

COMPLETE SOLUTIONS

Consulting International Inc. | Est. 2020

ENERGY FROM WASTE, FOR A BETTER TOMORROW

June 2024

The reason why Complete Solutions was founded...



Brown Bin
"Landfill"
We are filling up our landfills.



Green Bin "Composting"

Compliance levels are low.



Blue Bag "Recycling"

Less than 10% of recycling is re-purposed.

Rethink, Reuse, Reenergize: Transforming Waste into Sustainable Energy #SW2E.

Biomass Energy Techniques (BET) an Alberta Technology

- Alberta inventor:
  - Based in LaCrete, AB, Canada.
  - Inventor & Steel manufacturing background.
- Canadian innovation of 70+ year old patented technology (primary heating unit) into a Pyrolysis Rotational Drum (PRD) unit.
- International expansion into the USA.
- Currently manufacturing in the USA.
- Self-sustaining technology.
- 100+ primary heating units sold around the world.
- 15+ PRD Waste-to-Energy systems to date.

BIOMASS ENERGY
TECHNIQUES INC





Feedstock to Gas & Carbon, Gas to Heat & Low Emissions, Carbon to Biochar.

The Technology

- Converts waste biomass (feedstock) into heat and a byproduct called Biochar.
- Capture heat to a boiler to heat/cool facilities (HVAC or Thermal).
- Add an ORC to capture boiler's heat to generate electricity.
- Free exhaust – scrubbing not required to date.
- No hydrocarbons required in the conversion process. Self sustainable.
- Ideal feedstock moisture content range **25%-65%**.
- 3 sizes available - **¼, ½ & 1 Ton/Hour** units.

BIOMASS ENERGY
TECHNIQUES INC



2021 PILOT PROJECT

Harnessing Waste for a Sustainable Future, Powering Tomorrow Today.

DAVEY
Proven Solutions for a Growing World

BIOMASS ENERGY
TECHNIQUES INC







Converting Wood to BIOCHAR in the BET24S PRD Unit



BIOMASS ENERGY
TECHNIQUES INC





Feedstock to Gas & Carbon, Gas to Heat & Low Emissions, Carbon to Biochar.

What is Biochar?

High carbon form of charcoal produced by pyrolysis of biomass in the absence of oxygen:

- *Enhanced Plant Growth.*
- *Improve Porosity, Soil Health.*
- *Improve H20 holding capacity.*
- *Carbon Sequestration.*

***1 tonne** of biochar sequestered in the ground, can be equivalent of up to **3 tonnes** of CO2 removed from the atmosphere.*

KINETICBIOCHAR
CORPORATION



Potential alternate feedstocks for the BET PRD...



Sanitary Sewage Sludge & Woodchips...

Municipal Solid Waste, Plastics, Cardboard, and Construction Demolition Debris...













Pilot Plant - Potential Environmental Impact

(Single unit, Annualized – BET24S-PRD – Wood feedstock)

- 4,250+ tons diverted from landfills.
- 2,000+ M3 leachate saved.
- 8,000+ tons of GHG saved.
- Clean heat generated by 15+ B. BTU (~85 homes heated).
- Electricity generated (~40 homes).
- 1,000+ tons of biochar production.



Reducing Landfill Burden, Saving Resources, and Powering Homes with Sustainable Innovation.

DAVEY®
Proven Solutions for a Growing World

Equipment commissioned and in production.



Wood feedstock.





Biochar output.



CITY OF LINCOLN NEBRASKA

Equipment delivered, site development phase.

