



• August 15-18, 2010 • Dallas, Texas •
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MCLB Albany Landfill Gas Project

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Outline

- Landfill Gas to Energy (LFGE) Project Review
- LFGE Project Benefits
- Government Mandates
- RECs and Methane Destruction Credits
- Project Hurdles
- Project Status
- Keys to Success

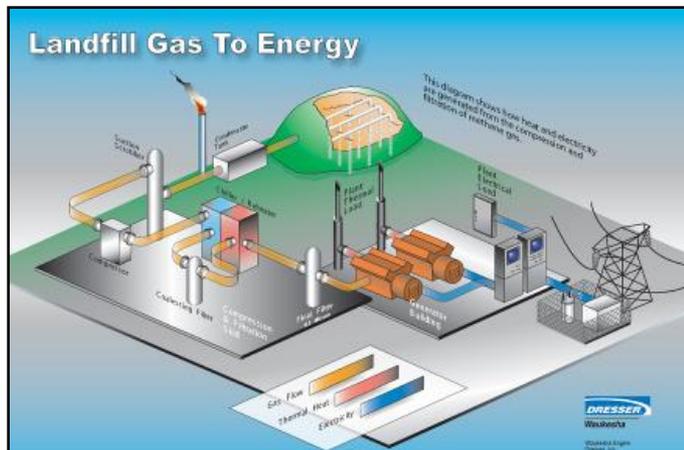
Project Overview

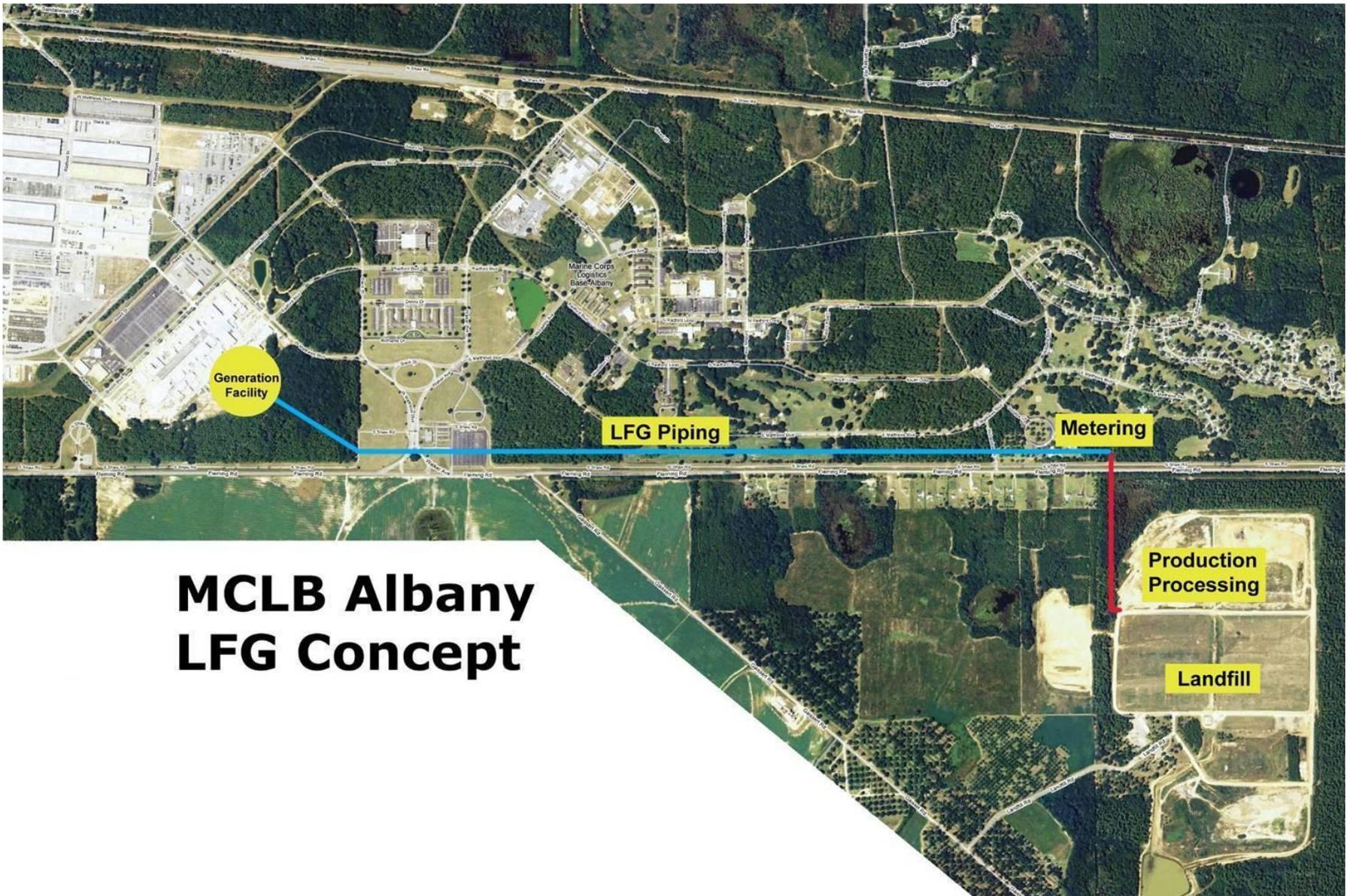
Scope

