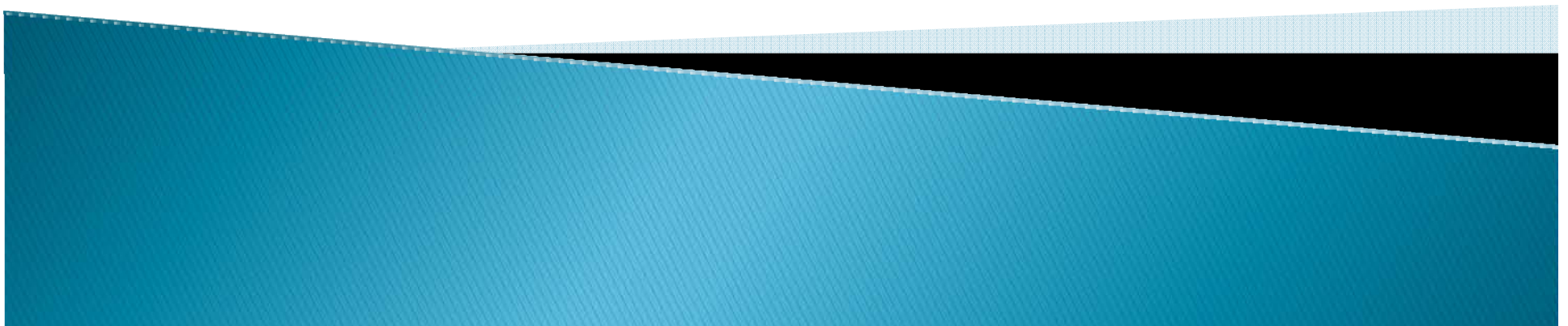


# Global Methane Initiative

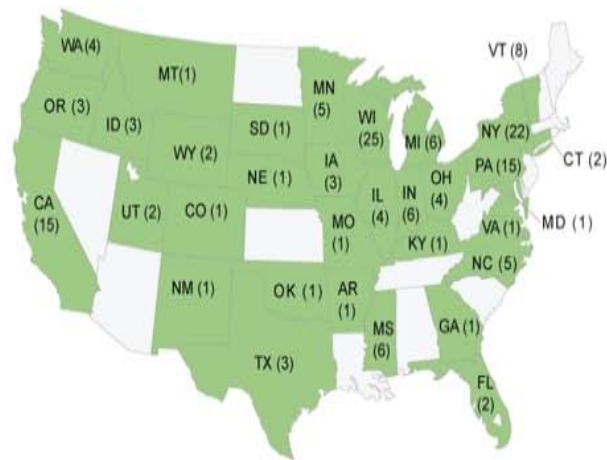
International Agriculture Project Database



# Introduction

- ▶ Purpose of database:
  - Provide general information on types and scale of operating AD systems in GMI countries
- ▶ Audience:
  - Anyone interested in information about existing systems (general public, policymakers, system developers, etc.)
- ▶ Location/access:
  - GMI webpage

Select a state for a list of operational digester projects.



Total farm-scale projects: 145  
 Total regional/centralized projects: 12

Project Name	City	State	Animal Type
<a href="#">Brookside Dairy</a>	Homer City	PA	Dairy
<a href="#">Brubaker Farms</a>	Mount Joy	PA	Dairy
<a href="#">David High</a>	Selinsgrove	PA	Swine
<a href="#">Dovan Farms</a>	Berlin	PA	Dairy
<a href="#">Four Winds Farm</a>	Ulysses	PA	Dairy
<a href="#">Hillcrest Saylor's Farm</a>	Rockwood	PA	Dairy
<a href="#">Mains Farm</a>	Newville	PA	Dairy
<a href="#">Mason Dixon Farms</a>	Gettysburg	PA	Dairy
<a href="#">Oregon Dairy Farm</a>	Litz	PA	Dairy

