Green Power Solutions, Inc.

Unlocking the power of biomass

Refining Waste into Resource

An Environmentally Responsible Solution

GPS

A Zero Waste Organization

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Unlocking the power of biomass

GREEN POWER SOLUTIONS, INC.
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Turning Waste into Resource

Green Power Solutions' core business is to:

- Capture the value of organic wastes through refinement into higher value products

Green Power Solutions facilitates organic waste processing to supply refined products to the following markets:

Energy-

- Clean Renewable Electricity through the anaerobic digestion of organic wastes

Oleo Chemicals-

- Refining of waste lipids providing refined feedstock to the advanced biofuel and biochemical supply markets

Organic Fertilizers-

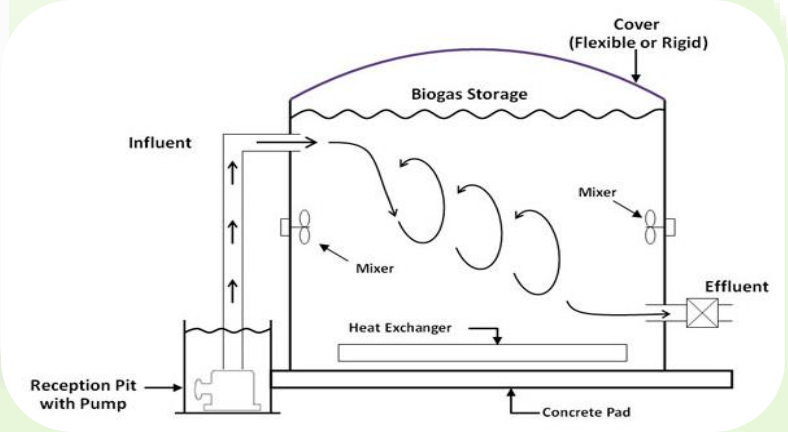
- Refined nutrient-rich soil amendments for use in agriculture

Green Power Solutions is a privately held corporation in business since 2006

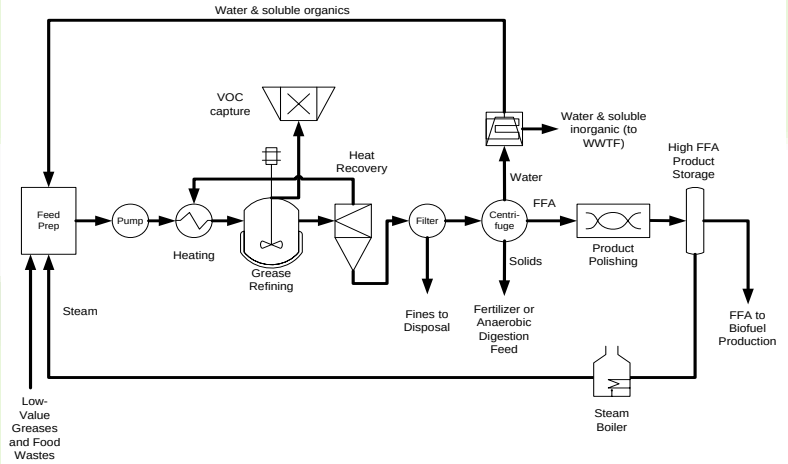
- Headquartered in Newtown, CT
- Currently generating industrial chemicals from waste grease sources
- Currently supplying feedstock (organic waste) to multiple New England AD facilities
- Focused on the development of Anaerobic Digestion facilities in Connecticut

The GPS Organic Waste Solutions

- **The GPS Organic Refining Plan** is focused on urban waste greases and residual food solids created in highly populated areas throughout North America.
  - **Anaerobic Digestion**
    - Agricultural Wastes
    - Supermarkets & Restaurants
    - Institutions
    - Food Manufacturers



  - **Fats, Oils, Grease (FOG) Refining**
    - DAF Sludge
    - Sewer/Trap Greases
    - Fry-o-later greases
    - Butcher waste scraps
    - Off-spec Yellow Grease

