



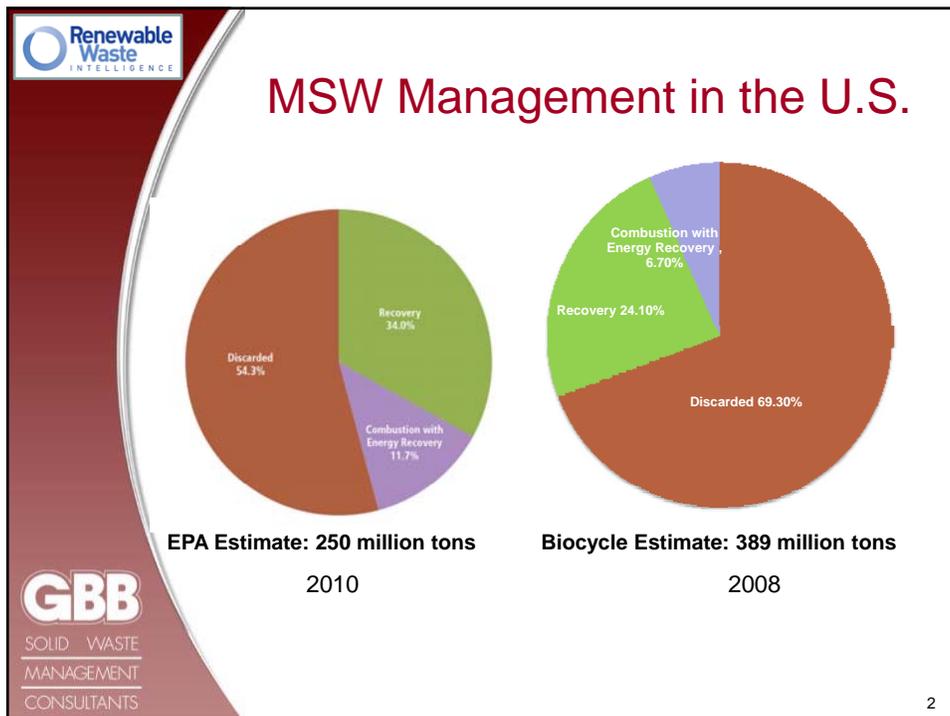
# **Working with Key Stakeholders to Commercialize Advanced Biofuels from Waste**

**Renewable Waste Intelligence  
Webinar**

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**By**  
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 **U.S. WTE/Conversion Technologies Status 2012**

- Some 5-7 WTE expansions and few new projects
- Companies offerings: some 600
- 10 -15 local governments pursuing proven and/or alternative conversion technologies
- 4-6 USDOE and USDA loan/grants supporting bio-fuels projects
- U.S. wants to reduce dependence on foreign oil and reduce greenhouse gases & carbon emissions
- U.S. needs more clean and renewable energy
- Additional Federal legislative incentives 'firmly up in the air'


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 **Opinion: Trends for the Future**

- New technologies need 3-5 years
- *Will there be an added economic benefit from waste as 'renewable energy'?*
- Possible expansion of renewable fuel standards from EPA and added recycling requirements (e.g. ethanol)
- Public sector taking "Low Risk" attitude
- Continued attention to more recycling
- More mixed waste processing for feedstock preparation and side-benefit of more recycling and
  - *Will electric utilities become a player for prepared fuels (RDF)?*
- Expect continued opposition from 'Environmentalists' and 'Zero Waste' proponents calling WTE/CT "incineration"

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## Factors Contributing to Increased Interest in WTE and CTs

- Federal renewable energy policy and funding
- Local governments desire to be greener and to divert more from landfills
- Local jobs
- Increase in disposal fees and transportation costs

...however, there is no disposal crisis

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## Financing Facilities

- Municipal or authority owner vs. private ownership
- Revenue bond financing
  - 100% debt
  - Construction and long-term assurances needed = D/B/O contractor
- Security: service agreement
  - Establishes the rules of engagement
  - Needs to be fair and reasonable
  - Allocates risks appropriately

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### Locations Advancing “Proven” Technologies

- Mass burn WTE expansions
  - Completed:
    - Hillsborough County, FL - Covanta
    - Lee County, FL – Covanta
    - Olmsted County, MN – Olmsted County
  - Under construction: Honolulu, HI – Covanta
- Mass burn under construction
  - Durham York (Ontario CN) – Covanta
  - Palm Beach County, FL (SWAPBC) – B&W
- Advancing new facilities with ‘proven’ technologies:
  - Baltimore, MD – Energy Answers
  - Frederick County, MD (NMWDA) - Wheelabrator
  - City of Los Angeles, CA – Green Conversion Systems
  - Puerto Rico – Energy Answers
  - Vancouver, British Columbia, CA
- Existing facilities being sold/upgraded/
  - Harrisburg, PA
  - New Hanover County, NC

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### Some U.S. Locations Currently Investigating/Advancing Waste Conversion Technologies

- Ada County, ID
- Baton Rouge, LA
- City of Allentown, PA
- City of Cleveland, OH
- City of Dallas, TX
- City of Glendale, CA
- City of Green Bay, WI
- City of Newport News, VA
- City of Plano, TX
- City of San Antonio, TX
- City of Taunton, MA
- Columbia, SC
- County of Maui, HI
- Fulton, MS
- Gallatin County, KY
- Hennepin County, MN
- Lake County, IN
- Los Angeles County, CA
- New York City, NY
- Prince William County, VA
- Salinas Valley, CA
- San Bernardino County, CA
- Santa Barbara County, CA

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 **Renewable Waste INTELLIGENCE**

## What Public Sector Looks For

- Opportunity to become 'greener'
- Low risk
- Proven technologies that meet environmental standards
- Contractors with deep and financeable pockets
- Technology performing as expected
- Compatibility with high level of recycling
- Predictable economics
  - Avoided/marginal cost of disposal
- Community acceptance  
(work with community; don't surprise them!)

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## What Companies Look For

- Limited and high disposal Costs, e.g. approaching \$100 per ton
- Enlightened elected officials
- Public sector development resources
- Political leadership
- Waste supply and control
- Energy/fuel and materials market(s)
- Capital from loans/grants to reduce need for private debt and equity
- Site
  - Permittable
  - Good logistics
  - Public acceptance
- Landfill for ash and by-pass



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PRINCE WILLIAM COUNTY, VIRGINIA

- Creating the Prince William Renewable Energy Park (PWREP) at the landfill (currently receiving 875 TPD MSW)
- Seeks to host a waste conversion technology proven in the 50 to 200 TPD range from contractor who will design, build, finance, own and operate
  - Eligible technologies include pyrolysis, gasification, anaerobic digestion, plasma torch or other conversion method producing a fuel or energy product, such as electricity, syngas, steam, useable heat and/or other industrial outputs
- Siting at County landfill or composting sites
- Issued RFP in June 2012; proposals due October 17, 2012
- Check status on the County's e-procurement web page under solicitations: <https://www2.pwcgov.org/e-proc/default.asp>



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## Benefits of Long-Term Partnerships

- Increased recycling and energy/fuel productions
- Contribution to need for renewable energy – a more energy beneficial and carbon neutral integrated waste management system
- Nearby infrastructure with less dependence on landfilling
- Lowering long-term liabilities

*...for more jobs, better environment, and energy independence!*



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*Thank you!!*

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