- Install a low-energy fuel generator with a heat recovery steam generator (CHP)
- Install two dual fuel (LFG/NG) boilers to burn excess LFG
- Install a LFG compression/dehydration station at the County landfill
- Install over three miles of pipe between the Landfill and LFGE Facility

Benefits

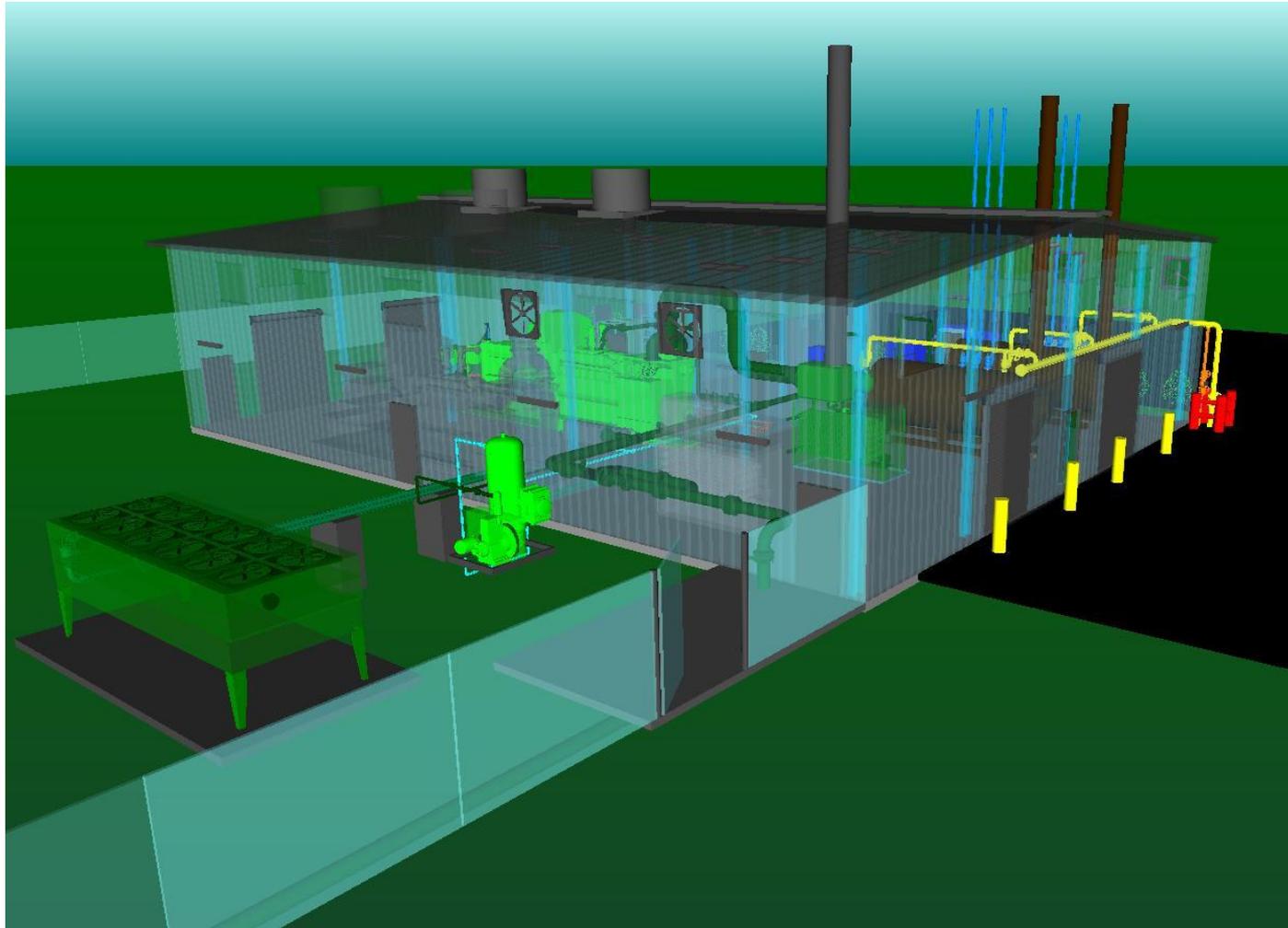
- Helps MCLB meet their mandated goals
- Energy security/energy reliability
- Reduces greenhouse gas emissions
- Double credit for renewable energy generation
- Ability to operate in island mode on natural gas





