

CAMBRIAN ENERGY

Financial Engineering's the Key:

How a Long-Term Energy Sale Agreement and
Bond Offering Transformed the McCommas Bluff
LFG Project;

Three Perspectives on One Project
LMOP - January 2012

Presenter:

Evan Williams of Cambrian Energy



Presentation Overview

The Developer's Perspective

- Background and Development History of McCommas Bluff LFGTE Project
- Recent Development and Construction
- Keys to Long-Term Financing of Project
- Tax-Exempt Bond Experience
 - Other Options Considered
- Rating Agency Experience
- Tax-Exempt and Taxable Bond Financing Options and Considerations
- Legal Structuring Considerations for Financing

McCommas Bluff LFTE Project

Development History

➤ Developer 1

- Awarded Landfill Gas Lease rights and constructed high btu renewable natural gas (“RNG”) project using PSA/TSA gas processing technology
- Installed LFG wells and began operations in 1998
- Transitional Event – **BANKRUPTCY**

➤ Developer 2

- Acquired operating assets of project
- Transitional Event - **BANKRUPTCY**

➤ Developer 3

- Acquired operating assets of project
- Attempted to convert project to LFG-to-electric power
- Transitional Event - **BANKRUPTCY**

➤ Developer 4 – Cambrian Energy & Partners

Cambrian Energy & Partners

- May 2007 – Cambrian Energy contacted by Trustee for Chapter 11 entities that owned McCommas Bluff LFTE project assets
 - Stalking Horse Bidder Request to Cambrian
- November 2007 – Dallas Clean Energy, LLC purchases project assets from Trustee
 - DCE formed by Cambrian Energy and Camco Global
- August 2008 – membership interest in DCE purchased by Clean Energy from Camco
 - \$14 million interim capital improvements loan by Clean Energy to DCE

Project Status When Assets Acquired

➤ Collection System

- Only one-half of filled area of landfill had an installed collection system
- Nearing non-compliance with NSPS

➤ Gas-driven engine-compressor

- Old with frequent breakdowns and replacement parts scarce
- Air emission compliance issues

➤ Merchant Gas Sale Agreement

- Product RNG gas sold at discount from Waha Hub index

➤ Delicate Relationships

- City of Dallas
- Atmos Pipeline-Texas

McCommas Bluff Landfill - Location



Gas Processing Facility - Equipment



Immediate Installation of LFG Wells

- Commercial Need for more Wells
 - To collect additional LFG up to capacity of existing gas processing facility of 9.4 million scf/day of raw LFG
- Compliance Need for more Wells
 - To meet NSPS requirements for installation of LFG collection system within 5 years of initial waste placement in area or 2 years following completion of waste in area
- Decision to Install Horizontal Collectors
 - Earlier collection of LFG generated

