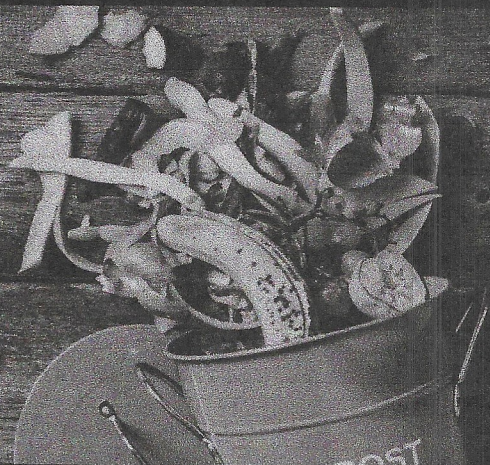
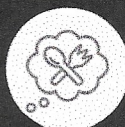
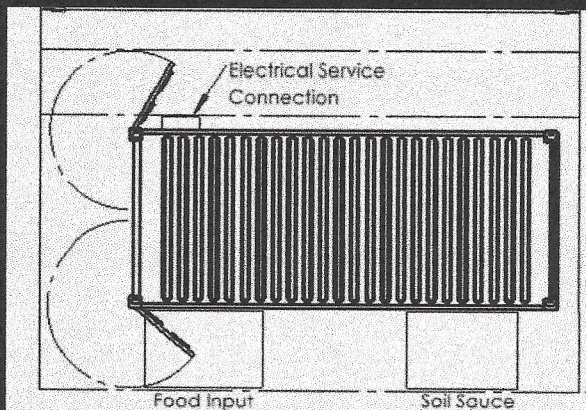


FOOD WASTE IS A PROBLEM.



ZEUS IS THE SOLUTION.

Zero Emission Upcycling System, Ecotone's Patented Food Waste Processor



ONSITE FOOD WASTE DISPOSAL

- Accessibility for staff and community
- 24/7x365 automated disposal of food waste
- Eliminate pest and odor issues



EMISSIONS REDUCTION

- 200,000 lbs/year of CO2 reduction
- Eliminate 1200-2000 waste hauling miles/year



COST SAVINGS

- On average we save customers \$100/month (\$1-1.5K/annually)
- Avoid State and Federal fines on waste to landfill legislation

SCAN TO SEE ZEUS IN ACTION!



ECOTONE
RENEWABLES

CONTACT US TO LEARN MORE



203.456.0533



ecotonebrand@gmail.com



www.ecotonerenewables.com



Jacob Beakas
Ecotone Renewables
PO Box 82534
Pittsburgh, PA 15218

ZEUS Customer Diversion Report

Dear Rich,

Thank you for working with us to sustainably eliminate food waste and support local soil health! Our partnership using the ZEUS digester is making your facility a zero food waste business. Below is this past month's diversion data alongside the appendix with historical data. Please reach out with any questions, and together we will continue to turn the food waste of today into the nutrients of tomorrow.

Warm regards,

A handwritten signature in black ink that reads 'Kyle Wyche'.

Kyle Wyche
Chief Operating Officer

July Report

Food waste diverted (pounds)	2,000
CO2e diverted (tons)	12

Table 1: Previous Month Diversion Data

Carbon diversion terms and calculations:

The per unit annual GHG reduction of the ZEUS digester technology is 138 tons CO₂e/unit/year. CO₂e means CO₂ equivalent since methane is a different and 86X more powerful carbon-based gas compared to carbon dioxide. This is calculated by assuming the system processes 12 tons of food waste annually, eliminates transportation steps, and displaces synthetic fertilizer use with the organic fertilizer byproduct.

Fossil fuels, especially diesel, are used in the previous baseline technology of transporting waste to centralized landfill facilities. Additionally, coal and natural gas are commonly used to transform Nitrogen through the Haber Bosch Process for synthetic fertilizer production.

Reduced transportation of food waste accounts for 1.3 tons CO₂e/system/year. In more detail, the energy from waste hauling is calculated by assuming a 300 mile waste transportation from production site to a centralized facility, and then to landfill. Assuming a [large garbage transportation truck can carry 10 tons](#) of organic waste and gets [3 miles per gallon using diesel](#), this translates to 10 gallons of diesel burned in the transportation of 1 ton of organic waste. Relating to the greenhouse gas impact, 10 gallons of diesel burned in the transportation of 1 ton of organic waste results in 0.1125 tons CO₂e/ton food waste.

