



INEZ POWER LLC

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The Company

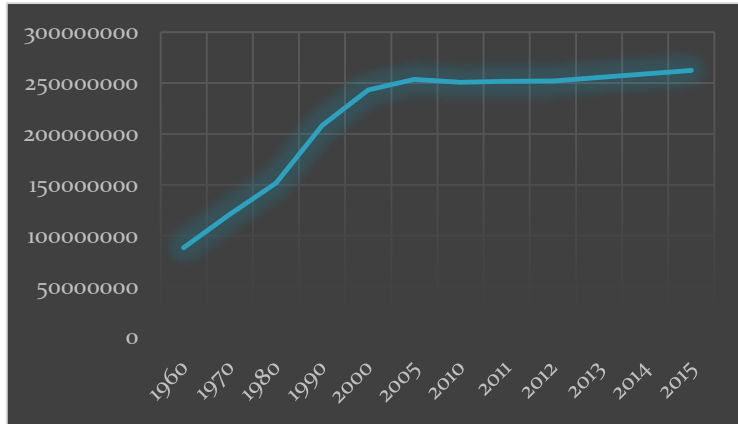


INEZ Power LLC (“IP”) is an innovative energy-from-waste system utilizing a gasification platform. This technology was developed at a facility in Inez, KY, to address significant challenges faced by communities across the US.

- ▶ Since inception, the company envisioned the potential of developing a novel technology possessing the requisite characteristics necessary to become a world leader in the competitive EFW market aimed at accomplishing three primary objectives:
 - (1) compelling economic profile with three revenue sources (power / steam generation, recycling, and tipping fees);
 - (2) 100% beneficial conversion of municipal solid waste (“MSW”) tailored to achieve Zero Landfill targets; and,
 - (3) compliance with strict environmental standards.