LFG Well Drilling - McCommas



LFG Header Pipeline - McCommas



New Refuse Cell - McCommas

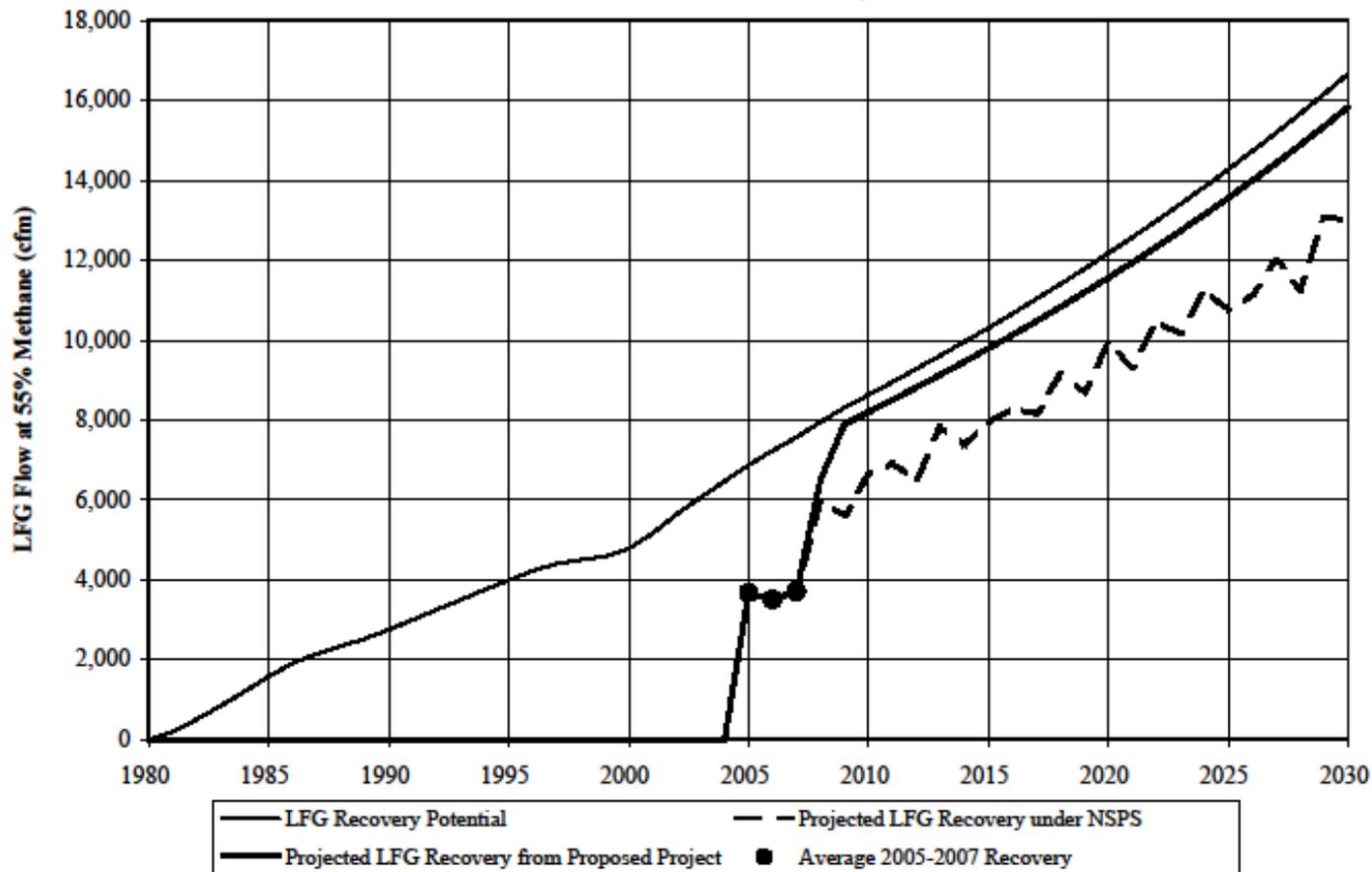


Enhanced Leachate Recirculation System



McCommas Bluff Landfill

Figure 1. LFG Recovery Projection
McCommas Bluff Landfill, TX



10/22/2007

Electrification Project

- “Big Sexy” engine-driven compressor replaced by three electric drive compressors
 - Raw landfill gas compressor
 - Process compressor for PSA/TSA system
 - Product gas compressor
- New thermal oxidizer
- New cooling towers, LFG drying system and control room
- **Financing** of Electrification Project and Initial LFG well field expansion through interim loan

Electrification Project Construction



McCOMMAS BLUFF | COMPRESSOR ELECTRIFICATION PROJECT, 2010

Compressor Building & Control Room New Cooling and Piping



New Electric Compressor Skids



Phase 2 Construction & Financing

- Add 5.5 million scf/day of PSA/TSA gas processing capacity
- Upgrade existing gas processing facility to 10 million scf/day raw LFG processing capacity
- Add 100 replacement and new LFG wells and horizontal collectors
- **Financing** – 14 year tax-exempt bond financing

Why did prior Developers fail?

- Did not meet Secret Formula for successful LFTE projects

Secret Formula

- Revenues > Expenses
- Predictably

Basic Rules for Financing

- Basic Rule: Project must meet requirements of Secret Formula
- Next Basic Rule: Debt is Less Costly than Equity
- No Science Projects

Firsts for McCommas Bluff Project

- Long-Term Take-and-Pay RNG Gas Sale Agreement with Shell Energy at premium prices
 - Incorporated premium pricing for renewable electric power in California
- Carbon Credits at NSPS landfill
- Investment grade rating for LFG project without credit enhancement

Key Project Agreements

- Landfill Gas Lease
- RNG Gas Sale Agreement
- Firm Gas Transportation Agreements
- Design-Build EPC Agreement
- All foregoing agreements included hypothecation language to allow pledging as security for project finance loan

RNG Gas Sales Agreement

- Third time's a charm!
- Departed from unpredictability of merchant sales at wholesale index prices
- Included firm transportation of gas from Texas to California
- Assured that Revenues would exceed Expenses Predictably

EPC Agreement

- Firm, Guaranteed Maximum Price Construction Agreement
- Liquidated Damages
 - Completion Delay
 - Specified Facility Performance Shortfalls
- Payment and Performance Bond for full amount of contract

McCommas Bluff – Carbon Credits

- First validation of early action methane collection in areas of NSPS Landfill
- Validation completed January 2010 by First Environment pursuant to Voluntary Carbon Standard 2007.1
- 1,555,710 tonnes available over first 5 years
 - Vintage: 2010 through 2014
- Additional volumes available

Trivia:

Which LFG Industry Celebrity's Life is the basis for the hit television series, "Survivor"?

