USDA Energy and Conservation Programs

Doing more by working together

USDA Supports Anaerobic Digesters

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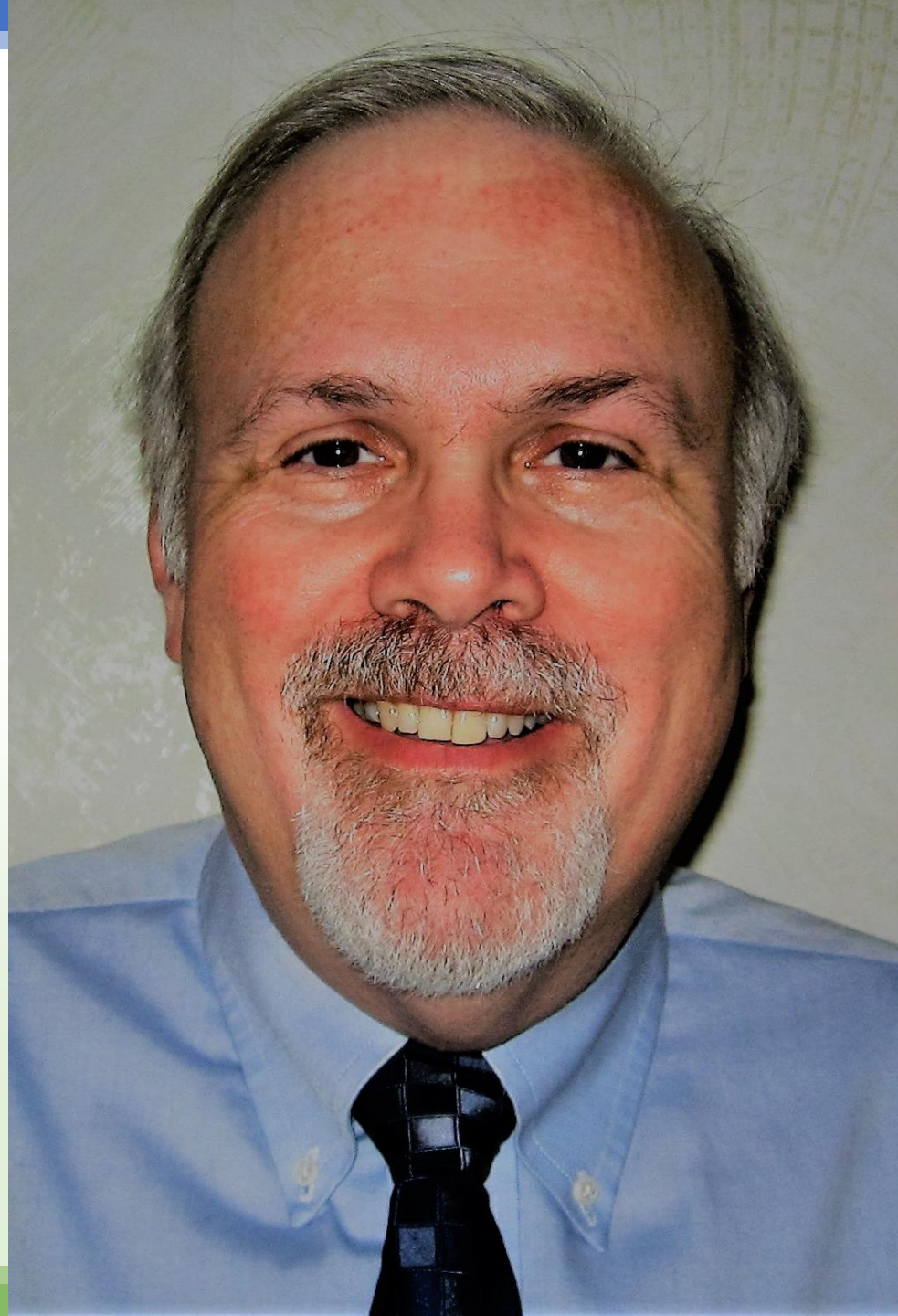
- Partnership with EPA, Memorandum of Understanding with Dairy Center for Innovation
- Anaerobic Digesters part of prior Strategic Goals to reduce emissions, manage animal waste, recovery nutrients and add economic value to rural communities