MCLB Albany LFG Concept

LFGE Plant - Exterior

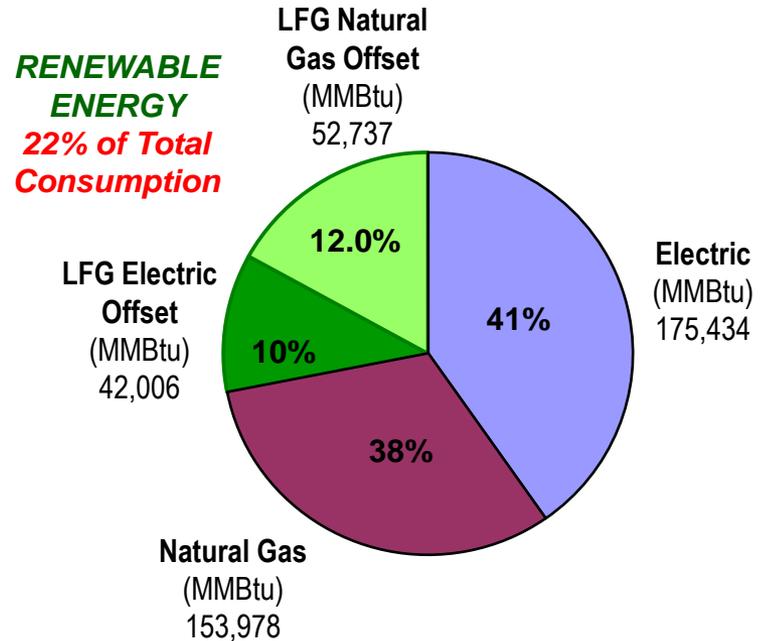
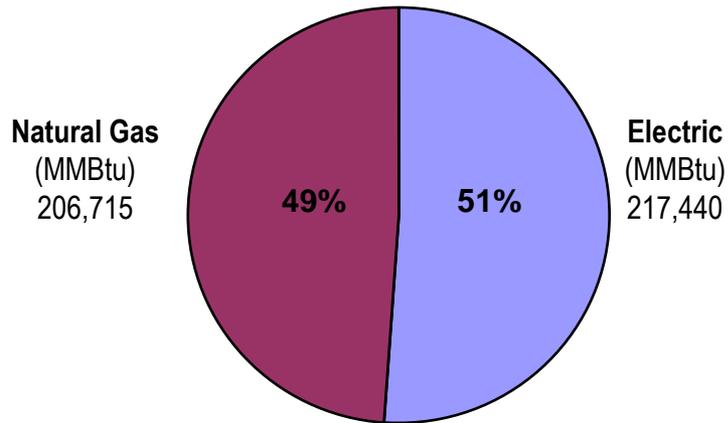


