The Opportunities and Challenges of Food Waste to Energy in the US

Food Waste-To-Low Carbon Energy Conference
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Gershman, Brickner & Bratton, Inc.
Quality – Value – Ethics - Results

Established in 1980

Solid Waste Management and Technology Consultants

Helping Clients Turn Problems into Opportunities
THE OPPORTUNITIES
Lots of Opportunity

EPA: 254 million tons (2013)

- Landfill: 53%
- Recovery: 34%
- WTE: 13%


- Landfill: 69%
- Recovery: 24%
- WTE: 7%
Lots of Food Waste

Composition of MSW Discards in the United States, EPA, 2012

- Food Waste: 21%
- Paper & Paperboard: 15%
- Plastics: 18%
- Wood: 8%
- Yard Trimmings: 9%
- Metals: 9%
- Glass: 5%
- Rubber, Leather & Textiles: 11%
- Other: 4%
- Other: 4%
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Food Waste</td>
<td>8.4%</td>
<td>21.1%</td>
<td>+12.7%</td>
</tr>
<tr>
<td>Wood</td>
<td>7.4%</td>
<td>8.2%</td>
<td>+0.8%</td>
</tr>
<tr>
<td>Yard Trimmings</td>
<td>18.4%</td>
<td>8.7%</td>
<td>-9.7%</td>
</tr>
<tr>
<td>Total Organics</td>
<td>34.2%</td>
<td>38.0%</td>
<td>+3.8%</td>
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Composition of Organics in MSW Discards in the United States, 1992 and 2012, USEPA
ANNUAL GLOBAL FOOD WASTE

20% of oilseeds

30% of cereals

35% of fish

20% of meat and dairy

40-50% of root crops, fruits and vegetables

1/3 of the world’s food is wasted each year, equivalent to 1.3 billion tons.

Source: UN Food and Agriculture Organization (FAO)

#GlobalAg

thechicagocouncil.org/globalag
50% US 2030 Food Loss and Waste Reduction Goal
Growth of Food Waste Collection Programs in the US

Number of Commercial Food Waste Collection Programs


Number of Municipalities with SSO Food Waste Collection Programs

Food Waste Disposal Bans

Red – State
Orange - City

Alaska
Hawaii

10
THE CHALLENGES
Low MSW Tipping Fees

Low Power Pricing - $/kWh

ISO New England - $0.0545
ERCOT - $0.0273
Southwest Power Pool - $0.034
CA ISO - $0.04
PJM - $0.043

1 - https://pricecontourmap.spp.org/pricecontourmap/
3 - http://www.ercot.com/
5 - http://www.iso-ne.com/isoexpress/web/reports/pricing
“Food waste belongs in a landfill!”
## US Investment in LFGTE

<table>
<thead>
<tr>
<th>645</th>
<th>• Operating LFGTE projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,066</td>
<td>• MW installed capacity</td>
</tr>
<tr>
<td>1.5</td>
<td>• $ million per installed MW</td>
</tr>
<tr>
<td>3.1</td>
<td>• $ billion currently invested</td>
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<tr>
<td>4.2</td>
<td>• $ billion expected investment</td>
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## Opportunities

- Lot of Organics = Lots of Attention
- Some State and Local Regulatory Support
- Growth in Recovery Programs
- Sound Technology

## Challenges

- Low Disposal Fees
- Low Power Prices
- Limited National Regulatory Support
- Some Landfill Owner Opposition
Thank You!

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