

Landfill Owner's Perspective on Project Ownership

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County Sold Electricity 1991-2006



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Existing Cogeneration System Had Insufficient Capacity



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Cogeneration System History

- 1991: system startup
- 1992: new cylinder kit
- 1992-2005: numerous new valves
- 1994: major failure > new block
- 1994: new cylinder kits
- 1996: major failure > stitched block
- 1998: new cylinder kits
- 1998: installed temperature scanner system
- 1999: consultant study of alternatives
- 2000: new cylinder kit
- 2000-06: discussions with local energy user
- 2001: major failure
- 2001: annual budget discussions
- 2002: new engine
- 2002-06: minor & major overhauls
- 2002: detonation systems installed
- 2002: boiler insurance cost increased
- 2002: annual budget discussions
- 2003: major failure > new cylinder kits
- 2003: began new power sale agreement
- 2003: installed computer system
- 2003: annual budget discussions
- 2003-05: engine-generator overhauls
- 2004: installed condensate knockout pots
- 2004: installed condensate systems
- 2004: discussions with local energy user
- 2004: annual budget discussions
- 2004-05: engine company discussions
- 2005: installed crankcase monitors
- 2005: installed flowmeters
- 2005: installed oxygen analyzers
- 2005: annual budget discussions
- 2006: select future option

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Cogeneration System Summary



- 15 years experience
- Performance history below expectations
- Improvements over past 2 years
- Future system needed to perform better as a business

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Request for Proposals



- Sent to 40 companies nationwide
- Advertised in 2 national trade journals
- 11 developers toured our facilities

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14 Proposals Received Project Duration 10-20 Years

	Company	Location	Technology				Number Solutions Offered
			Electric Power	Direct Use	High BTU	Vehicle Fuel	
1	Ameresco	Michigan, Massachusetts	X				
2	Bio-Gas Technologies	Ohio	X				
3	DTE Biomass Energy	Michigan, Arizona		X			
4	EcoEnergy	Illinois	X	X	X		
5	Enpower	California			X		
6	FirmGreen Energy	California, Ohio			X	X	
7	Green Gas Energy	Pennsylvania			X		
8	Greenfield Energy	New York, Illinois	X	X			
9	LFG Technologies	New York	X				
10	Minnesota Methane	California, Minnesota	X				
11	Sexton Power	Illinois	X				
12	SNS Energy	Illinois			X		
13	South-Tex Treaters	Texas			X		
14	Stora Enso	Wisconsin, Finland	X	X	X		
Total	14	10	8	4	7	1	20

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Evaluation Factors

- Sound alternatives most advantageous to County
- Financial & other benefits to County
- Qualifications, capabilities, track record of proposer
- System technology proposed
- Feasibility & timing of implementation

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Clarifications Sought on Each Proposal

- a. “Electric power” clarifications for:
4.0, 5.5, 7.0 cents per kilowatt hour
- b. “Direct use” and “high BTU” clarifications for:
\$5.00, 6.00, 7.00, 8.00, 9.00 per million BTUs

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Some Proposals Offered Us a Role in

- Capital investment / equity
- Operation & maintenance

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Some Proposals Offered Management of Our Well Field



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Factors to Consider for Municipal Ownership

- Capital investment is at risk
- Skilled operators may be difficult to retain
- System reliability may be disappointing
- Payback period may be longer than expected

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Factors to Consider for Privatization

- Contract terms
- Price for energy
 - Case A: Developer takes all risk and nearly all reward
 - Case B: Developer takes all risk and shares more reward
- Well field management
- Long-term contract fulfillment

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