



CityWide Energy Action, LLC

Renewable Energy Providers

Creating renewable and sustainable solutions for the environment

Fact:

40-50% OF ALL FOOD WASTE NEVER GETS EATEN.

THAT FOOD CAN BE EITHER BE:

- *DAMAGED IN TRANSIT,*
- *CONSIDERED TRIM WASTE AS PART OF THE PRODUCTION PROCESS*
- *DOESN'T GET SOLD TO A CONSUMER, OR*
- *ISN'T EATEN BY THE CONSUMER AT HOME*

UNIVERSITY OF ARIZONA STUDY, 2009.

- IF THE 232 MILLION TONS OF FOOD WASTE GENERATED IN THE US EACH YEAR WAS PROCESSED BY ANAEROBIC DIGESTION AND USED TO GENERATE ELECTRICITY, IT WOULD OFFSET 40 MILLION TONS PER YEAR OF CARBON DIOXIDE GENERATED FROM FOSSIL FUEL USE
- THE US SPENDS \$1B ANNUALLY TO DISPOSE OF FOOD WASTE
- LANDFILLS ARE THE SOURCE OF 20% OF ALL US METHANE EMISSIONS

(US EPA, 2010)

NYS mandates source separation of organics

CGS Sec. 22a-226e as amended by Public Act 13-285 Section 4

- **On and after January 1, 2014**, each commercial food wholesaler or distributor, industrial food manufacturer or processor, supermarket, resort or conference center that is located not more than twenty miles from an authorized source-separated organic material composting facility and that **generates an average projected volume of not less than one hundred four tons per year of source-separated organic materials shall:**
 - (A) Separate such source-separated organic materials from other solid waste; and
 - (B) ensure that such source-separated organic materials are recycled at any authorized source-separated organic material composting facility that has available capacity and that will accept such source-separated organic material.
- **On and after January 1, 2020**, each commercial food wholesaler or distributor, industrial food manufacturer or processor, supermarket, resort or conference center that is located not more than twenty miles from an authorized source-separated organic material composting facility and that **generates an average projected volume of not less than fifty-two tons per year of source-separated organic materials shall:**
 - (A) Separate such source-separated organic materials from other solid waste; and
 - (B) ensure that such source-separated organic materials are recycled at any authorized source-separated organic material composting facility that has available capacity and that will accept such source-separated organic material.

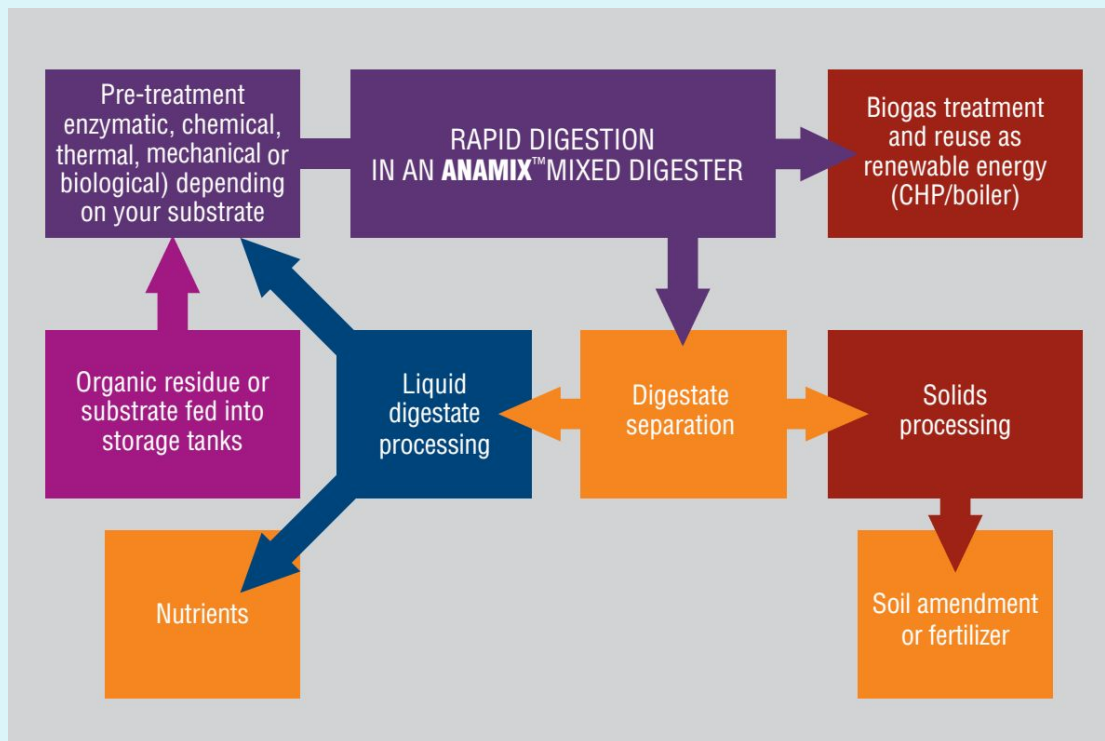
The Solution and Technology

- CEA Energy LLC. has partnered with a US Based, global technology provider to provide a complete industrial wastewater treatment and organic waste-to-energy solution.
- Hundreds of installations worldwide with the widest technology portfolios in the industrial marketplace.
- The right solutions, with the toughest industrial wastewater and organic processing systems available.

The Process

Rapid Transformation of Organic Residues

- Powerful, liquid state, anaerobic digestion process
- Converts organic residue into biogas



The Process

- Pre-treatment
- Multi-step biological fermentation
- Digestate separation
- Solids Processing
- Biogas treatment and upgrade

Industries Served

BREWERY

- SOFT DRINKS & JUICE
- MEAT/POULTRY/FISH/SEAFOOD
- DAIRY
- CONFECTIONARY
- POTATO & FOOD PRODUCTS
- SNACK FOODS
- PREPARED FOODS
- AND MANY MORE!



The Process-continued

- All substrate handling will be done indoors.
- Trucks enter the reception hall, and gates are lowered prior to truck tipping.
- An odor control system will be utilized to ensure no odors escape the building.
- Substrate is grinded in the reception hall.
- Substrate does not come in contact with ambient air at any point after tipping.



Digestion



Anaerobic Digesters and Reception Tanks

End Processing

- Biogas is collected throughout all stages of the process and is upgraded to CNG
- Solids are separated from the liquid slurry inside the processing building
- Nutrient-rich solids are used as fertilizers
- Wastewater is treated and discharged.



Liquids/solids separation facility

Proposed Facility

Capacity:
200 tons/day

Property Size:
6 acres

Biogas Production:
1,000,000 cubic feet/day

Substrates:
Source-separated
organics, agri-food
residues, commercial
and industrial residues



CEA EPCAL-Riverhead, NY



Thank you for your
time and support from:



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Contacts:

Mark Lembo
631.806.2141

Rich Galli, P.E.
631.271.9292

Michael Gianchetta, LEED AP
516.250.1039