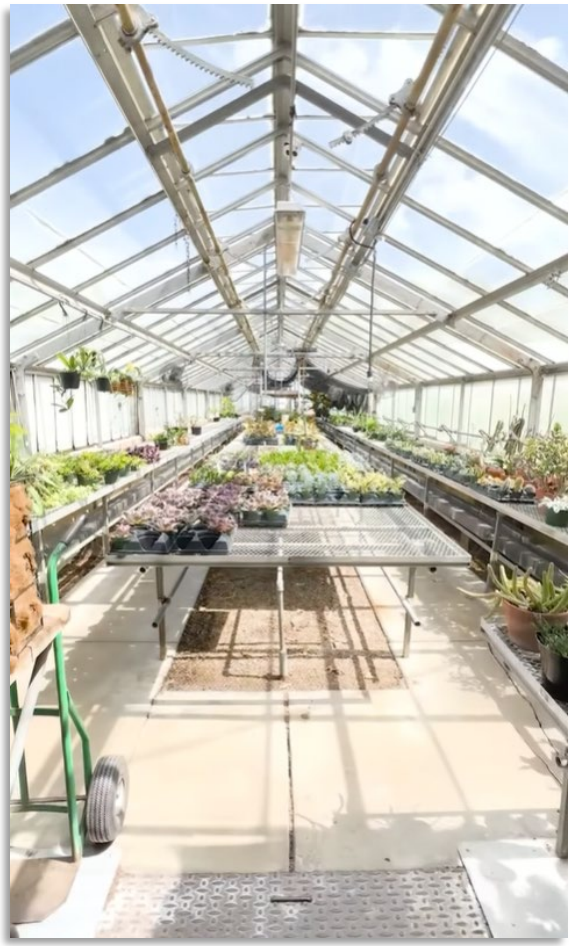




Bloomberg Philanthropies

city of CINCINNATI









Bloomberg Philanthropies

Equipment ordered, project in engineering phase.

Equipment delivered, site development phase.





Existing BET site in operation.



CEDAR BLUFF FARMS

(Lebanon, MO, USA)

Existing BET site in operation.



Metzler Forrest Products LLC

(Reedsville, PA, USA)



PEACE REGIONAL
WASTE MANAGEMENT COMPANY



Existing BET site in operation.





Former BET site, expanding in California.

Glanris

(Olive Branch, MS, USA)