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Waste Education

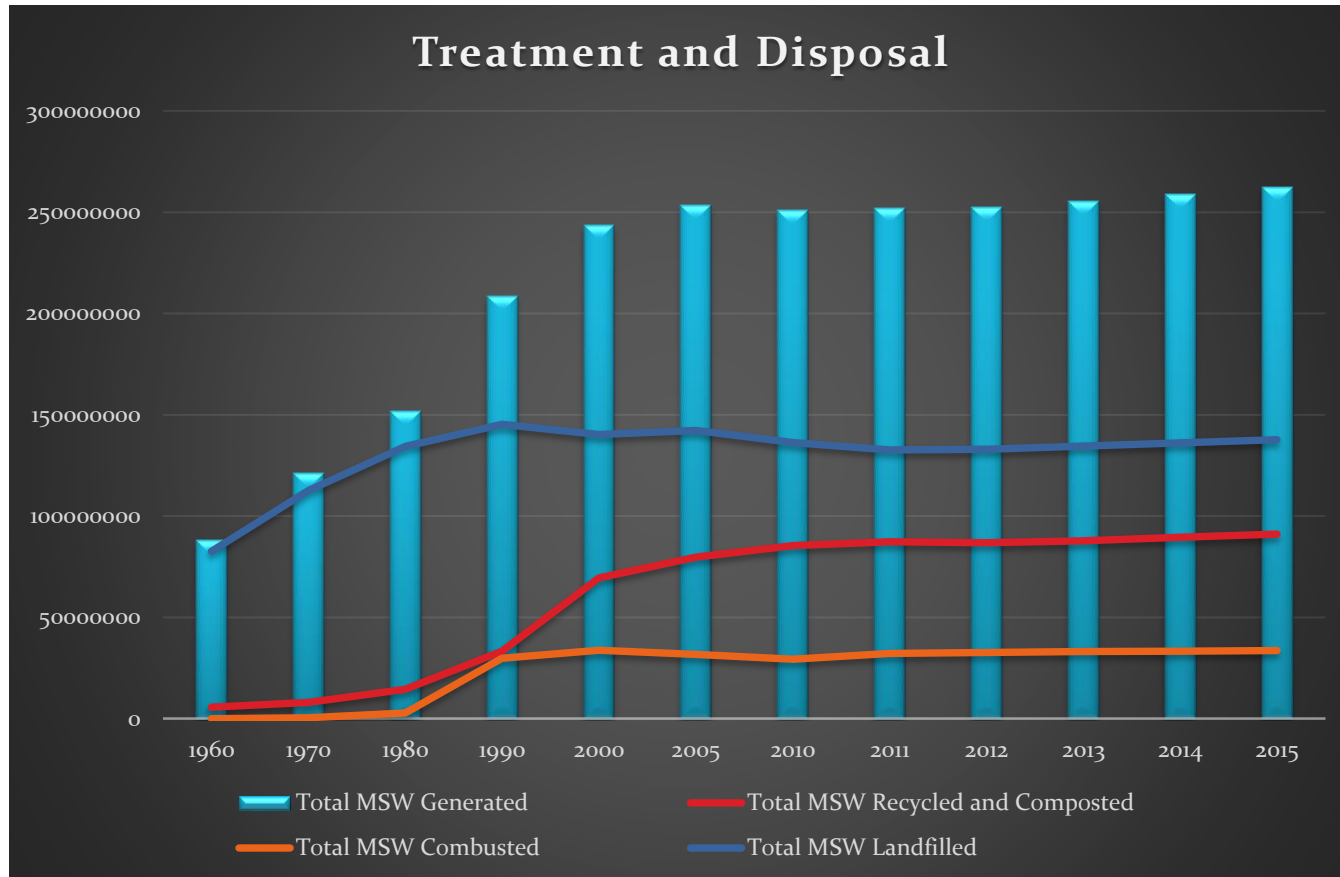


In 2018, the average person generates 4.4lbs of waste per day

- ▶ In 2015, in the United States, approximately 262 million tons of MSW were generated. Of the MSW generated, approximately 68 million tons of MSW were recycled and 23 million tons of MSW were composted. Together, more than 91 million tons of MSW were recycled and composted, equivalent to a 34.7 percent recycling and composting rate. In addition, more than 33 million tons of MSW (12.8 percent) were combusted with energy recovery. Finally, more than 137 million tons of MSW (52.5 percent) were landfilled.

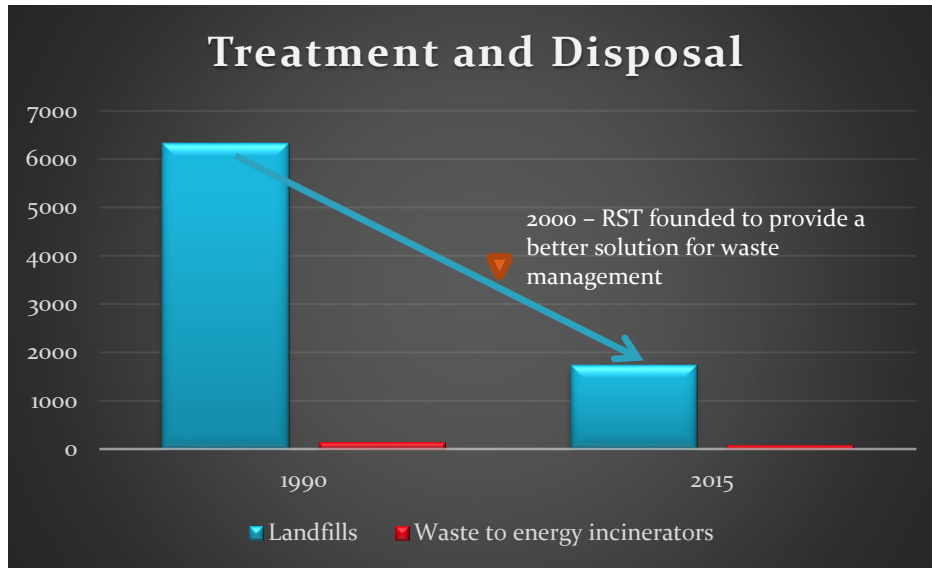
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Generation, treatment and disposal trends



