



Manure to Energy Initiative: Financing Inventory for Delaware, Maryland, Pennsylvania, Virginia, and West Virginia

Prepared for the
National Fish and Wildlife Foundation

*Prepared by the University of Maryland
Environmental Finance Center (EFC)
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*This document was prepared by: **Environmental Finance Center***

The Environmental Finance Center (EFC) is located at the National Center for Smart Growth Research and Education at the University of Maryland in College Park. The EFC is a regional center developed to assist communities and watershed organizations in identifying innovative and sustainable ways of implementing and financing their resource protection efforts throughout the Mid-Atlantic region, particularly for the Chesapeake Bay watershed. The EFC is non-advocacy in nature and has assisted communities and organizations in developing effective sustainable strategies for specific watershed protection goals for a variety of clients including state and local governments, watershed organizations, and land trusts.

*About the project: **Manure to Energy Initiative***

Support for the Manure to Energy Initiative is generously provided by a USDA Conservation Innovation Grant and by a grant from the National Fish and Wildlife Foundation, with matching funds from the Chesapeake Bay Funders Network and from participating farmers and technology vendors.

The Initiative is a collaboration to demonstrate technologies in on-farm systems which, through thermochemical conversion (such as combustion and gasification), convert poultry litter to heat and/or electrical energy, with ash as the principal co-product for incorporation in fertilizer. The goal is to develop options for farmers, which increase their net revenue and reduce sediment and nutrient movement to local waters and the Chesapeake Bay. EFC is a project partner working mainly on financing options for farmers who are adopting or may adopt a gasification technology for their farm system.

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Introduction

This document is meant to be a guide for anyone interested in the thermochemical conversion of poultry litter to heat and/or electricity to aid in the restoration of the Chesapeake Bay Watershed. Farms in Delaware, Maryland, Pennsylvania, Virginia, and West Virginia are the specific focus. Information is provided about possible funding and financial resources in the form of grants, loans, loan guarantees, cost share programs, and other miscellaneous opportunities. The information was compiled with help from numerous stakeholders, including various Federal and state agencies and farmers who are in the process of adopting a manure to energy technology.

Eligible federal and state resources are listed under the agency that administers them. Each section of this document includes an introduction to provide an overall summary and general guidance for the particular area of interest. Valuable technical and informational resources are included within the document and will be identified in the introduction of each section. These contacts can provide invaluable knowledge and act as advisors during the funding and development process.

Since this field is growing, there are a limited number of resources available; however, it is expected that more programs will be created as interest in the technologies grow. Therefore, this is meant to be a living document that will be updated or amended as new opportunities for poultry litter technology develop. For more information on any of the programs, interested parties should direct questions to the contact associated with each program.

Please refer any questions or comments about this document to efc.umd@gmail.com.



Federal Funding

Funding for the thermochemical conversion of poultry litter to heat and/or electricity is primarily available through the USDA Rural Development, the USDA Natural Resources Conservation Service, and the USDA Farm Service Agency at the federal level. Grants, loans, loan guarantees, and cost share programs are available through these organizations. In some cases, federal resources will provide a certain percentage of funding and state organizations can aid in contributing the rest. In addition, Small Business Development Centers can be a good place to start when beginning the process of financing and acquiring new technology. Farmers who have installed or are currently installing manure to energy technology on their farms recommended this resource. This section should be used in-conjunction with the banks and lending institutions, organizations, and individual state sections to provide a comprehensive view of the financing and technical resources for farmers interested in adopting this technology.

USDA Rural Development

Rural Energy For America Program (REAP) Grants—Renewable Energy Systems (RES) and Energy Efficiency Improvement Program (EEI)

Type: Grant

Website: <http://www.rurdev.usda.gov/rbs/busp/9006grant.htm>

The program provides grants for energy audits and renewable energy development assistance. It also provides funds to agricultural producers and rural small businesses to purchase and install renewable energy systems and make energy efficiency improvements. Eligible renewable energy projects include projects that produce energy from wind, solar, biomass, geothermal, hydropower and hydrogen-based sources. The projects can produce any form of energy including, heat, electricity, or fuel. The grants are awarded on a competitive basis and can be up to 25% of total eligible project costs. Grants are limited to \$500,000 for renewable energy systems and \$250,000 for energy efficiency improvements. Applications are accepted on a yearly basis by a predetermined date.

