

Potential Federal Funding Sources for Anaerobic Digester Systems



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Presentation Outline

- Rural Development
- NRCS
 - History and background of assistance
 - Addressing resource concerns
 - Available programs and assistance through NRCS
- Combining Programs and Partnerships

REAP – Rural Energy for America Program

The Rural Energy for America Program is grant and guaranteed loan program for ranchers, farmers and small businesses. It primarily serves communities of 50,000 or less. REAP has an energy audit component, grants of \$20,000 or less, \$80,000 grants or less, and grants of more than \$200,000.

Besides the Energy Audit piece, REAP offers Renewable Energy Development Assistance, grants and guaranteed loans for energy efficiency and renewable energy, and guaranteed loan only assistance.



How to apply for the Rural Energy for America Program

Administered Nationally

Apply through State Offices



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Alabama
Chris Beeker, III State Director
Sterling Centre, Suite 601
4121 Carmichael Road
Montgomery, AL 36106-3683
Voice: (334) 279-3400
Fax: (855) 304-8456

<http://www.rd.usda.gov/al>

Alaska
Jerry Ward, State Director
800 West Evergreen, Suite 201
Palmer, AK 99645-6539
Voice: (907) 761-7705
Fax: (907) 761-7783

www.rd.usda.gov/ak

Arizona
J.C. Sherman III, State Director
230 North First Avenue, Suite 206
Phoenix, AZ 85003-1706
Voice: (602) 280-8701
Fax: (855) 699-8035

www.rd.usda.gov/az

Arkansas
David Branscum, State Director
Federal Building
700 West Capitol Avenue, Room 3416
Little Rock, AR 72201-3225
Voice: (501) 301-3200
Fax: (855) 747-7793

www.rd.usda.gov/ar

California
Kim Dolbow Vann, State Director
430 G Street, # 4169
Davis, CA 95616-4169
Voice: (530) 792-5800
Fax: (530) 792-5837

www.rd.usda.gov/ca

Nebraska
Karl Elmshaeuser, State Director
Federal Building, Suite 308
100 Centennial Mall North
Lincoln, NE 68508-3859
Voice: (402) 437-5551
Fax: (855) 207-0384

www.rd.usda.gov/ne

Nevada
Philip Cowee, State Director
1390 South Curry Street
Carson City, NV 89703-9910
Voice: (775) 887-1222
Fax: (775) 885-0841

www.rd.usda.gov/nv

New Jersey
Kenneth C. Drewes, Acting State Director
8000 Midlantic Drive, Suite 505
Mt. Laurel, NJ 08054
Voice: (856) 787-7700
Fax: (855) 305-7343

www.rd.usda.gov/nj

New Mexico
Arthur A. Garcia, State Director
100 Sun Avenue NE, Suite 130
Albuquerque, NM 87109
Voice: (505) 761-4950
Fax: (505) 761-4976



www.rd.usda.gov/nm

New York
Scott Collins, Acting State Director
The Galleries of Syracuse
441 South Salina Street, Suite 357
Syracuse, NY 13202-2541
Voice: (315) 477-6400
Fax: (315) 477-6438

www.rd.usda.gov/ny

REAP Grant Assistance

Up to 25%
of Eligible Project Costs

 Renewable Energy Systems		 Energy Efficiency Improvements	
Minimum Grant Request	\$2,500 Total eligible project costs \geq \$10,000	Minimum Grant Request	\$1,500 Total eligible project costs \geq \$6,000
Maximum Grant Request	\$500,000 Total eligible project costs \geq \$2 million	Maximum Grant Request	\$250,000 Total eligible project costs \geq \$1 million

Loan only Programs, Resources for Financing

Business & Industry Loans

What is the maximum amount of a loan guarantee?