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Treatment and disposal options

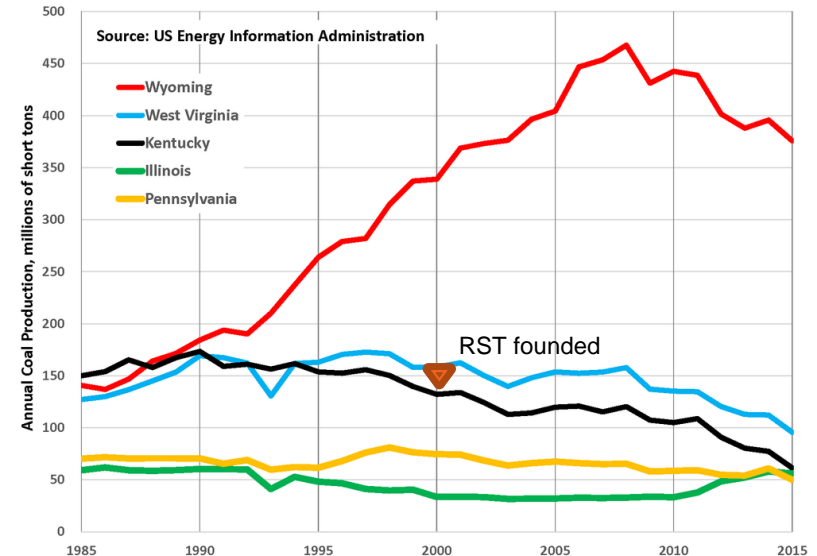
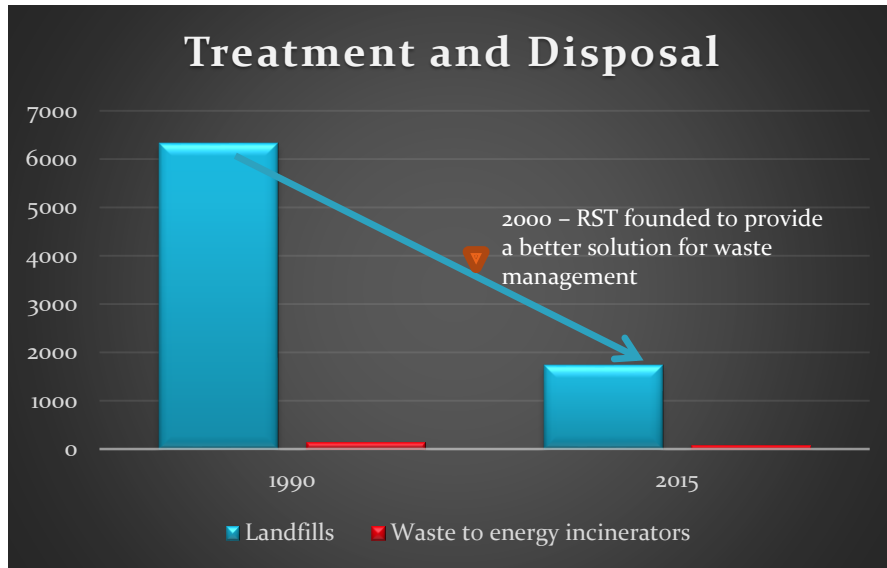


The rapid changing market of waste options

- ▶ In 1990 there were 6,326 landfills in the USA and 144 waste to energy incinerators. In 2015, the number of landfills had fallen to 1,738 and the number of waste to energy incinerators had fallen to 75. While landfills have become larger in size and more regional in nature, the statistic is alarming.
- ▶ Waste recycling has bridged the gap related to disposal options, with a large percentage of the recycled products being exported to China. In early 2018, China imposed strict recycling import guidelines, and US recycled exports have plummeted as a result. Many communities have halted recycling programs as the recycling market adjusts to a new normal and other outlets are identified.

