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# ALTERNATIVE DELIVERY METHODS FOR DEVELOPING A LANDFILL GAS-TO-ENERGY PROJECT

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### CONTRACT DELIVERY METHODS FOR LANDFILL GAS-TO-ENERGY PROJECTS

Design-Bid-Build (Public Operations)

Design-Build-Operate (Public Ownership)

 Design-Build-Own-Operate (Developer Model)

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## DESIGN-BID-BUILD (Conventional Public Works Delivery Method)

- Engagement of Design Engineer
- Procurement of General Contractor By Landfill Owner Based on Price
- Guaranteed Price and Schedule by G.C.
- No Guarantee of Performance
- Landfill Owner Operator
- No Long-Term Guarantee



### Example DBB Project – Monmouth County, New Jersey – 1 MW LFG Project



1 MW

1 Generator

JenbacherEngine



### MONMOUTH COUNTY OBJECTIVES AND PROCUREMENT OF 1 MW LFG PROJECT

#### County Objectives:

- Offset Electricity Costs at County-owned Facility
   Adjacent to Project Site
- Take Advantage of State Incentives (NJBPU Grant - 25%) and Low Interest Rates
- Develop Additional Renewable Energy Project

#### Procurement:

- Local Public Contracts Law
- Lowest Responsible Bidder



#### **COUNTY'S 1 MW LFG PROJECT**

- County applied for and received grant from the New Jersey Board of Public Utilities in the amount of \$800,000
- County financed remaining cost of project (\$2.4 Million)
- 1 MW generator utilizes the 450 cfm of gas reserved pursuant to a Separate Gas Rights Agreement (discussed later)



#### COUNTY'S 1 MW LFG PROJECT (Cont.)

- Net Metering
- Interconnection Agreement with Local Utility
- Produces enough electricity to offset up to \$1 million per year of County's electricity costs at County's Materials Processing and Recovery Facility
- Generates revenue from sale of Renewable Energy
   Certificates via an online auction platform

Tawkin
Delafield & Wood LLP

## SIGNIFICANT BENEFITS AND DRAWBACKS OF PUBLICLY OWNED DBB PROJECT

#### **BENEFITS**

- Most Control
- Reap Entire Financial Benefit
- Grant Funding
- Tax Exempt Debt

#### **DRAWBACKS**

- CapEx
- Most Risk
- More Headaches
- No Tax Benefits
- Limited Expertise
- No Long-Term Guarantor of Performance or Revenues
- More Responsibility (e.g. interconnect, off-take)



## DESIGN-BUILD-OPERATE (Public Ownership)

- Procurement of D-B-O Team Through RFP
- Development of Minimum Technical Requirements
   By Owner's Advisor
- Selection on Price and Other Factors
- Contractually Guaranteed Price, Schedule and Performance
- D-B-O Operator
  - Long-Term Guaranteed O&M Price
  - Long-Term Guaranteed Performance
- Landfill Owner Responsible for Interconnect and Offtake

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## EXAMPLE DBO DELIVERY METHOD – U.S. VIRGIN ISLANDS

- Virgin Islands Waste Management Authority Issued an RFP for the Development of a Landfill Gas-to-Energy Project (less than 1 MW) at the Bovoni Landfill on St. Thomas
- Grant Money Used to Finance Project (\$3.1M)
- Design, Build, Operate Contract Negotiated and Executed
- Facility Constructed But Not Operating



#### **AUTHORITY OBJECTIVES**

Long-term Beneficial Use of Landfill Gas

Reduce Odors

Take Advantage of Grant Funding



#### DBO SERVICE CONTRACT HIGHLIGHTS

- Guaranteed DB Price and Schedule
- Guaranteed Long-Term O&M Price
- Performance Guarantees Electric Power Production Guaranty
- Contract Security
  - Escrow Agreement
  - Payment and Performance Bond



## SIGNIFICANT BENEFITS AND DRAWBACKS OF DBO LFG PROJECT

#### BENEFITS

More Control

- Grant Funding
- PerformanceGuarantees
- Long-Term O&M Cost Guarantees

#### **DRAWBACKS**

- CapEx
- No Tax Benefits
- Responsibility for Interconnect and Offtake



## DESIGN-BUILD-OWN-OPERATE (Developer Model)

Procurement of DBOO Team

No Public Capital Expense

 Long-term Risk and Responsibility on Developer

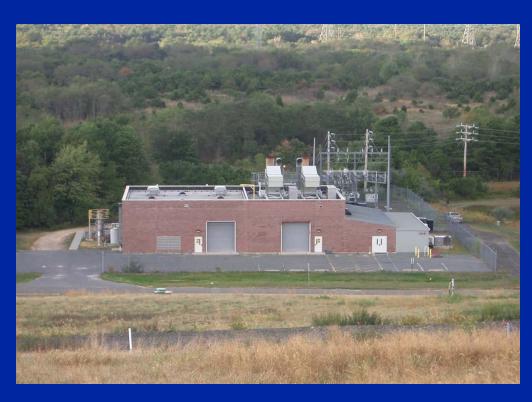


## EXAMPLE DBOO DELIVERY METHOD – Monmouth County, New Jersey

- In 1995, Monmouth County entered into a Gas Rights Agreement with a wholly owned subsidiary of Montauk Energy (Montauk)
- Montauk developed a 10MW LFG facility at the County's Reclamation Center
- The parties entered into an Amended and Restated Gas Rights Agreement in 2006



### MONTAUK'S 10MW LFG FACILITY AT THE MONMOUTH COUNTY RECLAMATION CENTER



**10 MW** 

2 SolarTaurus 60CombustionTurbines



## COUNTY OBJECTIVES FOR DBOO LFG PROJECT

- County Objectives:
  - Receive revenue from licensing of rights to gas produced at the existing Landfill
  - Minimize capital expense
  - Have private company own, operate and maintain energy generating facilities to minimize risk



## COUNTY OBJECTIVES FOR DBOO LFG PROJECT (Cont.)

 Same private company to share in responsibility for collection system

Reduce odors/odor complaints

Reduce costs associated with flare



# LEGAL CONSIDERATIONS REGARDING PROCUREMENT OF DBOO LFG PROJECT

Exceptions to Competitive Bidding

 Long Term Contract Allowed Under State Law

(N.J.S.A. 40A:11-15)



#### ROYALTY PAYMENTS

- Monthly Royalty Payments Based on Percentage of Gross Revenues from the Project
- Gross Revenues Include:
  - Electricity
  - Availability
  - Capacity
  - RECs
  - Anything Else, Including Future Benefits
- Minimum Monthly Royalty Payment Required



## SIGNIFICANT BENEFITS AND DRAWBACKS OF PRIVATELY OWNED DBOO PROJECT

#### **BENEFITS**

- No Upfront Capital Expenditure
- No Risk
- Partner with Significant Expertise
- Private Tax Benefits
- Limited Hassles
- No Responsibility for Interconnect and Off-take

#### **DRAWBACKS**

- Smaller Share of Financial Benefit
- Less Control
- No Grants or Tax Exempt Debt
- Long-Term Commitment



### CONCLUSION

 Benefits and Drawbacks to Each Delivery Method

All Models Can Be Successful



#### QUESTIONS AND COMMENTS

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