Reduced rotting food waste in landfill accounts for 127 tons CO₂e/system/year. The current baseline technology of landfilling contributes to [8% of global greenhouse gas](#) production. When focused on the United States which annually produces [6.6 billion tons of CO₂](#), this comes to 528 million tons CO₂ produced from food waste in the U.S. alone. On a per ton basis with the U.S. producing 100 billion pounds (50 million tons) of food waste, that calculates to 10.56 tons CO₂(equivalent)/ton food waste.

Reduced use of synthetic fertilizers replaced with the Soil Sauce byproduct accounts for 9.21 tons CO₂e/system/year. This equates to diverting [25,000 BTUs per pound of Nitrogen](#), [5,600 BTUs per pound of phosphate](#) and [4,700 BTUs per pound of potash](#). Converting BTU's to CO₂e assuming natural gas used equals [0.0053 tons CO₂e per 100,000 BTU](#). This converts to 0.00132 tons CO₂e/ pound of N, 0.000297 tons CO₂e/pound of phosphate, and 0.00025 tons CO₂e/pound of potash. Farmers annually use 200 pounds of N (0.264 tons CO₂e/acre), 70 pounds of phosphate (0.021 tons CO₂e/acre), and 60 pounds of potash (0.015 tons CO₂e/acre) per acre which is replaced by 140 gallons of Soil Sauce per acre annually. Each ZEUS producing 4,320 gallons/year can therefore service 30.8 acres per year and divert 8.1 tons CO₂e (N) + 0.65 tons CO₂e (P) + 0.46 tons CO₂e (K) = 2.73 tons CO₂e.

ZEUS Digester Installation Spec Sheet



System Overview

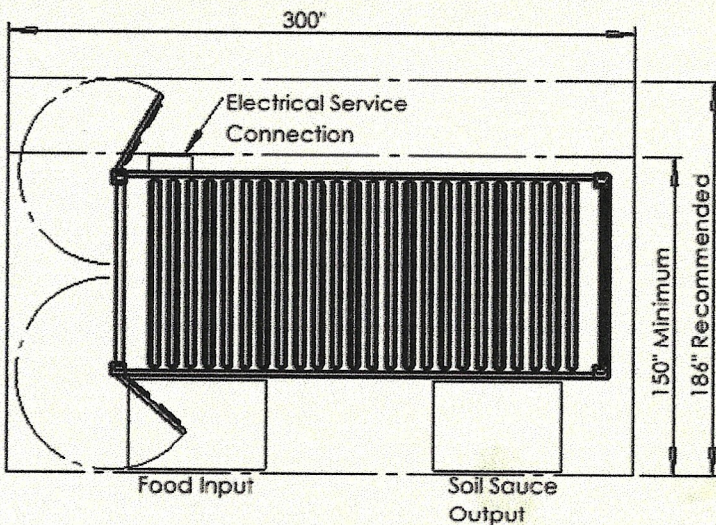


The ZEUS system is an autonomous composting system that manages up to 500 pounds a week of food waste, generates a powerful fertilizer called Soil Sauce, and produces usable biogas which can be burned for clean, green power.

The system is built inside a standard 20 foot shipping container, and is built to be placed in the elements. The ZEUS system is capable of collecting rainwater to meet its water input needs, meaning that it only requires an electrical supply to operate.

The ZEUS system provides a great paintable surface for murals and other branding, and it is recommended to be placed in a location where it can be viewed by the public.

System Placement



The ZEUS system requires a reasonably flat location, less than 6" elevation difference between corners for placement; it cannot be installed on an incline. It requires a total footprint area of 25 feet in width, and 12.5' minimum depth, 15.5' recommended depth.

The front of the ZEUS system is where the Food input and Soil Sauce output are located. It is recommended that this side of the system be visible to the public to maximize advertising opportunities.

The customer must provide an electrical service connection located near the back of the system. Both the food input and Soil Sauce output must be accessible to the users who will input waste. The ZEUS should be installed without any covering.