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Why Kentucky – Timing of Technology



- ▶ The Founders of RST have a long and successful history operating coal mines in the region. The founders saw two trends that encouraged them to develop a new technology that had its' genesis in Kentucky. In 2000, coal production from the region was on a steady decline with no end in sight. In 2000, the options for long term disposal of waste was on a rapid decline with no end in sight.
- ▶ The founders saw an opportunity to create a Kentucky Technology that would provide a holistic approach to waste management while creating a new economic engine for the region through the manufacturing and sale of projects.

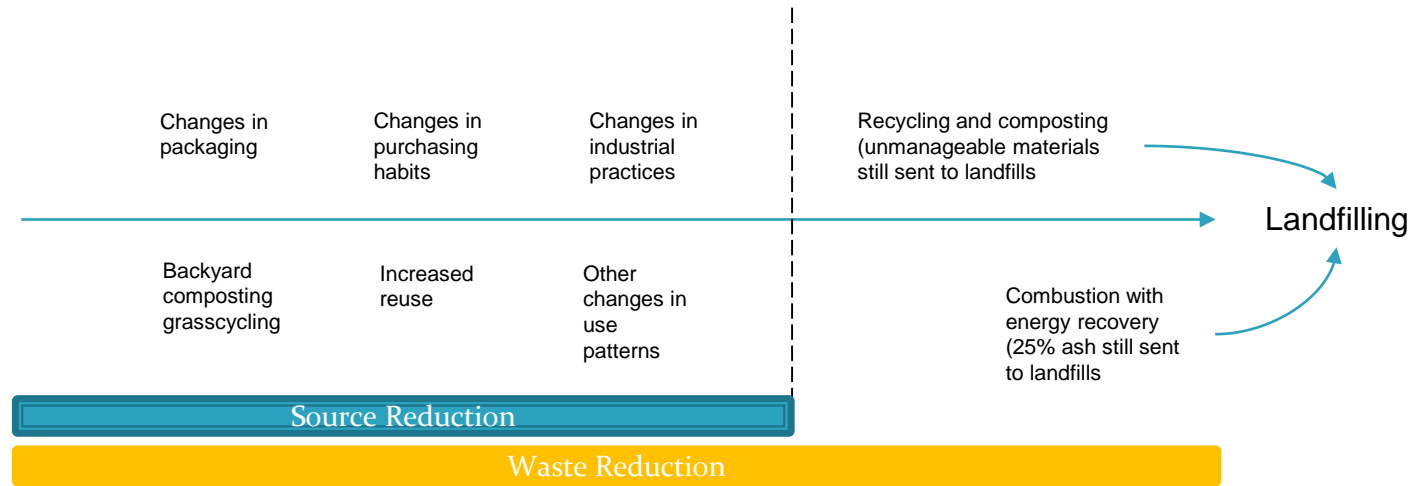
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Technology History

2000	Recycling Solutions Technology (RST) founded; Greenfield site located at Inez, KY
'01-'04	Engineering and other strategic relationships established
2005	USPTO Patent Granted
2006	Construction completed on commercial scale power-plant. Initiation of performance testing and design improvements.
2008	Successful air quality and ash results.
'09-'10	2009-'10 Solid waste and Air Quality permits.
2011	RST represents the first and only fully permitted successful gasification waste-to-energy plant in America (located in Inez, KY)
2012-16	Inez Power LLC is formed and becomes operating arm of RST. Third major improvement made to technology. Additional patents granted.
2017-19	Engineering completed for commercial upgrade of facility at Inez, KY. Construction begins in 2018. Commercial operations will commence in Q4 2019.

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Holistic Waste Management



- ▶ Inez Power encourages all the source reduction activities above and is superior to the waste reduction options above. **All** material at our facilities is either converted to energy, or recyclable materials used domestically with no impact by any foreign trade restrictions or tariffs.

