

**Biogas Absorption Chiller**

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<b>Funding</b>	<b>Encumb to Date</b>	<b>Pending</b>	<b>Total Anticipated</b>
<b>TOTALS</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

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**Manager**      Liebowitz, Barry  
**Contracts**    STD-9083  
**Contractors**   Matlink Dairy Farm, Inc.  
**Cities**  
**Counties**

**Matlink Dairy**

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<b>Funding</b>	<b>Encumb to Date</b>	<b>Pending</b>	<b>Total Anticipated</b>
Matlink Dairy Farm, Inc.	\$260,720.00	\$0.00	\$260,720.00
NYSERDA	\$250,000.00	\$0.00	\$250,000.00
<b>TOTALS</b>	<b>\$510,720.00</b>	<b>\$0.00</b>	<b>\$510,720.00</b>

**Manager**       Zweig, Jessica  
**Contracts**     STD-7246  
**Contractors**   Matlink Dairy Farm, Inc.  
**Technologies**  Agriculture  
**Cities**         Clymer  
**Counties**      Chautauqua

## Methane Digester Project

Demonstration of a plug flow anaerobic digester and methane generation system.

### BACKGROUND

Spreading manure on land can discharge nutrients and pathogens to water resources. Dairy farms are under pressure to control contaminants from manure so that expensive and energy-intensive water treatment plants will not be needed. Innovative systems can help farmers meet requirements in energy-efficient and cost-effective ways. Anaerobic digestion can minimize odors and allow more effective nutrient use by crops. To realize the potential energy, environmental and cost-saving benefits of anaerobic digestion, farmers need information to evaluate the energy, labor, land and equipment costs.

### OBJECTIVE

The objectives of this project are to: (1) construct and commercially operate an anaerobic digestion system to treat manure and reduce odor problem; (2) generate electricity with digester gas and market the excess power off the farm; (3) efficiently apply treated manure to crop lands to reduce purchases of fertilizer; (4) reduce potential for nutrient leaching by exporting a portion of treated solid fiber to markets beyond the farm; and (5) track and evaluate project data, costs and benefits and transfer this information to others.

### DESCRIPTION

Tasks include: (1) resolving interconnection issues relating to sale of electricity; (2) developing a detailed demonstration and evaluation plan to ensure useful data collection; (3) constructing the system; (4) training the operators and starting the process; (5) improving operations until stable operation is reached; (6) collecting data to evaluate performance; (7) preparing project reports to document performance, costs and benefits; and (8) transferring information to other farms.

### BENEFITS

If successful, this system will treat manure from over 600 milking cows and food wastes from local food processing plants. It is expected to generate 1,000,000 kWh per year from the recovered biogas. The greatly reduced odor of the treated manure will allow it to be applied to cropland when crop is ready to use the nutrients. This reduces the potential for nutrient runoff and also allows farmers to reduce their costs for inorganic fertilizer.

### SCHEDULE AND STATUS

The digester system has been operating well. Food processing wastes being digested along with the livestock manure increases gas production and offset costs of the installation. Digested slurry is separated. Separated liquids are stored for land application in accordance with NYS DEC permits and separated solids are used for livestock bedding or exported off the farm. A fact sheet has been prepared and further data are being collected.

<b>Funding</b>	<b>Encumb to Date</b>	<b>Pending</b>	<b>Total Anticipated</b>
Matlink Dairy Farm, Inc.	\$249,085.00	\$0.00	\$249,085.00
NYSERDA	\$200,000.00	\$0.00	\$200,000.00
<b>TOTALS</b>	<b>\$449,085.00</b>	<b>\$0.00</b>	<b>\$449,085.00</b>

<b>Manager</b>	Fiesinger, Thomas
<b>Contracts</b>	STD-6252
<b>Contractors</b>	Matlink Dairy Farm, Inc.
<b>Technologies</b>	Agriculture, Materials Recycling
<b>Cities</b>	Clymer
<b>Counties</b>	Chautauqua