

Disposal Capacity Procurement Review

JW Spear, Sr., P.E.
jw@JSAcivil.com

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Background

- In June of 2007 LCSWMD received proposals to provide 2,000 – 4,000 tons per day of MSW disposal.
- Three responsible proposers responded to the Request for Proposals:
- **Allied Waste Services** proposed receipt of MSW at one of either of their two transfer stations serving municipalities within lake county and subsequent landfilling,
- **Genahol Powers 1, LLC** proposed gasification of the MSW and production of ethanol from the syngas, and
- **Illinois Ethanol Power, LLC** proposed acid hydrolysis of the MSW and subsequent production of ethanol.

Role of J Spear Associates

- J Spear Associates was engaged by LCSWMD to review the proposals and make appropriate recommendations regarding the feasibility of the proposed technology.
- Examined proposals from three perspectives:
 - MSW handling,
 - Effectiveness and reliability of the technology, and
 - Economic stability of the proposed facility.

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Genahol-Powers 1, LLC (GP) -

- **Proposed Technology:**
 - MSW receipt and separation,
 - Gasification of MSW without additional oxygen,
 - Catalytic reforming of ethanol (Fischer-Tropsch),
 - Distillation of ethanol and other economic alcohols for resale.

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Genahol-Powers 1, LLC (GP) -

- **Proposal Attributes:**

- Waste receipt and separation technology conventional,
- Gasification is currently in commercial use and has been in commercial use for an extended period of time,
- Catalytic reformation is currently in commercial use and has been in commercial use for an extended period of time,
- Distillation is currently in commercial use and has been in commercial use for an extended period of time,

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Genahol-Powers 1, LLC (GP) -

- **Proposal Attributes** (Cont.):
 - Limited pilot experience may result in full-scale data development for process optimization,
 - Backup through commercially available waste management facilities funded through an insurance program, for extended periods,
 - 80% - 90% diversion of MSW (not including public or commercial recycling),
 - Lower GHG emissions than corn based ethanol, and
 - Lowest price per ton of MSW received.

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Genahol-Powers 1, LLC (GP) -

- **Proposal Attributes** (Cont.):

- Distillation is currently in commercial use and has been in commercial use for an extended period of time,
- Limited pilot experience may result in full-scale data development for process optimization,
- Backup through commercially available waste management facilities funded through an insurance program, for extended periods,
- 90% diversion of MSW (not including public or commercial recycling),
- Lowest price per ton of MSW received

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Comparison Table

TECHNOLOGY / ATTRIBUTE	ALLIED WASTE SYSTEMS	INDIANA ETHANOL POWER	GENAHOL POWERS LLC
Recognized Waste Management Alternative	YES	NO	NO
Technology in Commercial Operation	YES	YES (Except GPV)	YES
Technology fully developed	YES	NO (GPV and Process Interfaces)	NO (Process Interfaces)
Minimum Waste Receipt	no minimum	1000 TPD	1000 TPD
Proposed Waste Receipts	as generated	1400 TPD	2000 TPD
Percent Diversion	0	90	80
District Host Fee (\$/ton)	1.00	2.50	2.50
Cost Per Ton (\$)	41.00	20.00	17.50

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MSW-to-Ethanol -

offers compelling reasons for consideration,

- The MSW-to-Ethanol proposers offer compelling reasons for consideration,
- Significantly lower cost to the District and participating municipalities,
- Significantly higher diversion potential,
- Significant job creation potential,
- Significant positive environmental impacts,
- Technically, both appear to be able to be implemented as proposed,

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Recommendation

1. Identify Allied Waste Systems as the Landfill Component of the LCSWMD Waste Management System pursuant to the RfP procurement.
2. Identity Genahol Powers, 1 as the Primary Ethanol Facility Component of the LCSWMD Waste Management System pursuant to the RfP procurement.
3. Identify Indiana Ethanol Power as the Secondary Ethanol Facility Component of the LCSWMD Waste Management System.
4. Establish a contractual preference for Rail as the primary transportation system for non-Lake County waste.

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