Specifications

	Minimum	Recommended
Supply Voltage	220 Volt 3-Phase*	220 Volt 3-Phase*
Supply Current Rating	50 Amps	100 Amps
Physical Footprint	25' x 12.5'	25' x 15.5'
Total Incline	less than 6"	less than 3"

*Voltage supply must have a separate Neutral and Ground connection

ZEUS Digester System Preliminary Proposal

Rich,

Ecotone Renewables designs, manufactures and operates ZEUS anaerobic digester systems. The system is a modular, on-site organic waste processing solution that efficiently processes food waste while producing organic fertilizer and renewable energy. Ecotone Renewables preliminarily proposes an on-site ZEUS digester for the town of Canterbury, NH as outlined in the following proposal.

System Features

Benefits of the ZEUS digester system include:

- Processes up to 500 pounds of food waste per week using small-scale anaerobic digestion
- Can break down vegetables, fruits, animal products, oil, coffee and compostables
- Diverts food waste away from the landfill, avoiding 120 tons of CO₂e emissions per year
- Produces ~50 gallons of liquid digestate per week which becomes Soil Sauce, Ecotone's organic fertilizer brand
- Operates with minimal odors and pest issues due to the enclosed process area
- Has a self sufficient design that minimizes or eliminates permitting requirements
- Offers opportunities for marketing, PR and art through the use of the large side walls that can also educate about sustainability

Scope of Work

Our proposal includes the following scope of work:

- A ZEUS digester system at a location determined by the town of Canterbury, NH
 - 8' x 20' shipping container that can be placed on a parking lot, roof, basement or other hard surface to be confirmed before purchase
- Training of the town of Canterbury, NH staff on the operation and maintenance of the system **OR** full-service system operations and maintenance by Ecotone staff if leased
- System warranty and regular preventative maintenance if the system is purchased **OR** regular servicing of the system during the lifetime of the lease contract
- Processing of food waste in the town of Canterbury, NH
- Organic fertilizer produced by ZEUS

Lease Options & Project Timeline

- Budget Price for Outright System Purchase: \$60,000 - \$80,000
- Lease options:
 - \$700/month
 - Up to 500 lb/week of food waste input
 - Receive 10% of fertilizer production
 - \$1,400/month

- Up to 500 lb/week of food waste input
- Receive 40% of fertilizer production
- \$2,100/month
 - Up to 500 lb/week of food waste input
 - Receive 100% of fertilizer production
- Lease Term: 60 months (open to negotiation)
- Estimated lead time from contract signing to ZEUS delivery: 12 weeks
- Services Excluded: Shipping/freight, on-site installation of digesters, on-site electrical infrastructure modifications/additions

Conclusion

We believe that the ZEUS digester system is an excellent option for the town of Canterbury, NH to manage food waste on-site in a circular manner while producing organic fertilizer. Our team hopes to partner with the town of Canterbury, NH for many years to come as we help with the prevention and sustainable management of food waste on campus. For more technical details about the ZEUS system, please see [this technical data sheet](#). For information about potential grant opportunities, please see [this working document](#).

Thank you for reviewing our proposal. Please reach out with any questions. We hope to discuss the opportunity in more depth with you and your colleagues soon.

Thank you,

Jacob Beakas

Jacob Beakas | Sales Manager of Ecotone Renewables
+1 (567) 288-0006 | jacob.beakas@ecotonerenewables.com



A ZEUS system operating in Smithfield, RI

HOPKINTON - Bucket Experiment

ECOTONE
Jobs

- Pittsburg PA

Ship Container 20'
+ Rain Water (captured)
3 Phase Power

Digester Process
By-Product - Fertilizer
- Juice

Handles 500 lbs/wk (1 Ton/Month)
Restaurants - School/Cafe
Can do yard waste (limited)

Leasing - monthly rent - They own it.
(- Questionable
NOT IN AREA)

Purchase - 60-80K

Fertilizer - use or
sell
- Ship product?
[Solid chunk
Liquid

Maint Package

1-2 year

Enclosed heater

Input door on the side

Sensors: 200/250 lbs per load.

Monitor undesirable/non-composite

Can "trickle" in