## Example: US AD Projects

## Rocky Knoll Swine Farm

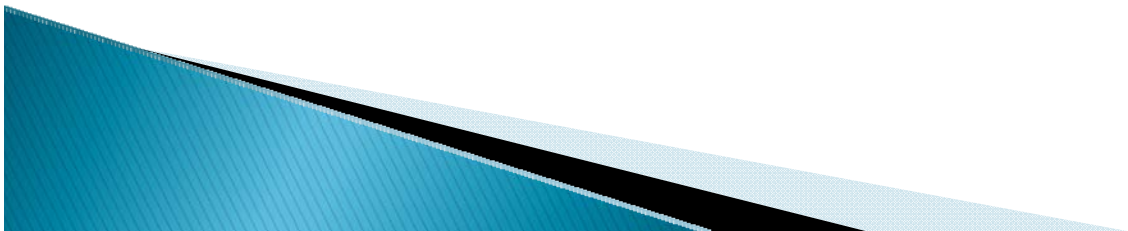
Location	Lancaster, Pennsylvania
Project Type	Farm Scale
Animal Type	Swine (farrow-to-finish)
Population Feeding Digester	1,000
Baseline System	Storage Lagoon
Digester Type	Horizontal Plug Flow
Co-Digestion	Dairy processing residues (dairy whey, other processing residues)
System Designer	Environomics & RCM International, Inc.
Biogas Generation	60000 ft <sup>3</sup> /day
Biogas Use	Cogeneration
Generating Capacity	130 kW

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## Example: Project Details

# Data Collection

- ▶ Collect as much data as possible
  - Useful for estimating emissions reductions
  - Useful for the development of case studies
- ▶ Publish limited information
  - Information that is practical and commonly available
  - Protect sensitive information

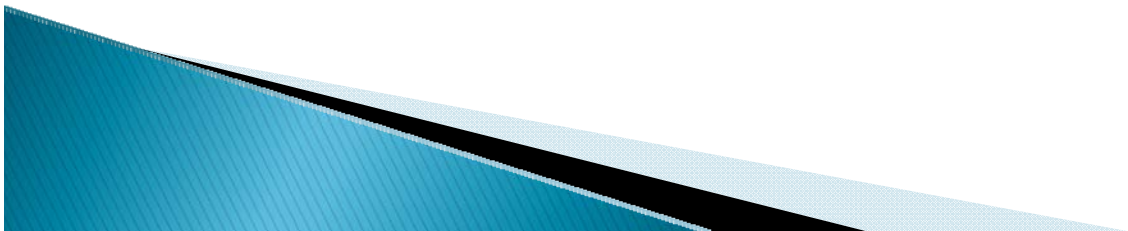


# Public Fields

- ▶ **General Info:**
  - Project name
  - Type
  - Location
- ▶ **Animal/Waste Info:**
  - Type
  - Number/volume
- ▶ **Baseline System**
- ▶ **Digester Info:**
  - Type
  - Designer
  - Status & year of operation
- ▶ **Biogas:**
  - Use
  - Generator set size/output

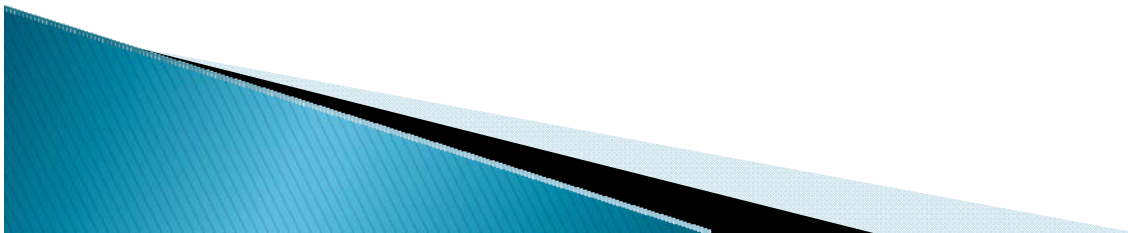
# General Information

- ▶ Farm/project name
- ▶ Location
- ▶ Project scale (on-farm, multiple farm, regional)
- ▶ Project type (animal species, agro-industrial)
- ▶ Contact information (project developer, farm owner, digester operator, etc.)



# Feedstock Information

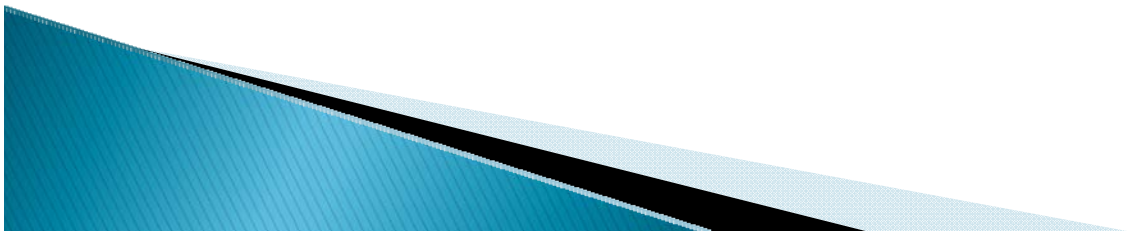
- ▶ Animal type
- ▶ Number of animals
- ▶ Other waste sources
- ▶ Volume of other wastes