Geoff Brown



Debt Financing Objectives for McCommas Bluff

- Refinance short-term interim loan with long-term limited recourse debt
- Obtain additional debt financing for expansion to LFG processing capacity

Limited Recourse Project Debt Financing

- Defined: A loan to a project, usually a bankruptcy remote, special purpose entity that owns the assets of the project, in which the recourse of the lender for repayment of its loan is limited solely to a security interest in the following:
 - Assets of the project, including tangible and intangible property
 - Revenues of the project

Limited Recourse Project Debt Underwriting Standards

- Experience of project sponsor evaluated by lender
- Project uses proven technology – i.e., no Science Projects
- Receipt by lender of LFG Resource Assessment that reflects longevity of resource to support repayment of loan
- All project entitlements have been received
 - Leases signed with no defaults
 - CUP, Air Permit and Building Permits issued with acceptable conditions
 - Air emission offsets identified for purchase at affordable price if a condition to air permit
- Experience of O&M services provider evaluated
- EPC Contractor – must be experienced and creditworthy
 - Underlying equipment warranties from sub-suppliers must be of sufficient length and coverage from creditworthy entity

Limited Recourse Project Debt Underwriting Standards

- Energy Sale Agreement Requirements
 - must be with creditworthy purchaser
 - at price that meets Debt Coverage requirement
 - for a term equal to or longer than term of limited recourse debt
- Project Financial Model must show minimum Debt Coverage Ratio compliance
 - Revenues must exceed expenses before debt service by specified ratio
 - Today's market: typically 1.5:1 or higher (min. for investment grade)

Limited Recourse Project Debt Underwriting Standards

- Each Project Agreement must be in a form acceptable to lender
 - Must include provision consenting to assignment to lender upon default by project sponsor
 - Must provide lender with right to cure upon default by project entity under project agreement
- Lender's independent engineer will have reviewed and provided its opinion as to sufficiency of the technology utilized, the receipt of all required entitlements and the economic viability of the project

Why Bonds?

Financing Options Explored for McCommas Bluff Project

- Environment: Mortgage Crisis in full bloom and banks in full retreat
- Bank – project finance loan
 - Interested at \$50 million +
 - Wanted 2% up front structuring fee
- Tax-Exempt bond with credit enhancement to investment grade through bank standby letter of credit with FHLB wrap
 - After 9 months bank couldn't provide

Application Filed with Rating Agency for Investment Grade Rating of McCommas Bluff Proposed Tax-Exempt Bond Issue

- Investment Grade Rating Needed to Broaden Marketability of Bonds to Institutional Investors
 - Investors Limited to investing in investment grade debt instruments
- Fitch Ratings
 - McCommas Bluff project was first review of a landfill gas-to-energy project
- Conservative approach to ratings
 - Sensitive to criticism from participation in mortgage-backed securities ratings

Fitch Ratings Process

- Visited McCommas Bluff project site and reviewed Electrification Project, landfill gas collection system, project operators and management
- Reviewed report of process technology, landfill gas resource and experience of management prepared by Independent Engineer, Sargent & Lundy
- Reviewed Financial Models

Fitch Ratings Stresses to Financial Model Assumptions

- Revenues:
 - No premium assumed for sale of excess RNG not subject to Shell Energy RNG Gas Sale Agreement
 - Reduced assumed availability of project
 - Questioned landfill gas resource – discounted increased LFG production from Enhanced Leachate Recirculation
- Expenses: Fitch assumed substantial increases in expenses (against fixed revenues)
 - Interest rate
 - Electric power
 - Property taxes