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Rural Energy for America Program/Feasibility Grant Program**Type:** Grant**Website:** <http://www.rurdev.usda.gov/rbs/busp/REAPFEAS.htm>

The REAP/Feasibility Grant Program provides grants for energy audits and renewable energy development assistance. It also provides funds to agricultural producers and rural small businesses to conduct feasibility study for a renewable energy system. Eligible feasibility studies for renewable energy systems include projects that will produce energy from wind, solar, biomass, geothermal, hydropower and hydrogen-based sources. The energy to be produced includes, heat, electricity, or fuel. The grants are awarded on a competitive basis and can be up to 25% of total eligible project costs. Grants are limited to \$50,000 for renewable energy feasibility studies. Applications are accepted on a yearly basis by a predetermined date.

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Rural Energy for America Guaranteed Loan Program

Type: Loan

Website: <http://www.rurdev.usda.gov/rbs/busp/9006loan.htm>

This program encourages the commercial financing of renewable energy and energy efficiency. Project developers work with local lenders, who then apply to USDA Rural Development for a loan guaranteed up to 85% of the loan amount. The loan cannot exceed 75% of the project cost and the maximum loan is \$25 million. National and state chartered banks, Farm Credit System Banks, savings and loan associations, and other lenders approved by the USDA are eligible. Eligible project costs include post-application purchase and installation of equipment, construction or improvements; energy audits or assessments; permit or license fees; professional service fees; feasibility studies and technical reports; business plans; retrofitting; construction of a new energy efficient facility; working capital; and land acquisition.

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Or contact your local USDA Rural Development office here:

http://www.rurdev.usda.gov/recd_map.html

USDA Value Added Producer Grants

Type: Grant

Website: http://www.rurdev.usda.gov/BCP_VAPG_Grants.html

This program provides competitive grants to agricultural producers to create or develop value-added producer-owned businesses. The term “value-added” includes an agricultural commodity or product that has undergone a change in physical state or was produced, marketed, or segregated (e.g. identity-preserved, eco-labeling, etc.) in a manner that enhances its value or expands the customer base of the product. Grants may be used to develop business plans and feasibility studies or acquire working capital to operate a value-added business venture or



alliance. The grants provide a maximum of \$100,000 for planning and \$300,000 for working capital grants. Cash and/or in-kind matching funds are required, must be at least equal to the amount of Federal funds awarded, and must be expended in advance. Applications are accepted on a yearly basis by a predetermined date. A confirmation of matching funds must be submitted with the application.

Note: *Although it does not say so specifically, manure to energy programs are eligible for funding.*

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Business and Industry Loan Guarantee Program

Type: Loan Guarantee

Website: <http://www.rurdev.usda.gov/ne/gbifsht.pdf>

The B&I Loan Guarantee program guarantees loans made by eligible local lenders to businesses to benefit rural areas. The program's primary purpose is to create and maintain employment and improve the economic and environmental climate in rural communities. USDA Rural Development typically guarantees loan amounts up to \$10 million, but the Administrator may guarantee loans up to \$25 million under special circumstances. The Secretary may approve guaranteed loans in excess of \$25 million, up to \$40 million, for rural cooperative organizations that process value-added agricultural commodities. The maximum percentage of guarantee is 80 percent for loans of \$5 million or less, 70 percent for loans between \$5 and \$10 million, and 60 percent for loans exceeding \$10 million. Eligible uses include business and industrial acquisitions, construction, conversion, expansion, repair, modernization, or development costs; purchase of equipment, machinery or supplies; startup costs and working capital; processing and marketing facilities; pollution control and abatement; refinancing for viable projects, under certain conditions; and purchase of startup cooperative stock. Interested applicants should contact their local USDA Rural Development office.



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Or contact your local USDA Rural Development office here:

http://www.rurdev.usda.gov/recd_map.html

USDA Natural Resources Conservation Service

National Conservation Innovation Grants (CIG)

Type: Grant

Website: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig>

CIG is a voluntary program used to encourage the development and adoption of innovative conservation methods and technologies that tackle specific deep-rooted agricultural problems. Applications for this grant are accepted until a pre-determined date each year. Environmental Quality Incentive Program (EQIP) funds are used to award CIG grants to non-Federal governmental or nongovernmental organizations, tribes, or individuals. CIG will fund single and multi-year projects, not to exceed 3 years through a nationwide competitive grants process. Along with the national CIG grant, there is a state component. Interested applicants may apply for both the national and state CIG grants, but can only receive funding for one. More funding is available at the national level than the state and the overall funding amount varies from year to year.

