LANDFILL GAS TO RNG

NORTH AMERICA
sysadvance

Project Overview

With rich environmental attributes (i.e. RIN & CA LCFS) diminished in value and transportation fuel offtake agreements difficult to consummate, the market is moving to undeveloped landfills for development opportunities that can provide an acceptable return on investment for sophisticated developers. Sysadvance North America is spotlighting this project as an example of several projects that are either in execution or in the pipeline in 2025.

In Lincoln, Nebraska, the Bluff Road Landfill has been beneficially using landfill gas for the generation of electricity. Approached by a private developer, the operator can see a cleaner and more efficient revenue stream by turning off the gen-sets and selling off the landfill gas rights and accepting a royalty payment for each MM Btu of gas sold into the ATMOS pipeline.

The developer chose the two-stage SYSADVANCE METHAGEN LF for this project over other alternatives in the market. They cited installed cost (CAPEX and site work) along with the performance expectations as primary reasons for choosing SYSADVANCE. Having only used membrane separation technologies for removing CO2 previously, it was a major paradigm shift for this developer.

The METHAGEN LF will be dynamically managing varying landfill gas conditions (changes in flow and gas composition) as it produces RNG (Renewable Natural Gas / Biomethane) that will be injected into a nearby ATMOS gas pipeline. The METHAGEN LF system removes the contaminants and much of the inerts on a consistent and controlled basis.
LF models range in size from 300 scfm to 3000 scfm of inlet capacity, all with a turn-down of 50% of nameplate without any loss in electrical efficiency.

METHAGEN systems, whether for landfill or digester applications, are designed and built to reach the highest performance requirements in the biogas or landfill gas upgrading industry. Its Vacuum-Pressure (VPSA) scheme and low energy demand allow the SYSADANCE systems to offer the lowest life cycle cost across the market of gas upgrading technologies.

SYSADVANCE is a proud member of

atee Club Biogaz · Renewable Natural Gas · gasnam · BIOREF · Canadian Biogas Association · EBA · ABiogás

www.sysadvance.com

Project Data

• Location: Nebraska
• Anticipated Commercial Operation: mid-2026

Uniqueness of the Project

• Large two-stage PSA landfill project – 3,000 scfm
• Methane Purity - >950 btu/cu ft HHV
• Nitrogen content in landfill gas: >7%
• Expected Energy Demand – 0.691 KW/inlet scfm rate
• Availability - >97.5% (regular maint included)
• Highly competitive CAPEX and OPEX

For More Information

SYSADVANCE – North America Technologies, Inc.
2270 Tyner St., Ste 2170 Port Coquitlam, BC, V3C 2Z1 Canada

Our website
Send us an email (Canada)
Send us an email (USA)
Send us an email (LATAM)