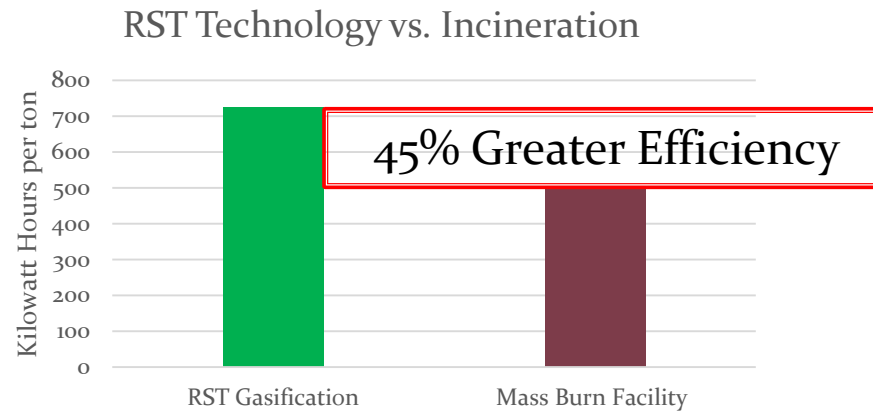
IP and Gasification 101

- ▶ IP's advanced gasification technology presents significant benefits over the diminishing returns of traditional waste-to-energy approaches
- ▶ Typical incineration plants have an energy ratio of 500kwh/ton of MSW
- ▶ IP Patented Process has an energy ratio greater than a 45% improvement over a standard incineration process
 - The process extracts 100% of the heating value out of the feedstock
 - The syngas requires a lesser amount of excess air for oxidation, improving the overall thermal system efficiency
- ▶ Incineration literally means to render to ash. Gasification converts MSW to a usable synthesis gas, or syngas. Instead of making just heat and electricity, as is done in a waste-to-energy plant using incineration, the syngas produced by gasification can be turned into higher valuable commercial products, or energy in a more efficient manner than incineration.

Inez Power employs an RST patented technology and integrated energy-from-waste system utilizing a gasification process that yields more energy economically than alternative energy-from-waste processes

Energy From Waste Gasification

- ❖ Gasification converts MSW to a usable synthesis gas, “syngas”
- ❖ The Inez Power facility’s gasification process generates more energy with less emissions than current incineration solutions
- ❖ A typical mass burn incineration plant generates an average energy yield of 500KWH/ton of material. The Inez Power facility can utilize the same feedstock and yield 725KWH/ton
- ❖ The process at the Inez Power facility extracts 100% of the heating value out of the feedstock
- ❖ With a low temperature gasification process, the Inez Power facility is able to extract all non-ferrous metals and create zero waste throughout the process. 100% of the process’ by-products have potential beneficial reuse



