Alternatives to Electrification of Landfill Gas

Obtaining Investment for LFG to Direct Use, Pipeline Injection and CNG

LMOP National Landfill Gas Energy Workshop
March 19, 2015 – New Orleans, Louisiana
Overview

- Challenges and Risks

- Regulatory and Market Drivers

- Planning Process
  - Diligence and Feasibility
  - Contracted Revenue
  - Structuring Considerations

- Common Deal Structures

- Other Options and How to Move Forward
Challenges and Risks

- Budget Constraints and Contracted Revenue
- Technology, Legal and Political Risks
- Ownership and Operation
- Energy Costs and Project Timing
Regulatory and Market Drivers

- **Regulatory**
  - RFS2 and RINs
  - RPS
  - LCFS
  - Organics Diversion
  - Sunset of tax credits for electricity production

- **Market Drivers**
  - Maximizing Use of Gas
  - Use for On Site and Vehicles: Cost Reduction
  - Proximity of Users and Cost to Transport Gas
  - Diversion of Waste from Landfills
  - Lower Electricity Prices
Planning Process

1. Conceptual Diligence and Evaluation
2. Feasibility
3. Project Ownership
4. Technology
5. Team Selection

The process is cyclical, with each step leading to the next and then back to the first step.
Planning Process

- Conceptual Diligence and Evaluation
  - Contracted Feedstock and Offtake; Site Control
- Feasibility: technology, regulatory, economic, project dynamics and energy market
- Ownership: Public vs. Private
  - Public-Private Partnership; DBOO/DBOOT
  - Financing sources and structures: debt, leasing, equity, tax equity, vendor financing and project finance
- Owner’s and Investor’s Interests
  - Control of financing, the facility and use of gas
  - Maximizing rate of return and use of subsidies
  - Minimizing risk of execution
  - Ease of exit
Connecting Financing Documents to Potential Project Agreements

- Site Lease, Permitting and Technology Licensing
- Construction (i.e., EPC) Agreement Concerns
- Feedstock Supply, Service and Offtake Agreements
- Market Financeability Provisions
- Interconnection and Transportation
- RPS, LCFS and RIN Verification, Monitoring and Certification
Financing Considerations

- **Equity**
  - Developer or Owner Equity
  - Third Party Strategic or Passive Investment

- **Debt**
  - Commercial or Bank Debt
  - Municipal Debt
  - Green Infrastructure
    - State revolving loan funds
  - State Green Bank/Financing Authorities
    - Credit enhancements; risk mitigation
    - Loan guarantees
  - Federal Programs with USDA or DOE

- Partnerships with non-governmental entities, including fleet owners
- Will third party investors and lenders provide value for RINs or LCFS
Bond Incentives

- Pre-pay transactions: proceeds of bonds are used to pre-purchase gas from the generator
  - Bond proceeds are used to purchase natural gas in advance of delivery
  - Purchase is made by or for a governmental utility for use in the utility’s service area

- Output facilities (e.g., generating, distribution and transmission facilities) proceeds of bonds are used for capital expenditures for such facilities
  - $15 million limitation: generally, not more than $15 million of an issue for an output facility may be used for a private business use
  - Private business use is use directly or indirectly in a trade or business that is carried on by any person other than a governmental unit

- QECBs: less sensitive to ownership

- Solid waste exempt facility bonds: flexible but first useful product or useful energy rules do limit their reach
Governmental Structure – Tax-exempt Bonds

For discussion purposes only; consult your tax advisor
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Commercial Ownership Structure – Bank Lender

For discussion purposes only; consult your tax advisor
Third Party Debt & Equity

For discussion purposes only; consult your tax advisor

Lender

Equity Investor

Loan Agreement

LLC Agreement

ProjectCo

Payment

Site Lease/Gas Rights

$/MMBtu

MMBtu

Gas Purchaser

LF Owner

For Third Party Debt & Equity, the diagram illustrates the relationships between the Lender, Equity Investor, ProjectCo, Gas Purchaser, LF Owner, and various agreements such as Loan Agreement, LLC Agreement, Payment, and Site Lease/Gas Rights. The text box advises to consult your tax advisor for discussion purposes.
Moving Forward

- What is the purpose of the project?
- Is the technology proven?
- What is the creditworthiness of any obligor, vendor or counterparty?
- Define the roles of all participants and stakeholders and identify acceptable risks; is there political will and community support?
- What are the sources of financing and optimal incentives?
- Is the transaction structure simple relative to the size of transaction and the experience of the transaction parties?
- Have you accounted for market and regulatory factors that are in flux?
- Do you have the right team?
Questions or Comments?

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