

# Brattleboro, Vermont Food Scrap Composting Facility, and Anaerobic Digestion Feasibility Study

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Windham Solid  
Waste Management  
District operates the  
2<sup>nd</sup> largest food  
scrap composting  
facility in Vermont





## Bob Spencer toured Danish biogas facilities in October 2018 as a guest of the Danish Trade Council

- 13 persons from US were invited for a 5-day tour of biogas facilities, food repackaging plants, gas pre-treatment technologies, and university research.
- Tour demonstrated a significant national commitment to the development of biogas, and collaboration between private companies and universities.
- Biogas in Denmark driven by economies of scale, standardized designs, buy-in from farmers, and bipartisan policy support.
- See Spencer article in BioCycle:

<file:///Users/bob/Documents/BioCyRE/Deep%20Dive%20Into%20Danish%20Biogas%20-%20BioCycle%20BioCycle.html>



Windham Solid Waste Management District operates food scrap composting facility adjacent to 5-MW solar array on closed landfill

A large, abstract blue watercolor splash graphic on the left side of the slide, with a textured, painterly appearance. The splash is darker in the center and fades out towards the edges.

# Brattleboro Curbside Residential Food Scrap Collection From 3,000 Households

- Pay-As-You-Throw (PAYT) trash
  - \$3/bag
- Single stream recyclables collection
  - No charge for residents
- Food scrap collection
  - No charge for residents
- Every other week trash collection
  - Encourages food scrap recycling by “reluctant composters”
- Promotion of backyard & community composting

# Brattleboro Curbside Program





# Brattle grow Compost

Windham Solid Waste Management District's  
All Purpose Compost

Call to order 802-257-0272



# Vermont's Mandatory Food Scrap Diversion

- Act 148, Universal Recycling, passed by VT legislature
- Mandatory food scrap diversion started 2015 for large generators
- Mandatory residential food scrap diversion starts July 2020

# Commercial and Institutional Food Scraps



- Schools, restaurants, businesses, events
- Trash haulers have new business opportunity to rent dumpsters & collect food scraps
- WSWMD accepts food scraps mixed with soiled/non-recyclable paper & cardboard
- WSWMD provides free technical assistance





## 17 Dairy Manure AD Facilities in Vermont


- Process farm wastes & industrial food waste from breweries, ice cream & cheese manufacturers
- Minimal potential for farms to process post-consumer food scraps due to concern with inorganic contaminants
  - AD digestate used for bedding for cows
- Several farm AD facilities have closed in recent years
  - Technical & financial reasons

# Anaerobic Digestion Feasibility Study

- WSWMD has conducted several feasibility studies of AD
- Food scraps are theoretically available but it is difficult to get long-term contracts with food scrap generators
- Potential AD facility relatively small at 10,000 tons per year of food scraps
  - Economy of scale is lacking
- VT electric utilities pay \$0.21/kWh for electricity from food scraps
- One new food scrap AD facility is under construction in central VT

# Depackaging Technology In New England

- Massachusetts has 6 food scrap depackaging facilities
- Maine has one
- Some Vermont grocery stores started collecting packaged food scraps in 2019
  - Paying to have it hauled to AD facility in Maine
  - Adversely impacted VT composting facilities who were accepting these food scraps



# Digestate Inorganic Contamination

- No federal or state regulatory requirements for inorganic contaminants in bio-pulp delivered to AD facilities
- No federal or state regulatory requirements for inorganic contaminants in digestate applied to agricultural lands
- Potential adverse impact on agricultural lands receiving digestate
- Danish regulations establish inorganic contaminants standards in bio-pulp & digestate