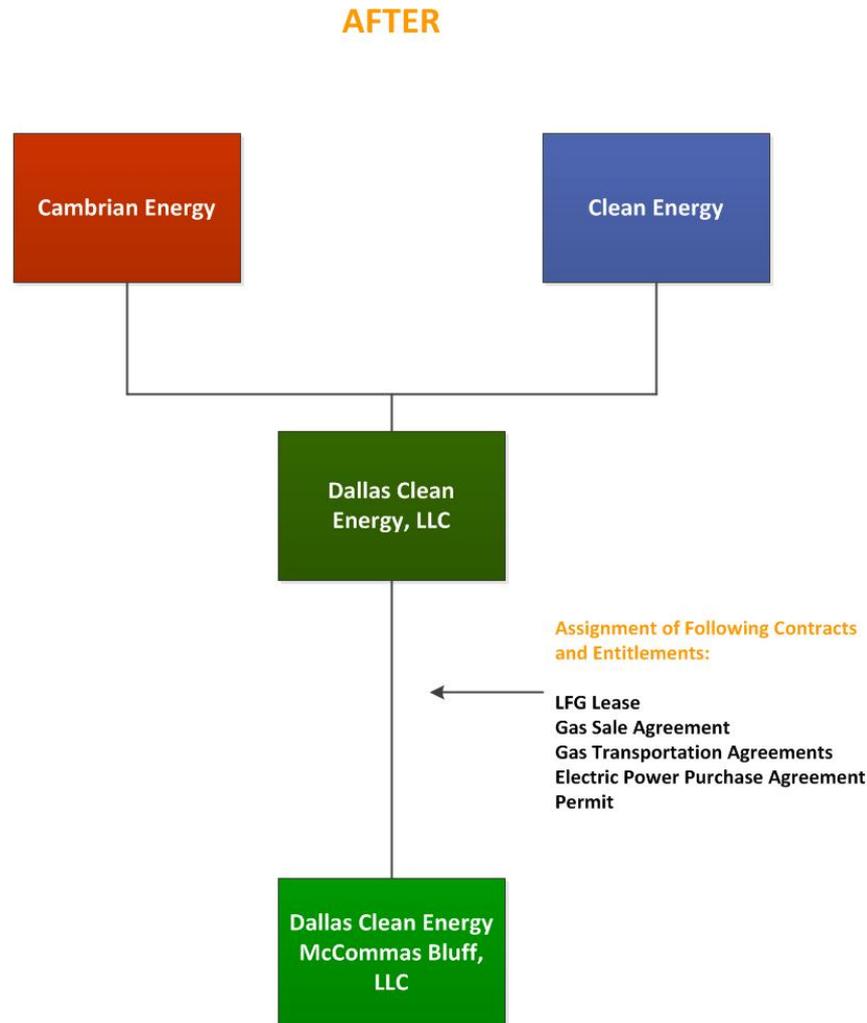
Project Responses to Fitch Questions and Stresses

- LFG Resource – provided supplemental report by SCS Engineers confirming LFG resource and rate of generation
- Legal Opinion by Texas property tax counsel on exemption from property taxes
- 5-year fixed price electric power purchase agreement with Constellation NewEnergy
- Failed Cased Financial Model
 - Reduces risk of construction
- Owners contributed additional equity

Investment Grade Rating Received Bonds Sold at Increased Interest Rate

- Fitch Ratings issued investment grade rating after
 - Additional equity contribution by owners
 - Supplemental report by independent engineer with supporting opinions and data
- Japanese earthquake, tsunami and nuclear plant disaster occur March 11, 2011 and paralyze financial markets
- DCEMB bonds sold March 31, 2011 at higher interest rate than before March 1, 2011

Legal Restructuring for Bond Offering



Each Bond Offering Needs One of These!



PARTICIPANTS IN DALLAS CLEAN ENERGY McCOMMAS BLUFF, LLC \$40.2 MILLION TAX EXEMPT BOND OFFERING

Dallas Clean Energy LLC -
Parent Project Company

Dallas Clean Energy
McCommas Bluff, LLC -
Subsidiary of DCE

Cambrian Energy -
Member of DCE

SCS Engineers –
*Special Engineering
Consultant and O&M
Contractor*

Clean Energy
Member of DCE

City of Dallas -
Landfill Owner

Mission Economic
Development
Corporation -
Conduit Bond Issuer

Brusniak/Blackwell LLP -
*Special Property Tax
Counsel*

City of Mission, Texas –
*Municipal Sponsor of
Conduit Bond Issuer*

Shell Energy North
America (US), LP -
*RNG Purchaser and Gas
Transportation Manager*

Community Development
Corporation –
Financial Advisor

Constellation NewEnergy
Electricity Supplier

Bond Underwriting Firms

Atmos Pipeline-Texas -
*Natural Gas Pipeline
Interconnected to Project*

BNY Mellon -
Bond Trustee

Texas Bond Allocation
Board -
*Texas Agency for Tax-
Exempt Bond Allocation*

Sargent & Lundy -
Independent Engineer

VM Energy LLC -
EPC Contractor

So.....

**Who Sells and Buys Tax-
Exempt Bonds?**

**What Legal Structuring
Considerations are
Required?**



Thanks for Listening!