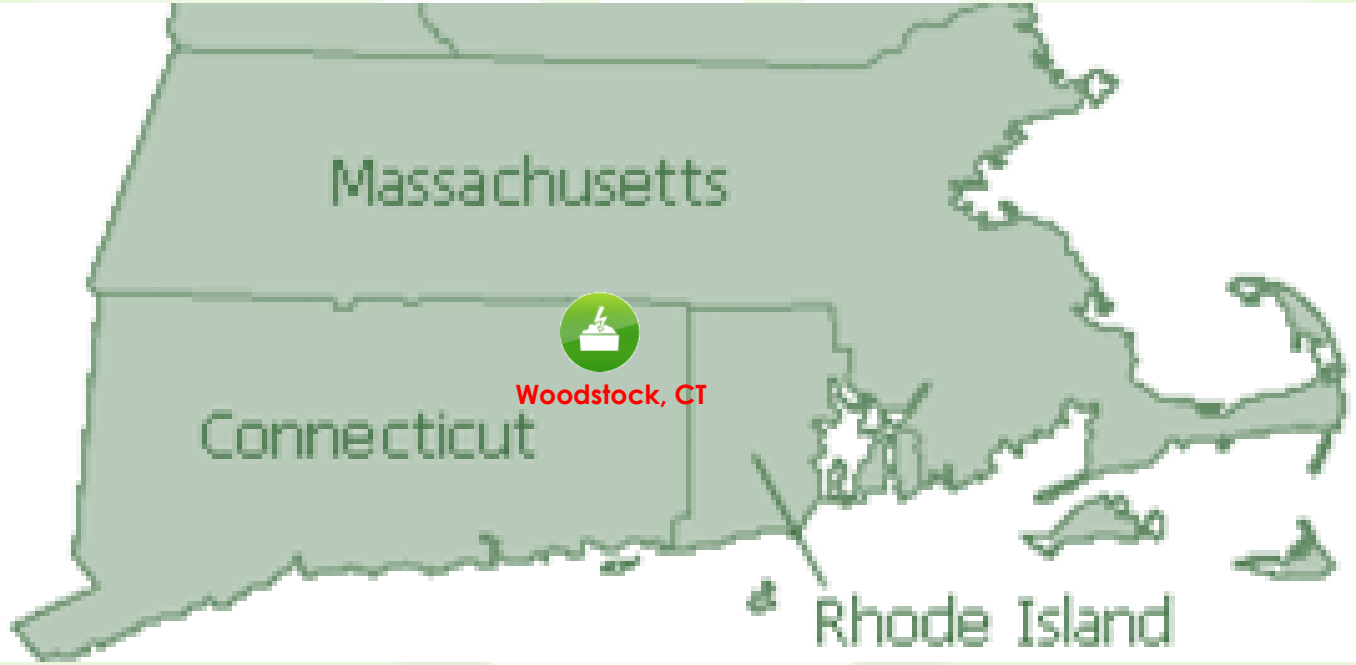


The Organic Waste Opportunity

- **Legislative Progress - Organics Diversion**
  - **Organic Bans –** Multiple NE States have instituted or are considering organic disposal bans
    - **2010 MA DEP Draft Solid Waste Master Plan**
      - Set a goal to divert 350,000 tons/yr of food waste by 2020
      - Includes ban on disposal of commercial food waste starting in 2014
    - **2011 State of Connecticut *Public Act No. 11-217***
      - *Organic waste ban for commercial generators >104 tpy*
    - **2012 State of Vermont *Public Act No. 148***
      - *Organic waste ban for commercial generators >104 tpy*
    - **2014 State of Rhode Island *Public Act H7033 Substitute A***
      - *Similarly instituted an organic waste ban for generators >104 tpy*

The GPS Focus - Connecticut

- **Phase I -** GPS plans to construct anaerobic digestion facilities to reform organic wastes generated throughout the East Coast, starting in Connecticut.



Project 1: Woodstock BioEnergy Center

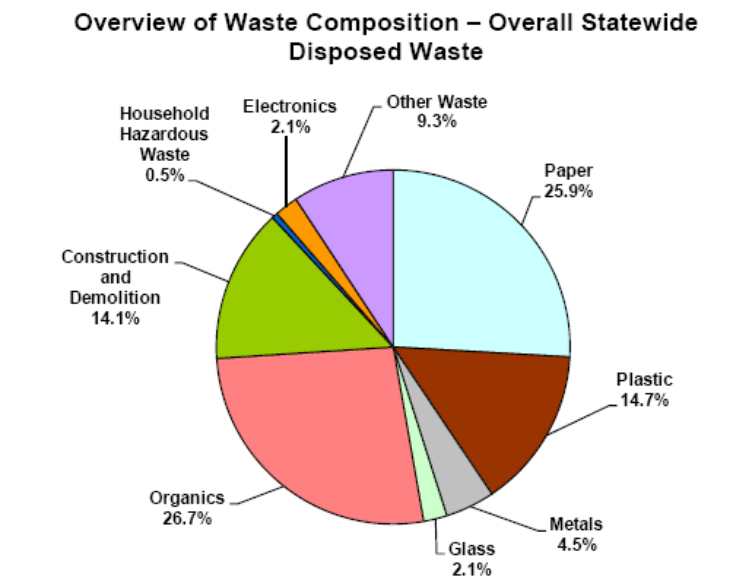
- **Woodstock, CT Anaerobic Digester and R&D Facility**
  - **Location: Fairvue Farms, Woodstock, CT**
  - **CAPEX: $10.5 Million Dollars**
  - **Nameplate Generation: 1 MW**
    - On-site energy to power the Fairvue Farm operation, plus additional capacity sufficient to meet the demand of **800 CT homes.**
  - **Feedstock:**
    - **42,000 tons**/year of manure/AG waste
    - **35,000 tons**/year of food waste
  - **Biomass R&D Facility:**
    - Research Biomass-to-energy/feed technologies.
  - **Project Financing:**
    - Grants, Debt & Equity