80 percent for loans of \$5 million or less

70 percent for loans between \$5 and \$10 million

60 percent for loans exceeding \$10 million, up to \$25 million maximum

Rural Energy for America Programs

- **What are the loan guarantee terms?**
- \$5,000 minimum loan amount
- \$25 million maximum loan amount
- Up to 85% loan guarantee
- Rates and terms negotiated with the lender and subject to USDA approval
- Maximum term of 30 years for real estate
- Maximum term of 15 years for machinery and equipment
- Maximum term of 7 years for capital loans
- Maximum term of 30 years for combined real estate and equipment loans



Livestock Partnerships

In October 2015, USDA, through REAP, awarded \$12.5 million in grants and loans to support the installation of 17 anaerobic digesters and biogas systems in California, Maine, Massachusetts, Michigan, New York, North Carolina, Ohio, and Washington. When operational, these systems are projected to generate over 167,000 megawatt hours of renewable power annually

Productive **Lands**

Healthy **Environment**

High Quality, Productive Soils



Clean and Abundant Water



Healthy Plant and Animal Communities



Clean Air



An Adequate Energy Supply



Working Farm and Ranch Lands



History

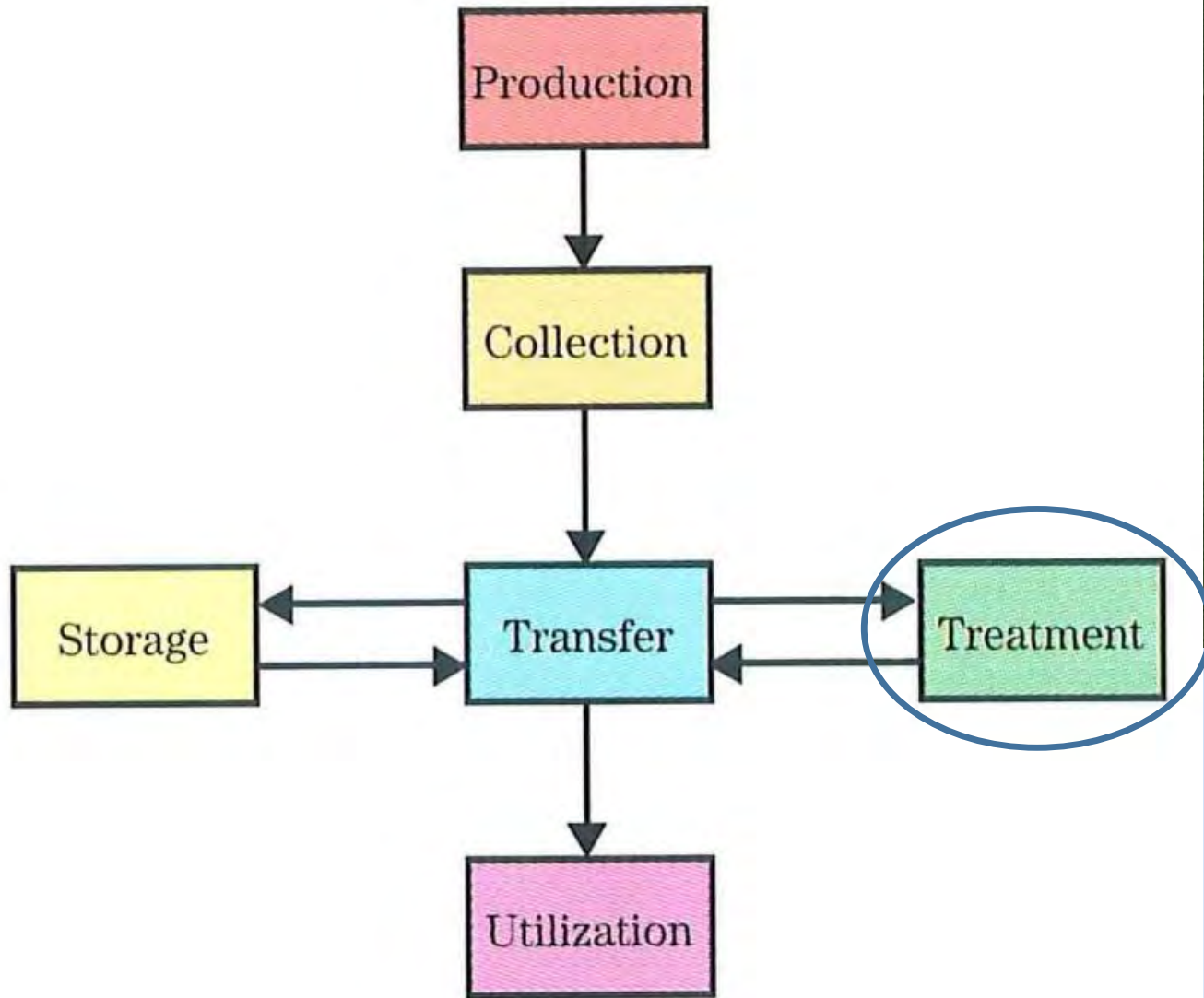
- Between 2003 and 2017 NRCS has provided assistance on 49 anaerobic digesters
- Programs
 - Agricultural Water Enhancement Program (1 digester system)
 - Chesapeake Bay Watershed Initiative (3 digester systems)
 - Environmental Quality Incentives Program (45 digester systems)
- Obligations
 - \$11,368,478