LFGE Plant - Aerial



Energy Mix – Impact of LFG

MCLB
2008 Energy Use Breakout



LFGE Project Benefits

- Exceeds Renewable Energy Mandates
- Saves money
- Locks in low energy cost for 20+years (with flat annual escalation)
- Destroys Methane (possible future monetary benefits)
- Provides Energy Security and Reliability
 - Dual Fuel Equipment (generator and boilers)
 - Island Mode Capability
 - Redundant Steam Production
- Designed for Future Expansion

Government Policies and Mandates

EPACT 2005

- Electric Renewable goals (as a percent of electricity consumed):
 - 3 percent or more by FY 2007 through FY 2009
 - 5 percent or more by FY 2010 through FY 2012
 - 7.5 percent or more by FY 2013
- Electric renewable energy amount shall be doubled if renewable energy is produced and used on-site.

Executive Order 13423

- Requires that agencies use new renewable source for half of the EPACT 2005 renewable energy goals (as a percent of electricity consumed).
- Allows non-electric renewable energy to count toward goals.
- Requires “to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use”

EISA 2007

- Requires a reduction in energy intensity of 30% by end of FY 2015 as compared with FY 2003.

RECs and Methane Destruction Credits

Renewable Energy Credits:

“RECs – also known as green tags, green energy certificates, renewable energy credits, or tradable renewable certificates – represent the technology and environmental (non-energy) attributes of energy generated from renewable sources”

-FEMP's Renewable Energy Requirement Guidance for EPACT 2005 and EO 13423

“Credits generated from the displacement of fossil fuel emissions [with renewable energy] on the electricity grid”

-Chicago Climate Exchange, Inc.

Methane Destruction Credits:

“Credits stemming from the combustion/destruction of methane or the use of methane for energy or heat”

-Chicago Climate Exchange, Inc.

Renewable Energy Attributes

“Renewable Energy Attributes: Only the proportion of the renewable energy and/or environmental attributes from renewable on-site projects, facilitated projects or purchases which are retained by the agency can be counted against the Renewable Energy Goal. That portion of renewable energy and/or environmental attributes retained by, transferred or sold to a third party, cannot be counted toward the Federal Renewable Energy Goal, including electric service providers who retain ownership of renewable energy attributes to meet renewable portfolio standards.”

-FEMPs Renewable Energy Requirement Guidance for EPACK 2005 and EO 13423

OWNING YOUR ATTRIBUTES

Double Counting Occurs when non-energy attributes such as emissions credits/allowances or other environmental attributes are further disaggregated from the renewable attributes by the renewable energy/REC supplier and sold separately.

For RECs to count under EPACT 2005 Requirements or the EO13423 Requirement, both the renewable attributes and the non-energy attributes must be retained by the agency, retired, or precluded from transfer to a third party.