# Pre-Digestion Details

- ▶ **Baseline system**
- ▶ Manure collection process
- ▶ Pretreatment solids separation (yes/no & method)
- ▶ Pretreatment tanks (yes/no)

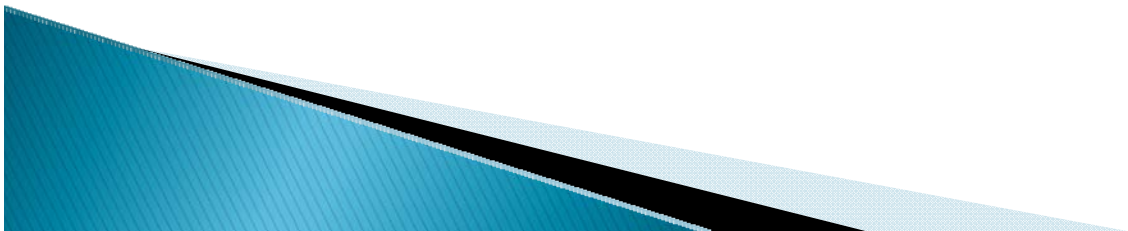


# General Digester Info

- ▶ Digester type
- ▶ System designer
- ▶ Current status (planned, construction, operational, shutdown, cancelled, unknown)
- ▶ Startup/closure year
  - If closed, reason for closure
- ▶ Generator set supplier
- ▶ Cover manufacturer
- ▶ Hydraulic retention time

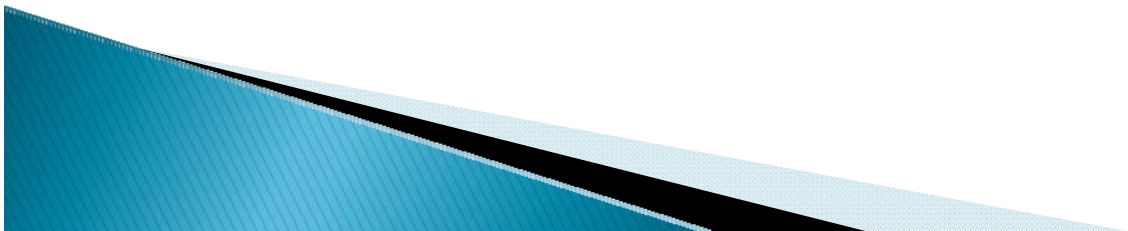
# Additional Digester Properties

- ▶ Solids retention time
- ▶ Digester mix tank (yes/no)
- ▶ Digester operating volume
- ▶ Post-treatment solids separation (yes/no)
- ▶ Effluent storage/disposal
- ▶ Digester heating
- ▶ Digester materials
- ▶ Gas storage method



# Biogas Generation and Use

- ▶ Biogas production
- ▶ Biogas use method
- ▶ Generator set type (engine or microturbine)
- ▶ Generator set manufacturer
- ▶ Generator set size/output
- ▶ Boiler/furnace manufacturer
- ▶ Boiler/furnace size/output

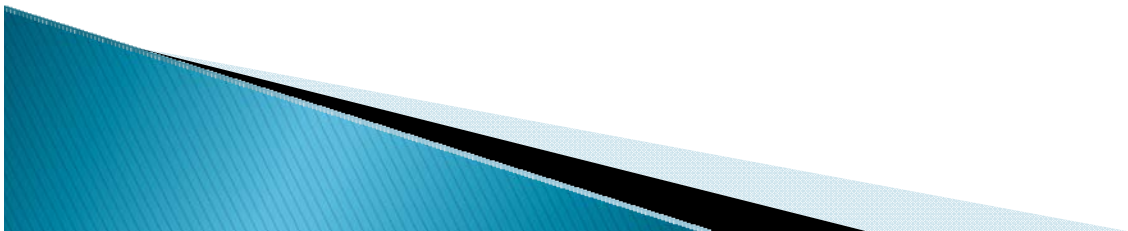


# Financial Information

- ▶ Total capital investment
  - Digester
  - Gas use
  - Effluent storage
- ▶ Total operation & maintenance cost (\$/year)
  - Digester
  - Gas use
  - Effluent storage
- ▶ Grant name(s) and amount(s)
- ▶ Amount of borrowed capital
- ▶ Other funding name(s) and amount(s)

# Financial Information, cont.

- ▶ Type of utility contract
- ▶ Amount of electricity/heat generated
- ▶ Baseline fuel replaced for energy (type & amount)
- ▶ GHG credits
- ▶ RECs



# Comments / Questions

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