History

- Prior to 2009
 - Anaerobic Digester – Ambient Temperature (365)
 - Anaerobic Digester – Controlled Temperature (366)
- After 2009
 - Anaerobic Digester (366)
 - Combined standard handles all digester systems
- Ambient Temperature
 - Generally covered lagoons
- Controlled Temperature
 - Plug flow, complete mix, other types



Manure Management Functions



An anaerobic digester may only be part of an overall animal manure management system.

Before Developing Contract

- Determine if there are resources concerns
- Use NRCS planning process
- Develop a Comprehensive Nutrient Management Plan (CNMP)
 - Record of Decisions to address resource concerns
 - Water Quality
 - Soil Erosion
 - Air Quality
 - Usually multiple conservation practices are required to address the necessary resource concerns



Anaerobic Digestion (366)

- Purposes:
 - Manage odors
 - Reduce net effect of greenhouse gas emissions
 - Reduce pathogens
 - Capture biogas to facilitate energy production*



Limitation

- Environmental Quality Incentives Program Manual (based on The Agricultural Act of 2014) Natural Resources Conservation Service can assist producers to specifically address energy conservation through practice implementation.
- **Exemptions** to payment include “**practices or activities where the primary purpose is renewable energy production** (e.g., generation of electricity or biofuel practices).
- NRCS through EQIP does not provide payments on the energy generation components of an anaerobic digestion system (i.e. genset or compressed biogas conversion).



EQIP Eligibility

- Control or own eligible land
- Comply with adjusted gross income limitation (AGI) provisions (~\$900,000 gross maximum) (Current Farm Bill)
- Be in compliance with the highly erodible land and wetland conservation requirements
- Develop a CNMP to address the necessary resource concerns

EQIP - Environmental Quality Incentives Program

- Help producers install or implement structural, vegetative, and management practices on eligible agricultural land
- Payments can be made up to 75% of the costs
 - 90% for socially disadvantaged, limited-resource, beginning, and veteran farmer and ranchers

Payment Limitation

- Food, Conservation, and Energy Act of 2008 – payment limitation of **\$300,000** with the waiver authority by the Chief of NRCS to not exceed \$450,000.
- Agricultural Act of 2014 - “A person or legal entity may not receive, directly or indirectly, cost-share or incentive payments under this chapter that, in aggregate, exceed **\$450,000** for all contracts entered into under this chapter by the person or legal entity during the period of fiscal H. R. 2642—83 years 2014 through 2018, regardless of the number of contracts entered into under this chapter by the person or legal entity.”
- Next Farm Bill ???

Ancillary Practices

- Waste Separation Facility (632)
- Waste Storage Facility (313)
- Waste Treatment (629)
- Waste Transfer (634)
- Roofs and Covers (367)
- Waste Treatment Lagoon (359)



Contracting

- Complete CNMP
 - Record of Decisions
 - Conservation Practices
 - Implementation Timeline
- Develop financial contract
- All practices listed in the CNMP must be implemented by the end of the contract period