**See Table 1 for Descriptions
By Facility Number**

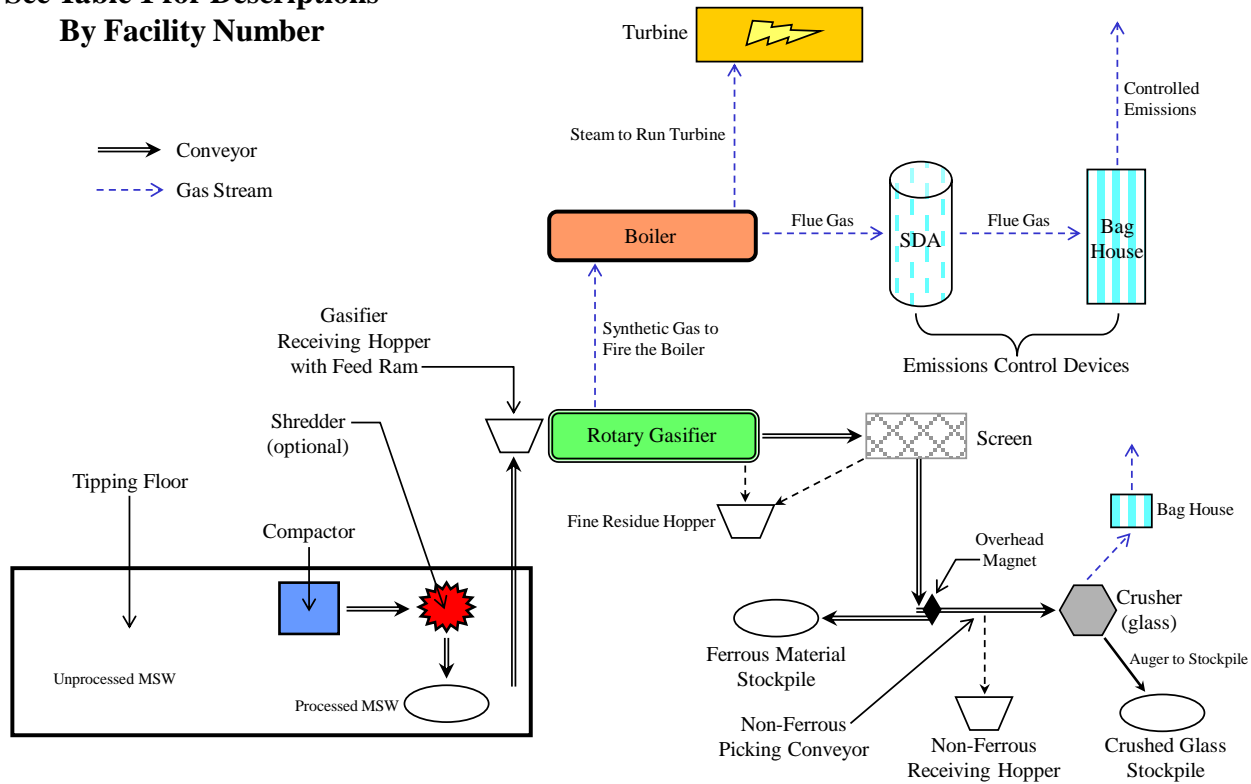


Figure 1
Process Flow Diagram
Reliance Renewable Energy, LLC

Date: June 23, 2011
 Project Number: 0018-10
 Scale: No Scale
 Project Manager: PMG



IP technology pathway



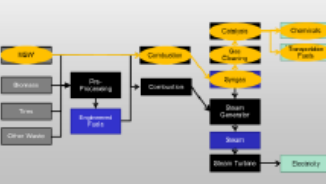
Competitive Advantage

Fuel Sourcing	Fuel Processing	Primary Conversion	Secondary Conversion	“Refined” Products
MSW Biomass Tires CDW Other	Refuse derived fuel (RDF) Solid recovered fuel (SRF) Tire Derived Fuel (TDF) Mech./Biological Treatment (MBT) Others	Combustion (Steam/Electric) Gasification and related technologies	Steam/Electric Gas cleaning, steam reformation, etc.	Chemicals (ammonia, methanol, etc.) Transportation Fuels

IP Business Model

Generally speaking, moving from left to right, emissions decline, costs and technology risks increase, and product values improve

Waste-to-Energy Comparison

Technology	Pro	Con
<p>Mass Burn to Power</p> 	<ul style="list-style-type: none"> • Proven technology • Long-term contracts for output 	<ul style="list-style-type: none"> • Negative public perception of incineration • Large residual solid waste stream • High capital cost
<p>INEZ</p> <p>Gasification to Power</p> 	<ul style="list-style-type: none"> • No feedstock preprocessing + modular construction = low CapEx • Long-term contracts for output • Zero residual waste • Ability to platform within 2 yrs 	<ul style="list-style-type: none"> • Limited operating history • First-of-a-kind integration issues
<p>Gasification to Fuels & Chemicals</p> 	<ul style="list-style-type: none"> • Highest value end products 	<ul style="list-style-type: none"> • Substantial integration & performance risks • High-cost preprocessing • High-cost of plasma or other gasification and gas cleaning process • High-cost “refinery” backend • Price risks on output difficult to hedge

Design benefits related to construction

- ▶ The IP process is an “intelligent design” that was developed from empirical data on a FULL SCALE demonstration plant.
- ▶ All the major plant components are shop assembled and field connected.
 - This approach provides for a significantly higher level of quality control on component level fabrication and, shortens the construction schedule.
 - A shorter construction schedule means money saved, reduced project risk and, faster project approval to operations timeline.

