

LP18-2022 Ameresco Gas Processing and Pipeline Project

Description of Project: Ameresco Keller Canyon RNG LLC (Ameresco) owns and operates an existing landfill gas-to-energy power plant (LFGTE plant) with a peak capacity of 3.8 megawatts at Keller Canyon Landfill (KCL), located at 901 Bailey Road in the Pittsburg area in unincorporated Contra Costa County. KCL is a Class II waste disposal site operating in accordance with applicable local, State, and federal regulations. KCL is required by permit and regulation to collect and control landfill gas (LFG) to minimize impacts to the community and environment. The gas collection and control system are expanded regularly as KCL continues to dispose of waste, and the volume of LFG generated increases.

LFG or “natural gas” consists of nearly 100 percent methane, and therefore is a valuable source of fuel. Ameresco has contracted with the Keller Canyon Landfill Company for the right to utilize the LFG for energy production or other beneficial uses as allowed by regulations. Since 2009, Ameresco has operated a LFGTE power plant that processes the LFG by filtration and drying to create fuel used to fire internal combustion generators to produce electricity. The LFGTE plant occupies approximately 13,000 square feet of an 803-acre parcel on the KCL property. At present, the volume of LFG generated at KCL exceeds the fuel demands of the LFGTE plant, and the excess LFG is consumed in an enclosed flare facility located adjacent to the LFGTE plant.

Ameresco is proposing a renewable natural gas processing facility and pipeline (RNGPFP) that includes construction and operation of a new RNG processing facility and an underground transmission pipeline. The RNGPFP would significantly reduce LFG flows to the enclosed flare facility. The new RNG processing facility would operate independently of the operation of the existing LFGTE plant and would significantly increase the utilization of LFG for energy, by processing the landfill gas to sufficient quality to allow it to be placed into the regional natural gas network. The footprint of the new RNG processing equipment would cover an area of approximately 48,000 square feet (1.1 acres) on a new level pad of approximately 84,000 square feet (1.9 acres). The new RNG processing facility would operate 24 hours per day/7 days per week and would be manned by two operators for 40 hours per week. The proposed processing equipment includes compressors, filters, direct fuel recuperative thermal oxidizer, enclosed flare, thermal and pressure swing adsorption units, and media beds to treat LFG to meet PG&E’s Rule 21 standards. Most of the equipment would be less than 10 feet in height and, except for the proposed enclosed flare, a few larger pieces of equipment would vary in height from 25 to 35 feet. The proposed enclosed flare would be approximately 50 feet in height, the same height as the existing KCL enclosed flare facility.

The RNG pipeline would carry the RNG from the new processing facility to a connection with the PG&E natural gas transmission pipeline network northeast of the site. The design of the pipeline would meet and/or exceed all regulatory requirements and/or industry standards. The pipeline would start at the RNG processing facility on a portion of the KCL Primary Project Area, traverse through the KCL-owned property known as the Special Buffer Area (SBA), and into the contiguous PG&E-owned utility corridor. Within this utility corridor, the pipeline would go under the Contra Costa Canal. The pipeline would terminate in a metering station to be owned and operated by Ameresco. The metering station would then connect with the existing PG&E STANPAC 3 gas transmission pipeline at a PG&E-owned STANPAC 3 valve lot. The estimated total pipeline length is approximately 3.4 miles. The pipeline would be buried underground with 48 inches of minimum

cover and would be a four-inch diameter steel-wrapped pipe designed for operation at an estimated pressure of 680 pounds per square inch.

Construction of the Ameresco RNGPFP would take 12 to 14 months. During this time, the level pad area adjacent to the existing RNG processing facility would be constructed using approximately 89,000 cubic yards of imported earth fill, covering a total area of 189,000 square feet (4.3 acres) of land, followed by installation of new RNG processing equipment. Concurrently, the RNG transmission pipeline would be installed. The installation of the pipeline would involve creating a trench, placing the pipeline within the trench, and backfilling after placement. The pipeline would be placed at a depth of four feet in most locations. For the pipeline segment in PG&E property, the pipeline would be constructed at a minimum depth of four feet, to a depth of up to 50 feet to meet minimum clearance specifications for the Contra Costa Canal.

Surrounding Land Uses and Setting: The Ameresco RNGPFP is located almost entirely on KCL property. The LCL property is approximately 2,345 acres, which consists of a Primary Project Area of approximately 1,596 acres and an SBA of approximately 750 acres. Along with open space, active landfill operations occur within the Primary Project Area, which includes landfill infrastructure, administration, operations, and waste disposal. Within the Primary Project Area, landfill activities encompass 375 acres, and the landfill disposal footprint covers 244 acres. The SBA is conserved open space located directly east of, and contiguous to, the Primary Project Area. The SBA serves to “buffer” or isolate the landfill from surrounding land uses and is reserved for uses consistent with open space, agriculture, and non-waste disposal landfill infrastructure as determined by Contra Costa County. The Ameresco RNGPFP would be located on the following KCL-owned parcels.

Location	APN
Primary Project Area	094-360-008
	094-360-019
Special Buffer Area	094-360-020
	094-360-022

A portion of the RNG transmission pipeline would be in PG&E property east of, and contiguous to, the SBA. The PG&E property consists of five parcels that total approximately 212 acres, including four parcels in the City of Pittsburg that total approximately 52 acres and one parcel of approximately 160 acres in unincorporated Contra Costa County. The PG&E property is open space land that serves as a north-south utility corridor and contains large electrical transmission lattice towers, overhead high-voltage electrical transmission lines, and an underground gas transmission pipeline. The northernmost PG&E parcel includes the STANPAC 3 valve lot. A portion of the Ameresco RNGPFP pipeline would be located on the following PG&E-owned parcels.

Location	APN
County	094-080-012
Pittsburg	094-090-002
	094-160-004
	095-160-005
	095-160-006

Land immediately surrounding the Ameresco RNGPFP includes the above described KCL Primary

Project Area and SBA and the adjoining PG&E utility corridor. The Concord Hills open space is adjacent to KCL to the south and southeast. The nearest developed non-landfill land uses are single-family residences located off the KCL property approximately 0.33 mile north-northwest of the proposed project site; single-family residences located about 0.40 mile west of the proposed project site west of Bailey Road; and single-family residences and the City of Pittsburg Water Treatment Plant located east of the project site and adjacent to the PG&E utility corridor.