CIG - Conservation Innovation Grants

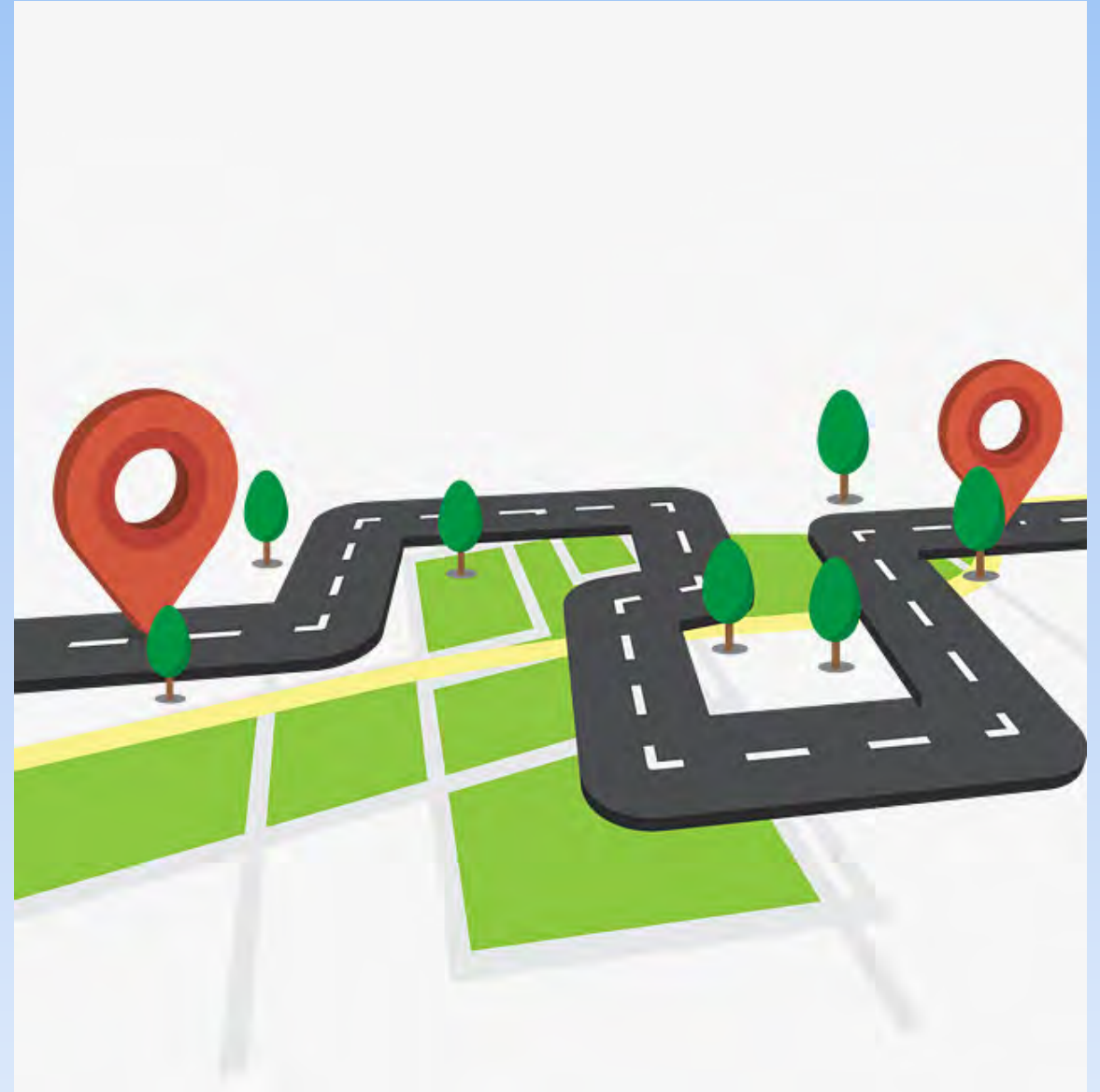
- competitive grants that stimulate the development and adoption of innovative approaches and technologies for conservation on agricultural lands
- ~ \$15 - 20 million per year since 2004 (\$237 million since 2004)
- Up to 50% matching federal funds (maximum of \$2 million)

