

# Landfill Gas Collection and Capitalization at Tri-Community Recycling & Sanitary Landfill

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# The TCL Facility

- A not-for-profit corporation owned by three municipalities (Caribou, Fort Fairfield, Limestone)
- Located in the Town of Fort Fairfield, Aroostook County, Maine
- 100 tpd facility providing disposal capacity for 35 municipalities with a total population of 35,000

# Landfill Gas Management

- Conducted a comprehensive landfill gas study in 2006
- Generated a list of options for landfill gas collection and control
- Ultimately selected active gas extraction; in substantial part, due to carbon offset opportunities
- Not subject to NSPS

# The TCL Gas Project

- In 2007, installed 20 extraction wells in a previously closed, 13-acre, unlined portion of the landfill
- 6 additional wellheads installed on leachate collection structures and a previously passive gas vent system
- Flare operating since late-May 2008 at 75 – 100 scfm (30-350 scfm flare capacity)
- Gas quality generally in the 45-50% methane range
- Major construction project ongoing at the landfill facility
- Adjacent secure cells with total capacity of 1.44 million tons, of which 338,300 tons are in-place; no existing gas collection in this portion of the landfill

# \$\$Carbon Reduction\$\$

- Looking to capitalize on carbon emission reductions
- Issued an RFP for “carbon credit marketing services” to several firms
- Indicated that preference would be given to proposals with firm fixed price for carbon credits over the term of the contract; however alternative proposals would be accepted
- As a small facility with limited staff resources, looking for a “full service agreement”

# \$\$Carbon Reduction con't\$\$

- Received 5 proposals; 2 for fixed price purchases and 3 for brokerage arrangements
- Individual proposals are considered proprietary and confidential
- Prices generally ranged from \$4 - \$8/tonne; dependent upon standard, term of sale, etc.
- Estimate 7,500 – 10,000 tonnes per year
- Most proposals referenced several prevailing standards to which TCL credits may be verified, registered, and subsequently sold (VCS, CCAR, RGGI, CCX)
- Need to determine all costs associated with verification and registry in order to determine net revenues

# The Challenges

- Conduct a reasonable evaluation of proposals and select a company that will provide the best “fit” with TCL
- A very small player in a large, dynamic market
- Limited personnel and financial resources
- Geographic location
- New – we are learning as we go

# Current Status

- Recently selected Terrapass to partner with and are working to finalize a contract with them
- Why Terrapass??
  - Fixed price offer that was financially competitive
  - Unique business model
  - Smaller, growing company

# The Future

- Continue to look for options for capturing thermal and/or electric energy from gas stream
- Evaluate the feasibility of expanding the gas collection system into the secure phases of the landfill
- Explore synergistic opportunities for methane capture from nearby cattle feedlot operation

QUESTIONS??

TRI-COMMUNITY RECYCLING &  
SANITARY LANDFILL

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