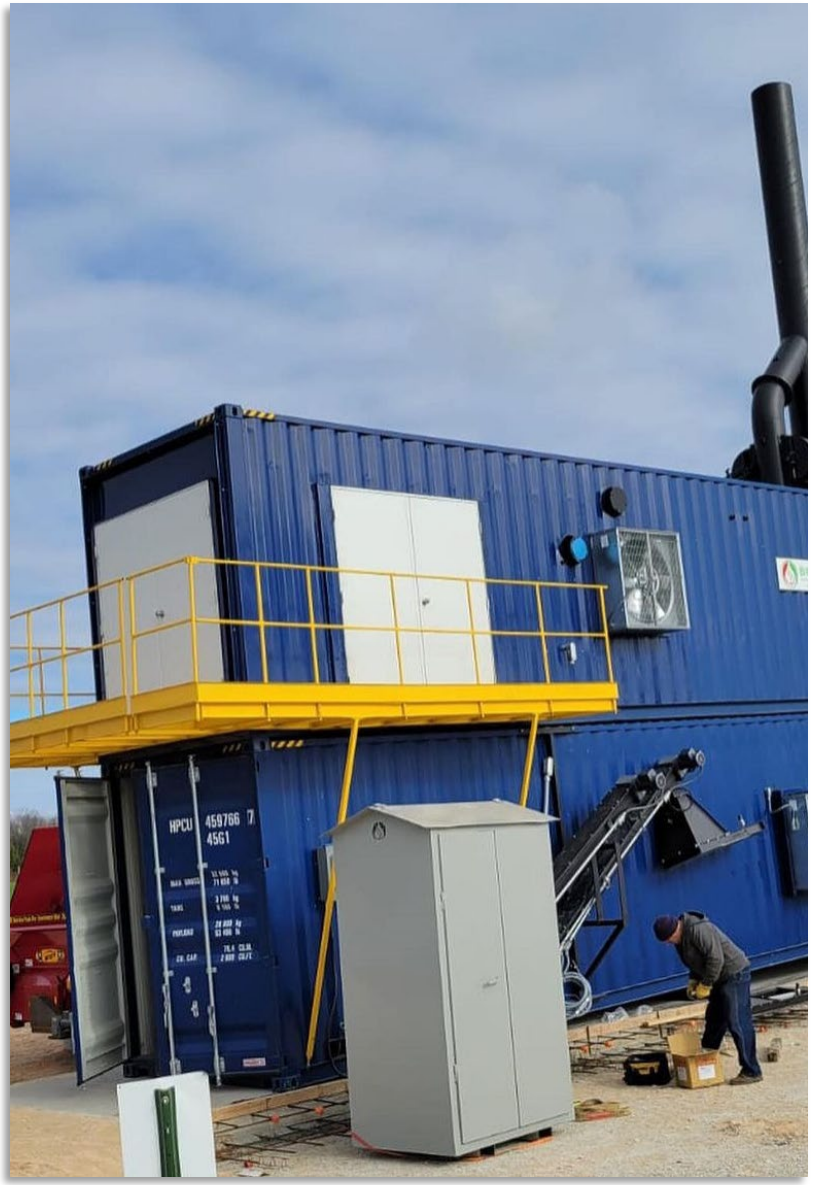


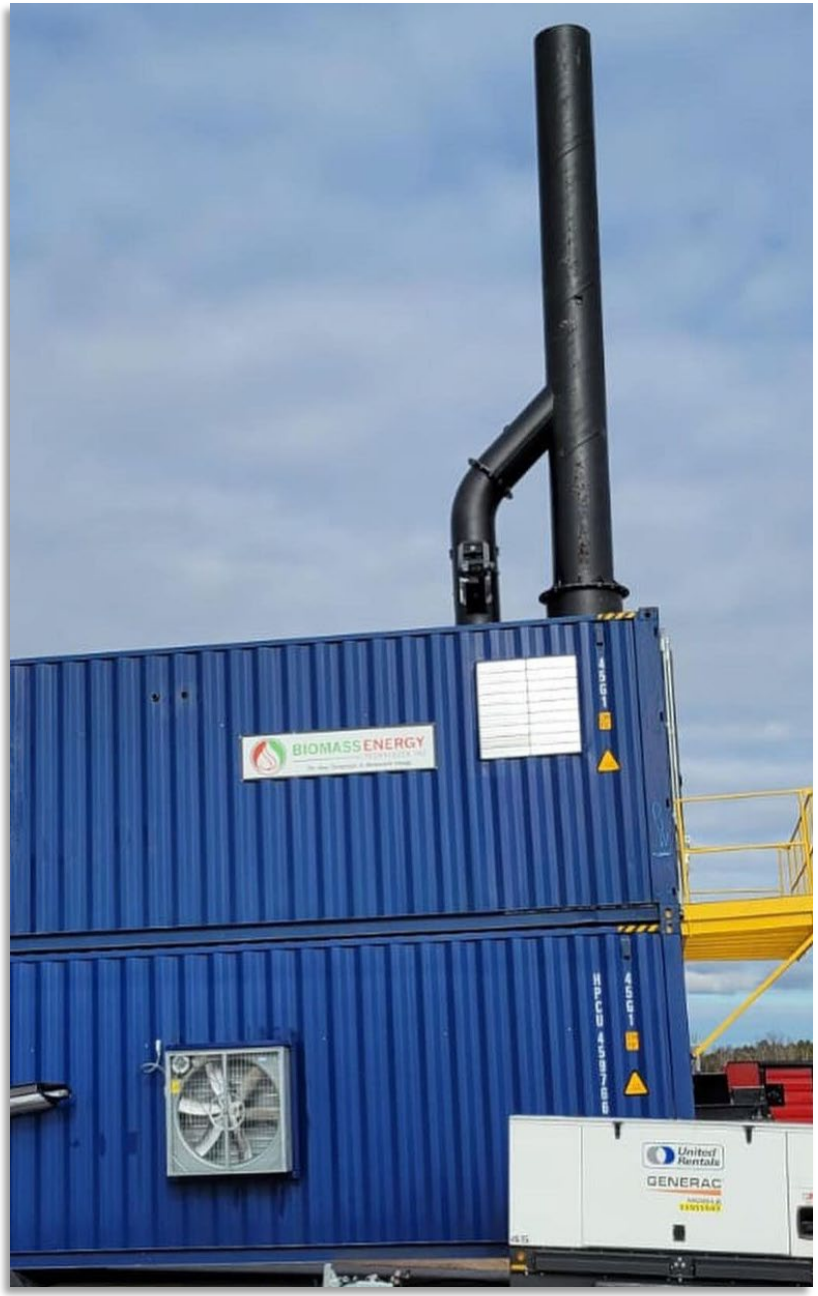
Co-Gen System

(USA)

Existing BET site in operation.







EXECUTIVE TEAM

COMPLETE SOLUTIONS



Ian Soder

Founder | Director

20+ years experience



Jason Holtz

Director

30+ years experience

INDUSTRY PARTNERS

COMPLETE SOLUTIONS

DAVEY
Proven Solutions for a Growing World

CITY OF LINCOLN NEBRASKA

CARBON EVOLUTION

city of CINCINNATI

BIOMASS ENERGY TECHNIQUES INC

PEACE REGIONAL WASTE MANAGEMENT COMPANY

KINETIC BIOCHAR CORPORATION

GROWTH PARTNERS

COMPLETE SOLUTIONS

Government of Canada / Gouvernement du Canada

Edmonton Global

NAIT

EDMONTON UNLIMITED

calgary economic development
be part of the energy

IRELAND-ALBERTA TRADE ASSOCIATION

STARTUP EDMONTON
DIVISION OF INNOVATE EDMONTON

TAP Trade Accelerator Program

St. Albert AND DISTRICT CHAMBER OF COMMERCE

LONDON & PARTNERS

EXPLORE EDMONTON

COMPLETE SOLUTIONS

Consulting International Inc. | Est. 2020

ENERGY FROM WASTE, FOR A BETTER TOMORROW

QUESTIONS?

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