The Organic Waste Opportunity - CT

- **Connecticut State-wide Solid Waste Composition and Characterization Study, Final Report;** May 26, 2010
  - http://www.ct.gov/dep/lib/dep/waste_management_and_disposal/solid_waste/wastecharstudy/ctcompositioncharstudymay2010.pdf

Ten Most Common Materials, by Weight – Overall Statewide Disposed Waste

Material	Est. Percent	Cum. Percent	Est. Tons
Food Waste	13.5%	13.5%	321,481
Compostable Paper	8.2%	21.7%	195,185
Leaves & Grass	7.2%	29.0%	172,408
OCC/Kraft Paper	5.8%	34.8%	138,240
Wood - Treated	4.7%	39.4%	111,404
Durable Plastic Items	3.6%	43.1%	86,325
Other Recyclable Paper	3.6%	46.7%	85,517
Other Film	3.5%	50.2%	83,478
Carpet	3.5%	53.7%	83,125
R/C Organic	3.2%	56.8%	75,195
Total	**56.8%**		**1,352,359**



Highlights

- Nearly **500K tpy** of organics being incinerated or landfilled.
- At **$60** a ton, this represents a **$29.6** million dollar revenue opportunity

CT Legislative Progress – AD Incentives

- Significant legislative rule making needs to be implemented to spur investment into AD facilities.
  - **CT Progress to date – Anaerobic Digestion Incentives**
    - **2011 AD Pilot Program –** State funding for AD facilities
      - Project Financing - $450 per kw of generation
    - **2013 Legislative Energy Bill –** Defined Anaerobic Digestion as a Class I renewable, allowing for CT REC sales.
    - **2013 Virtual Net Metering Bill –** Defined a retail program for AD projects for both municipal and agricultural producers that offers retail generation rates including a portion of transmission and distribution values.

CT Legislative Progress – In Reality

- **Progress Reality**
  - **Connecticut - AD Specific Road Blocks**
    - **2011 AD Pilot Program –** State funding for AD facilities
      - *To Date – 5 projects have been selected; 0 facilities have been built*
    - **2013 Energy Bill –** Defined Anaerobic Digestion as a Class I renewable, allowing for CT REC sales.
      - *Due to ZREC/LREC Program – Traditional RECS are price and term limited.*
        - *Traditional RECs no longer trade for long term fixed pricing*
    - **2013 Virtual Net Metering Bill –** *Agricultural Producers*
      - *AD Projects are competing against LREC/ZREC subsidized projects*
      - *Unlike Municipalities, to qualify for VNM Farms have to own these projects outright.*
      - *VNM Credit Values change on a 6 month basis, leaving significant risk in project investment*

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Jumpstarting an Organic Waste Industry

- **How to jumpstart an Industry – Real Legislative Solutions**
  - **Legislation needs to eliminate/reduce long term risk**
    - Long Term Fixed/defined off-take agreements must be available to these projects. (Options)
      - **Institute an AD Specific Carve-Out**
        - Similar to solar carve-out legislation, mandate the utilities to purchase a % of their total power supply from AD energy sources.
        - Alternatively **- Institute an AD Feed-in-Tariff (FIT)**
          - Similar to the Vermont or Ontario FIT programs
      - **Instituting an AD-RECs**
        - Similar to the Z-REC and L-REC programs
        - Allowing Class I AD technologies compete for long term off-take contracts with utilities.

What do you think?

- **Discussion Points**
  - How to get State energy policy to value the organic diversion benefits of these projects?
  - Why are Net Reduction Technologies (such as AD) as defined by REGI not considered to be on par with technologies like solar and wind?
  - Over time, tipping fees for organic waste will likely reach a $0 rate due to competition, improved technology, and unlevered facilities. Due to the public benefit, does it make sense to look to states/municipalities to facilitate bond funding for such projects? This has been the norm for large scale burn facilities?

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