the Lachenaie Landfill processing plant, SacRT will submit quarterly (effective the quarter after the original data was submitted) production data until staff is in receipt of records covering a full two years of production data from the Lachenaie Landfill processing plant. If these records indicate that one or more of the certified CIs shown in the table below are higher, staff may adjust the certified values upwards.
4. Sac RT must provide signed statements from Lachenaie Landfill in Montreal Urban Community, Quebec, Canada, and any party to whom it conveys biomethane from the Lachenaie LFG processing plant attesting under penalty of perjury under California law that all environmental attributes, including the right to generate credits under the LCFS, are exclusively reserved to Sac RT, and that no party will claim or has claimed credit for volumes reported in California's LCFS program under any other governmental program except the federal RFS.

Proposed Lookup Table Entries

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity Values (gCO ₂ e/MJ)		
			Direct Emissions	Land Use or Other Indirect Effects	Total
CNG from LFG	CNG051	2B Application*: Quebec, Canada landfill gas to pipeline-quality biomethane; delivered via pipeline; compressed to CNG in CA	8.32	0	8.32

* Specific Conditions Apply.

Staff Analysis and Recommendations

Staff has reviewed Sac RT's application for the production of CNG from LFG originating in Montreal Urban Community, Quebec, Canada. Staff has replicated, using the CA-GREET1.8b spreadsheet, the CI values calculated by Sac RT. Sac RT has provided documentation in support of the key components of its pathways: energy consumption at the Quebec LFG processing plant and the CNG fueling stations. It has also provided the volumes of CNG produced. Staff is satisfied that the energy consumption levels reported in Sac RT's application accurately represent actual usage for the time period for which records were submitted, and that Sac RT is capable of maintaining CIs that are at or below those shown in the table above. Therefore, staff recommends that Sac RT's application for Method 2B LFG-to-CNG pathway be certified.