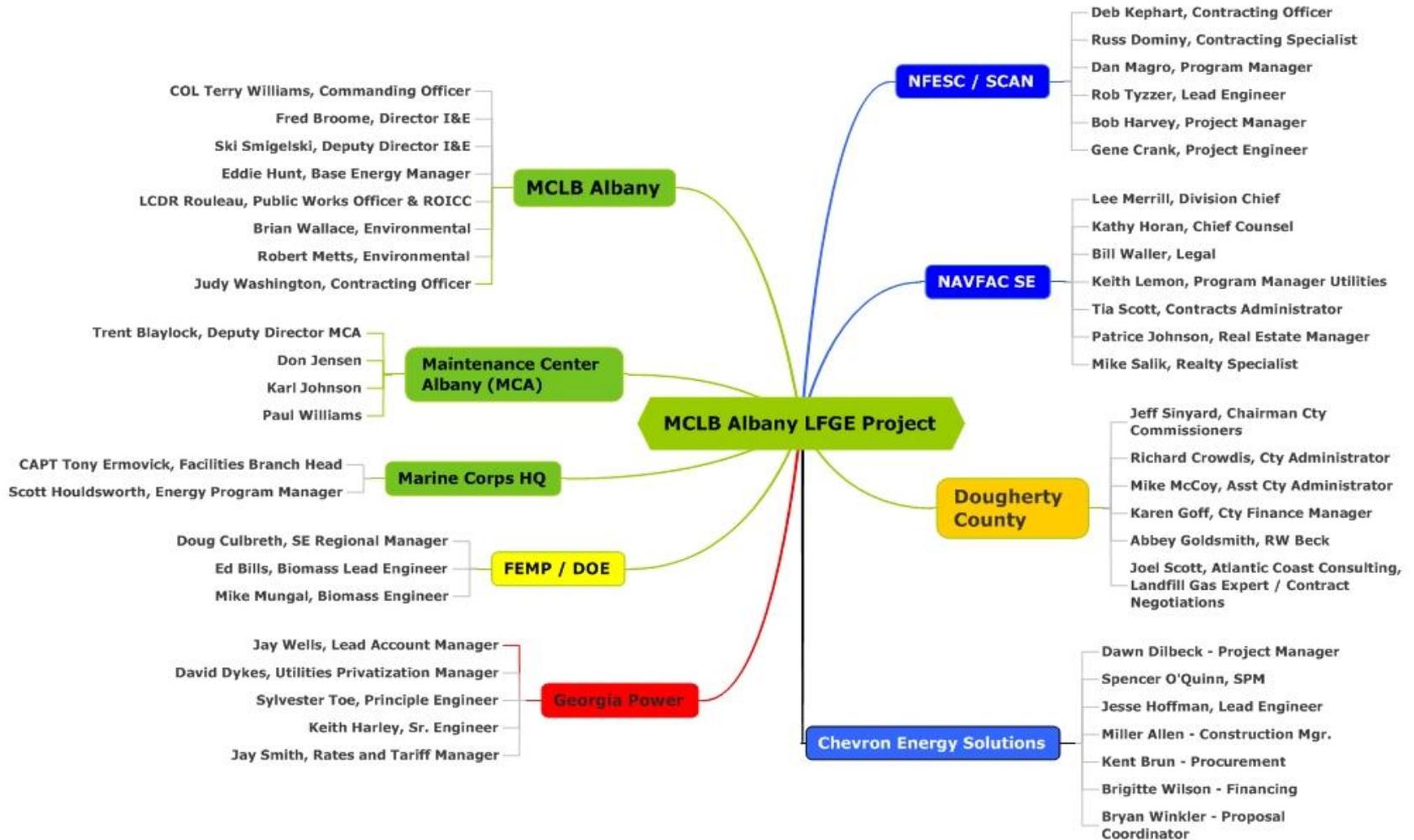
- *FEMP “Renewable Energy Requirement Guidance for EPACT 2005 and EO 13423”*

YOU MUST RETAIN OWNERSHIP OF THE RECs & METHANE DESTRUCTION CREDITS IN ORDER TO COUNT THEM TOWARD YOUR RENEWABLE ENERGY GOALS

Obstacles & Perseverance

- Information from Past Projects
- Who Needs to be Involved?
- Purchase Agreement
 - LFG is not a Commodity
 - Determining LFG Price
 - Allocating Risks
 - Signing a 20-year+ Agreement
 - Sharing of Environmental Attributes
 - Changing Scope
- ESPC Deadline
- Financing in a Volatile Market
- Easement
- Timing ESPC Award, Purchase Agreement, and Easement

LFGE Project Team



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LFGE Project Timeline



March 2007

NTP for DO 2 Initial Proposal

October 2008

NOITA Received for DES



December 2009

Purchase Agreement Signed for LFG & DO 2 Awarded



March 2011

Project Acceptance

June 2007

First Meeting with County

May 2007

County Contacts MCLB for LFG Use

June 2009

DES Submitted

May 2010

Groundbreaking Ceremony



August 2007

Initial Proposal Submitted

Keys to Success

- Partnering
- Communication
- Sharing Risks and Sharing Rewards
 - Utility Rate Escalation
 - LFG Quality
 - LFG Quantity
 - Energy Savings
 - Equipment Reliability and Uptime
- Learning from Past Projects

Resources

Federal Acquisition Regulations

(Purchase Agreement Term Ref: FAR 41.102(b)(7))

www.acquisition.gov/far/

EPAs Landfill Methane Outreach Program

www.epa.gov/lmop

FEMP – Laws and Regulations

www1.eere.energy.gov/femp/regulations/guidance.html

Questions?



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