ORGANIC WASTE RECYCLING
- Education & Training
- Collection & Transportation
  - Renewable Energy & Compost
  - End Product Marketing & Sales
Who we are

- 25+ years experience in the supermarket & food service industry
- 25+ years transportation experience: waste, biosolids, compost, beneficial use
- 25+ “uninterrupted” years of multi-feedstock, indoor composting experience
- 25+ years compost marketing & sales experience
- 15+ years of high-solids anaerobic digestion experience
- 25+ years of design build experience
- 25+ years of operations & maintenance experience
- 7+ years of food waste collection experience

"Experience is simply the name we give our mistakes."
What we do

*Organic waste recycling is all we do*

- Vertically integrated
  - From collection to end products sales
- Multi-feedstock processors
- Dual Technology
  - High-solids digestion
  - In vessel composting
- Completely indoor facility
- *End product focused*
Where we (will) do it

Gloucester City, NJ
Brownfield Development Area

- Named a BDA by NJDEP in 2007
- Site is 121 acres of underutilized industrial property
- 16 industrial sites
- Catalyst Site – Gloucester City
  Organic Recycling, LLC
Gloucester City, Camden County, NJ
Gloucester City Organic Recycling, LLC

850 Water Street
Gloucester City, NJ 08030

- Former BP / Arco Terminal Site
- Brownfield Site vacant for 30 years
- Three party settlement agreement with City, BP and NJDEP
- City to officially turn over the site for construction around June 15, 2016
  - Remediation at no cost to the City
How we do it

- Combination of debt, equity and tax credits
- 82% of Revenues under agreement
  - 61% long term
  - 21% medium term
- Food waste secure through current collections
- Compost sold under long term agreement
- EPC agreement / O&M partnership
Technology Platform

- Multi-feedstock
  - Wide Variety of Organic Waste

- Dual Technology
  - High-Solids Anaerobic Digestion
  - In Vessel Composting

- Odor Management
  - Completely Indoors
  - Negative Pressure
  - Biofilters & Scrubbers
  - O&M
  - Housekeeping
High-Solids Digestion
High-Solids Digestion

- Materials are mixed and filled with a wheel loader into concrete digesters
- Organic waste is processed generating biogas
- Biogas sent to a combined heat and power unit
- Air, liquid, and gas tight
In Vessel Composting

Indoor composting operations utilizes Aerated Static Pile (ASP) technology

- Industrial-scale composting facilities specifically designed for high-solids AD
- Modified Aerated Static Pile (ASP) processes and stabilizes organic materials into high-quality compost
- Refined over forty years of operations
- All operation are done indoors under controlled conditions
In Vessel Composting

- Materials loaded into aerated composting bays with sliding doors
- No mixing or turning
- Reaches temperatures over 140° F, eliminating odor causing compounds
- Handles any residual liquids from digestion
Odor Management & Control

Odor management is a fundamental business practice required for successful organics recycling in New Jersey. *All operations are conducted indoors under negative pressure.*

Integrated odor management into every aspect of business planning and the business model including:

- Business Philosophy
- Generator Training Programs
- Equipment & Supplies Selection
- Collection Methodology
- Collection Equipment
- Truck Routing
- Technology Selection
- Facility Design
- Operations Plan
- Housekeeping Procedures
- End Product Marketing & Sales
Development Issues
Eliminate Risk to Get Financed

- Site Issues
- Technology (14.3%)
- Construction
- Management Team
- O & M
- Revenue
  - Energy
  - Feedstock
  - Compost
- NIMBY
Site Risk
Technology Risk

Guaranteed:
- Throughput

- Energy Production
  - Electrical
  - Thermal

- Parasitic use
  - Electrical
  - Thermal

- End Product Quality

- Monetary damages backing up guarantee
Construction Risk

- Built on time
- Built on budget
- Operations meets performance criteria
- Under warranty
- Monetary damages backing up risk
Management Team Risk

Need to have the knowledge and experience that touches all aspects of the business model

- From feedstock collection to compost marketing and sales
O & M Risk

Need to have the knowledge and experience that touches all aspects of the business model

- From feedstock collection to compost quality production
Revenue Risk

Agreements that mirror term loads or reach risk adjusted returns over the life of the investment

- Feedstock Agreements
- Power Purchase Agreement
- Compost Agreements
- O&M Agreement
**Residuals Risk**

Can you sell your compost?

**NIMBY Risk**

Will it smell?
What We Need....

To build out food waste to low carbon energy in NJ

A departure from the current “waste” model and a move towards a “end products” manufacturing model

(listed in order of importance)
1. Compost Market Development Strategy
2. REC’s or FIT
3. Food Waste Ban
Compost Market Development

- Require compost use in all government projects
- Denver Water Example
  - Creates compost market
  - Reduces water use
  - Reduces runoff
  - Lessens impact on WWTP

Before a newly constructed premise may be landscaped, property owners must amend their soil with compost so the soil more efficiently retains water. This rule applies to all new residential, commercial, government and industrial properties within Denver Water’s service area.

- Importance of Soil Amendment
- To Pass a Soil Amendment Inspection
- Schedule a Soil Amendment Inspection
- Winter Extension
- Phased Projects

For more information:

- Soil amendment: 303-893-2444 or customercare@denverwater.org
- Tap issues: 303-628-6100
- Meter set/inspection: 303-628-6145
**REC’s or FIT**

States that have created a vehicle towards increased energy revenues for digester projects are attracting investment.

- California
- Hawaii
- Maine
- Oregon
- Vermont
- Washington

FIT policies are successful around the world, notably in Europe. Currently there are six U.S. states that mandate FITs or similar programs. A few other states also have utilities with voluntary FITs. There is growing interest in FIT programs in the United States, especially as evidence mounts about their effectiveness as framework for promoting renewable energy development and job creation.
Food Waste Ban

NJ needs a food waste ban addressing the needs of all stakeholders, but a ban alone may not create food waste to low carbon investments and jobs.

A compost market strategy, REC’s or FIT, and a food waste ban will