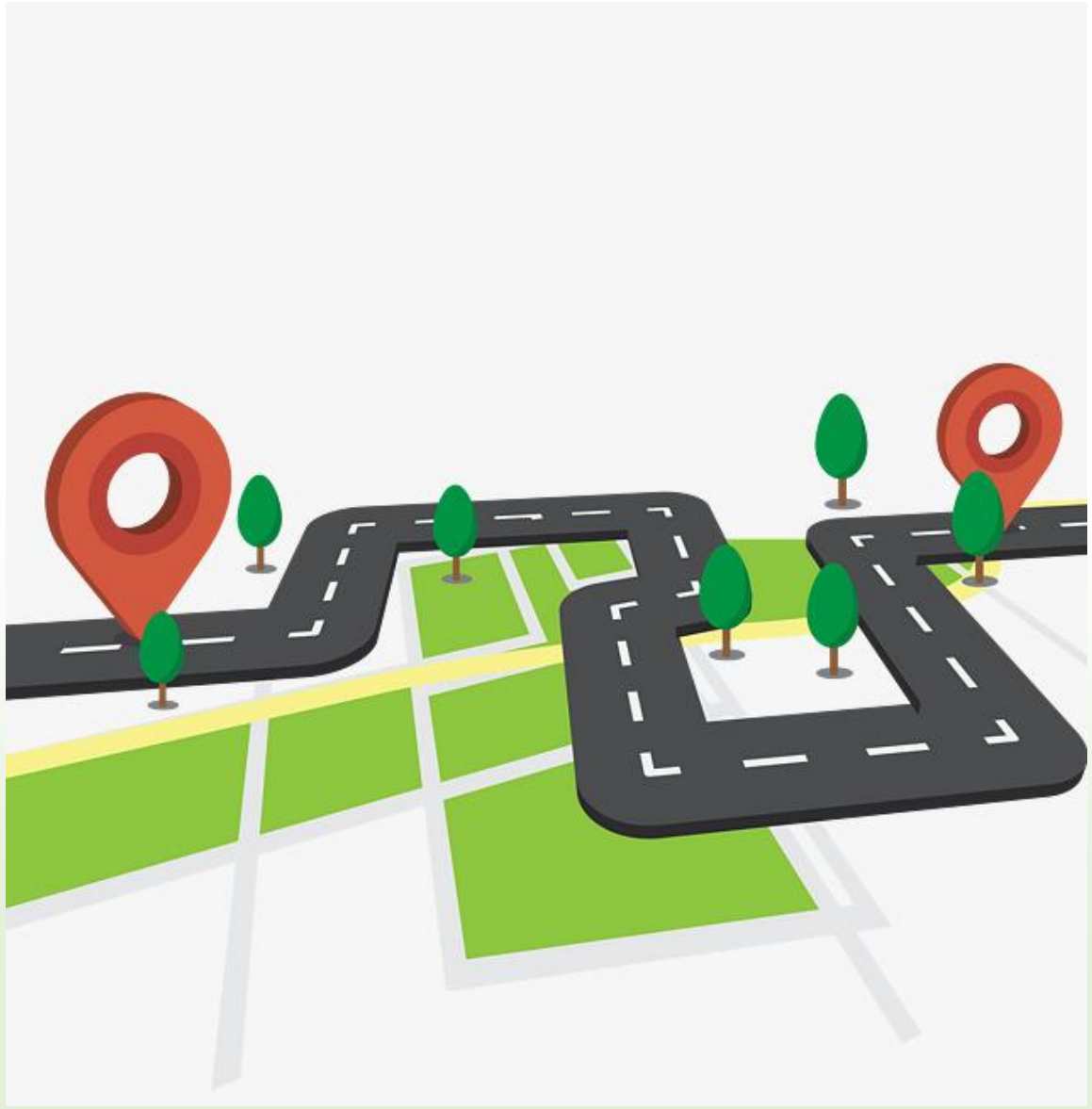


EQIP

- This program is designed to mitigate problems
- Mitigation first establishes that there is a problem and then applies a conservation practice
- In all cases the conservation practice follows a standard
- An applicant is typically a farmer, rancher or a small business with a land based business

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 and project developer to determine if a digester is a viable option.
- Conduct feasibility study and financial analysis.
- Consult with RD about financing, loans and grants for eligible costs.



REAP – Rural Energy for America Program

The Rural Energy for America Program is a 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.

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 ≥ $10,000	Minimum Grant Request	**$1,500** Total eligible project costs ≥ $6,000
Maximum Grant Request	**$500,000** Total eligible project costs ≥ $2 million	Maximum Grant Request	**$250,000** Total eligible project costs ≥ $1 million

Reporting Requirements of the REAP Awardee

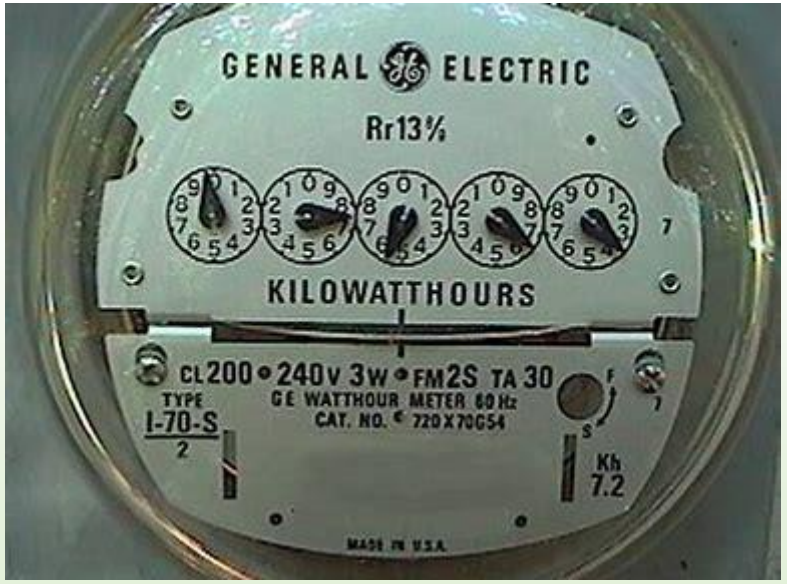
Consists of the following:

- Federal Financial Reports on a semiannual basis
- Project Performance Reports between grant approval and completion of project (i.e. construction) and a Final Project Development Report
- Outcome Project Performance Reports provided periodically once the project is completed.

Measurement and verification; reporting is self-certified

2 years for energy efficiency

3 years for renewable energy



	Projected	Actual
Generated Energy	3,022,200 KWH	2,993,621 KWH
GHG Emissions KwH Calculation	3,022.20000	2,993.62100
State Factor	0.791	0.791
Reduction Savings	2,390.56020 KWH	2,367.95421 KWH

These reporting requirements are spelled out in RD Instruction 4280 Subpart B 4280.123 paragraph j.

How to apply for the Rural Energy for America Program

Administered Nationally

Apply through State Offices

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

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 50S
Mt. Laurel, NJ 08054
Voice: (856) 787-7700
Fax: (855) 305-7343

www.rd.usda.gov/nj

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

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

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

Energy Efficiency

Elm Creek, NE	Heartwell, NE
Converted gravity irrigation to pivot irrigation	Diesel to electric irrigation pump conversion
•$34,710 REAP funding •$104,128 Leveraged funding	•$4,507 REAP funding •$13,519 Leveraged funding
48% projected annual energy savings	60% reduction in energy costs

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

What are the loan terms for B&I?

- Maximum term on real estate is 30 years
- Maximum term on machinery and equipment is its useful life or 15 years, whichever is less
- Maximum term on working capital not to exceed 7 years
- Loans must be fully amortized; balloon payments are not permitted
- Interest-only payments may be scheduled in the first 3 years

Who may apply for this program for B& I Loans?

Lenders with the legal authority, sufficient experience and financial strength to operate a successful lending program. This includes:

Federal or state-chartered banks

Savings and loans

Farm credit banks

Credit unions

Rural Utility Service Loans

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

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

REAP Grant Scoring

1.	Quantity of Energy	25 pts
2.	Environmental Benefits	5 pts
3.	Commitment Funds	20 pts
4.	Size of Applicant/Rural Small Business	10 pts
5.	Previous Grantee	15 pts
6.	Simple Payback	15 pts
7.	State Director/Administrative Points	10 pts

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

Through EQIP, NRCS supported eight anaerobic digesters in FY 2015 and one in the first quarter of FY 2016.

Livestock Partnerships

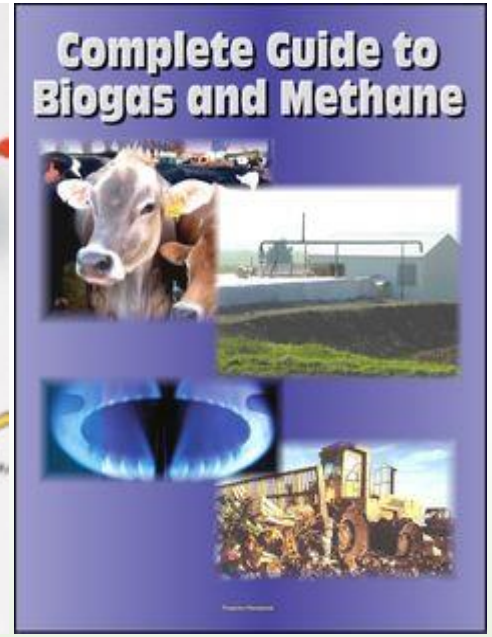
Metrics for anaerobic digesters and flaring lagoon covers is measured in million metric tons of CO_2 equivalent saved.

Each anaerobic digester is estimated to save a minimum of 8,800 MT per year

Flared gas from manure storage is estimated to be 5.83 T per dairy animal and 0.9 T per market hog

Since FY 2003, Rural Development has provided grants or loans for 146 digesters with a total investment of $499 million. Those digesters have reduced emissions equivalent to 72,923 MMTCO2E annually. Under the 2014 Farm Bill, the REAP program has budgetary authority for $50 million per year, some of which may be eligible to be used for furthering digester/electric generation facilities, depending on funding priorities as determined on a competitive basis.

Recommended procedures



If you're considering a project, the best path is to talk to EPA AgStar, NRCS, and RD. Attend an AgSTAR Workshop and determine if an Anaerobic Digester is feasible, if it makes sense from the standpoint of feedstock resources, and from reasonable revenue projections.