Conservation Innovation Grants Anaerobic Digester

- Cayuga County Soil and Water Conservation District – Cayuga County Environmental Regional Digester
- Classic Farms, LLC – Installation of a “Fixed Film” Anaerobic Digester on a Swine Finishing Facility
- University of Georgia – Extracting Energy from Poultry Waste and Fruit and Vegetable Waste Through Anaerobic Digestion Technology
- Utah State University – Cost-Effective and Reliable Anaerobic Digestion for Animal Feeding Operations
- Washington State University – Pathogen Reduction in a Community Based Anaerobic Digester

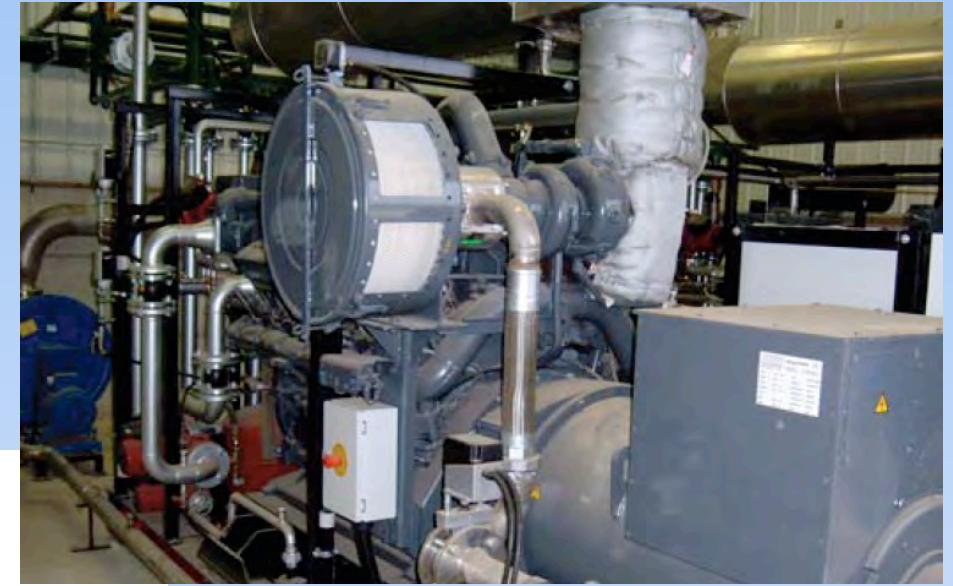
Suggestions for Developing a Digester Project

- Check with NRCS about developing a conservation plan to manage manure. Can NRCS contribute financially for these practices? Work with AgStar to determine if a Digester is a viable option, do the financial analysis. Consult with RD about financing, loans and grants for eligible costs.



Renewable Energy

EQIP Practice Standards
could be combined with
REAP



Scenic View Dairy

Anaerobic digester

- \$1.9 Million Total Cost
- \$474,088 REAP Grant

Powers an equivalent of
1000 homes/year

How can these programs work together?

- REAP Energy Efficiency Improvement combined with Amendments for Treatment of Agricultural Waste, a practice of the Environmental Quality Incentives Program
- REAP Energy Efficiency Improvement combined with a Pumping Plant, a practice of the Environmental Quality Incentives Program
- REAP Energy Efficiency Improvement with a Grass Waterway, a practice of the Environmental Quality Incentives Program
- Energy Efficiency from Rural Development and an electric transmission line extension from the Rural Utility Service

USDA Supports Anaerobic Digesters

Partnership with EPA, Memorandum of Understanding with Dairy Center for Innovation

Anaerobic Digesters part of prior Strategic Goals to reduce emissions, manage animal waste, recovery nutrients and add economic value to rural communities.

Digester projects contact at Energy Programs is:

Fred Petok, C.E.M.
Energy Program Specialist, Technology Branch
USDA Rural Development Energy Programs
Room 6868 MS 3225
1400 Independence Avenue SW
Washington DC 20250
202 -690-0784



Conclusions

- Several conservation practices may be required to address the resource concerns with anaerobic digester possibly being one of those practices
- A comprehensive nutrient management plan (CNMP) is to be developed before an EQIP contract
- Current Farm Bill payment through EQIP is limited to \$450,000 by the person or legal entity
- Conservation Innovation Grants can be used to demonstrate innovative technologies

The End



Thank You