Types of Waste

- ▶ MSW
 - ▶ Industrial
 - ▶ Special
 - ▶ Commercial
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Unprecedented Environmental Profile

Intelligent engineering & design = a significant technology advantage

- ▶ In typical incineration facilities, an average of 25% of the incoming waste stream is sent back to a landfill for disposal.
- ▶ IP's eco-engineered gasification technology addresses this problem in an unprecedented fashion, wherein 100% of the by-products have a beneficial reuse.
- ▶ Only IP provides a 100% recycling advantage.
 - Significant clean energy production from the gasified feedstock.
 - All ferrous and non-ferrous metals are recovered, down to the individual paperclips and staples.
 - All ash frit has passed extensive TLCP testing for beneficial reuse as aggregate.
 - All glass is crushed as reuse in glass-fault facilities.



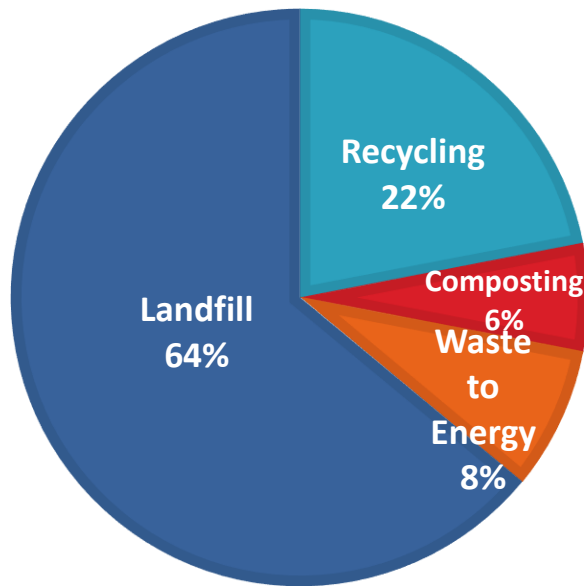
ZEROWASTE

Metals recovery



WASTE-TO-ENERGY FUTURE TRENDS

Current Disposal Mix

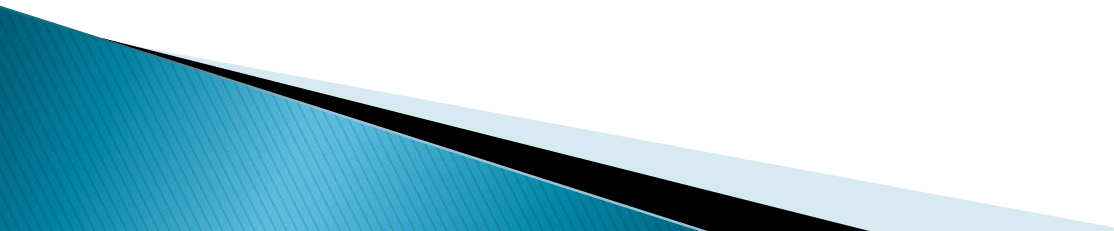


Source: Columbia University; BioCycle State of Garbage 2013 results; 389 million tons annually

Trends That May Result in Additional WTE Capacity

- Drivers:
 - Sustainability
 - Greenhouse Gas Reductions
 - Zero Waste to Landfills
 - More diversion with organics treatment and waste-to-fuels
- 5% more WTE using RST Technology would mean:
 - 25 more 1,500 TPD plants
 - \$5 billion more capex based on estimated Capital cost of \$133,000/installed ton

- ▶ Inez Power LLC in cooperation with RST
 - Changing the way we WASTE, one pound at a time.

 - ▶ John Burke – RST/Inez Power LLC Principal
 - ▶ DB Kazee – Principal and Counsel
 - ▶ Lee Bazzle – Project Director
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Questions?