



ROCKWOOD AG-GRID

RECYCLING & REUSE BUSINESS DEVELOPMENT GRANT

CASE STUDY

JUNE 2024

Rockwood Ag-Grid LLC (RAG) is a partnership between Ag-Grid Energy LLC (AGE) of Kennett Square, Pennsylvania, and Rockwood Farm of Granville, Massachusetts. Their goal is to produce clean and renewable energy from agricultural and pre-consumer food material through anaerobic digestion. Rockwood Ag-Grid received assistance from the Massachusetts Department of Environmental Protection's (MassDEP's) Recycling & Reuse Business Development Grant and Recycling Loan Fund.

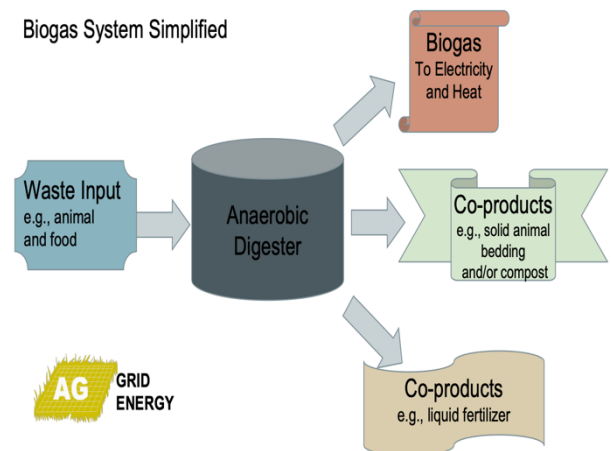
BACKGROUND:

- Food material accounts for about 22 percent of Massachusetts trash, nearly one million tons per year.
- In November 2022, MassDEP expanded its waste disposal bans by lowering the threshold on commercial organics/food material to facilities generating more than one-half ton of these materials per week.
- Anaerobic digestion is an innovative solution for managing food waste and generating clean energy.

BUSINESS OVERVIEW:

- Operating from Rockwood Farm in Granville, MA, Rockwood Ag-Grid uses an anaerobic digester (AD) to transform cow manure and pre-consumer liquid food material, along with surplus packaged foods sourced from warehouses and grocery stores, into valuable resources.
- After pumping cow manure and food waste into the AD, it produces a digestate, which is then separated into a solid form suitable for use as animal bedding, and a liquid form ideal for fertilizer.
- The AD also captures biogas generated during the digestion process, which is then converted into electricity to power on-farm operations.
- Any surplus electricity is sold back to the grid to be purchased by local municipalities.

Biogas System Simplified



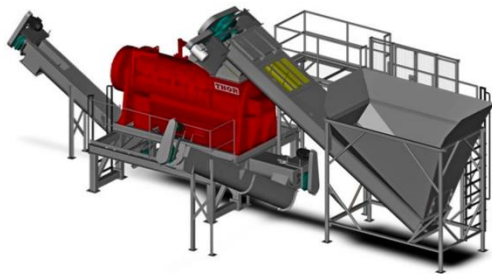
FOR MORE INFORMATION:

Rockwood Ag-Grid: Ken Verhelle, Ken.Verhelle@aggridenergy.com;
<https://aggridenergy.com/project/rockwood-farm>

MassDEP: Sean Sylver, Sean.Sylver@mass.gov;
<https://www.mass.gov/recycling-waste-grants-loans>

WORK WITH MASSDEP:

- Rockwood Ag-Grid received a \$700,000 loan from MassDEP's Recycling Loan Fund and a \$250,000 MassDEP Recycling & Reuse Business Development Grant to purchase a Thor De-Packaging unit, increasing RAG's capacity for processing organic food material.
- The unit can process 100 tons of organic food material per day, which has allowed RAG to expand the volume of food they process and generate more clean energy to be sold back to the grid.
- MassDEP's funding has also allowed Rockwood Ag-Grid to hire four new employees to operate the machinery.



Left image: Thor De-Packaging Unit. Right image: Dan and Richard Woodger of Rockwood Farm with Founder/CEO of Ag-Grid Energy, Rashi Akki at the grand opening of Rockwood Ag-Grid Organics.

RESULTS:

- In 2023, Rockwood Ag-Grid:
 - Processed 6,159 tons of packaged food material.
 - Generated 1,231,722 gallons of slurry for the AD.
- On an annual basis, Rockwood Ag-Grid:
 - Produces 3.5 million kilowatt hours of electricity to be used by both Rockwood Farm and the local community of Granville.
 - Recycles ~30,000 tons of food material from the local area.
 - Reduces carbon dioxide emissions by producing clean energy.

EXPANSION AND DEVELOPMENT:

In the near future, Rockwood Ag-Grid hopes to add a second engine to its operations to increase clean energy production, which would, in turn, increase its capacity to process additional food material.

COMMUNITY IMPACT:

- The town of Granville, Rockwood's host municipality, and 11 additional municipalities in western Massachusetts are participating in net metering credits generated by Rockwood Ag-Grid.
- Rockwood Ag-Grid provides local food producers with a trusted management solution.
- Anaerobic digestion enables farmers to reduce carbon emissions while also providing a stable source of income.