Contact:

Interested applicants should contact their local NRCS office listed below

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Environmental Quality Incentives Program (EQIP)

Type: Cost share

Website: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip>

EQIP is a voluntary, competitive cost share program that provides financial and technical assistance to agricultural producers through contracts from one to ten years in length. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve resources on agricultural land and non-industrial private forestland. EQIP payments are limited to 75 percent of the practice costs, but farmers may receive 100 percent payment for any income that may be foregone as a result of practice installation. A maximum of \$300,000 can be received per person or legal entity through EQIP over a 6-year period. Projects of special environmental significance determined by the USDA can petition for up to \$450,000. Applicants are ranked and chosen based on criteria developed by both NRCS National Headquarters and NRCS State Conservationists. The ranking criteria are determined on a state-to-state basis. Many specific features of EQIP are determined by NRCS State Conservationists and therefore, you should contact your local NRCS office for more information.

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Chesapeake Bay Watershed Initiative (CBWI)

Type: Cost share

Website: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/home>

Applications for CBWI, a cost share program, are accepted continuously throughout the year to be evaluated, ranked, and prioritized based on their potential to control erosion and reduce sediment and nutrient levels in local waters and the Chesapeake Bay. Agricultural producers who live within the Chesapeake Bay Watershed are eligible to apply for technical and financial assistance. Those located within particular watersheds will be designated as high priority for funding. The CBWI will fund 75% of a project, and the farmer has to pay the other 25% of costs. Funding is generally limited to \$300,000, but with special permission, a farmer could receive \$450,000.

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USDA Farm Service Agency (FSA)

Farm Ownership Loans

Type: Loan

Website: http://www.fsa.usda.gov/Internet/FSA_File/loans11.pdf

FSA's loan programs are designed to help family farmers obtain loans and loan guarantees, and conduct business planning. In general, loan funds may be used to purchase a farm, enlarge an existing farm, construct new farm buildings and/or improve structures, pay closing costs, and promote soil and water conservation and protection. Eligible applicants may obtain direct loans up to a maximum indebtedness of \$300,000. Maximum indebtedness for guaranteed loans is \$1,119,000. The maximum repayment term is 40 years for both direct and guaranteed farm ownership loans.

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Farm Storage Facility Loan Program

Type: Loan

Website: http://www.fsa.usda.gov/Internet/FSA_File/farmstorage_fac_loan.pdf

This loan program provides low-interest financing for producers to build or upgrade farm storage and handling facilities. Eligible commodities include soybeans, peanuts, hay, renewable biomass, pulses, oilseeds, corn, grain sorghum, oats, wheat, barley, fruits, and vegetables. Also included are new structures suitable for storing renewable biomass built according to acceptable industry guidelines and having a useful life of at least 15 years. The maximum loan is \$500,000 with a 15% cash down payment required, limiting the loan to 85% of the net cost of the eligible storage facility.

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Conservation Loan Program

Type: Loan

Website: http://www.fsa.usda.gov/Internet/FSA_File/consv_loan_pf_20120306.pdf



FSA makes and guarantees loans to promote conservation on farms and ranches in an attempt to conserve natural resources by helping farmers access credit to implement conservation practices. Funds can be used to implement NRCS approved conservation practices targeted to reduce soil erosion, improve water quality, and promote sustainable and organic agricultural practices. This includes manure management, manure digestion systems, and adaptation of other emerging or existing conservation practices, techniques, and technologies. Direct loans up to \$300,000 and loan guarantees up to \$1,119,000 may be available by applying with lenders working with FSA.

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Email: Alfred.lewis@wv.usda.gov

Pennsylvania

Bill Wehry
Phone: (717) 237-2117
Email: bill.wehry@pa.usda.gov

Or contact your local FSA office here:

<http://www.fsa.usda.gov/FSA/stateOffices?area=stoffice&subject=landing&topic=landing>

Small Business Administration

Small Business Development Centers (SBDC)

Type: Misc

Website: <http://www.sba.gov/content/small-business-development-centers-sbdc>

Small Business Development Centers (SBDC) are administered by the Small Business Administration and are partnerships between the government and colleges or universities. Contacting your local SBDC office is a good place to start when beginning the process of financing and acquiring new technology. Entrepreneurs or small business owners can contact their local SBDC to receive help to start or expand their business. SBDCs provide technical assistance, help develop business plans, and search for funding sources among other services. SBDC provides assistance for finding funding sources, but doesn't provide funding themselves. All services are free and confidential. Offices are located in all 50 states and each state has multiple local offices. Some offices have specialists that focus on particular issues like



agriculture or renewable energy; however, this varies by state.

Contact your local SBDC office here:

- Delaware: <http://www.dsbtcd.org/default.aspx>
- Maryland: <http://www.mdsbdc.umd.edu/>
- Pennsylvania: <http://www.pasbdc.org/>
- Virginia: <http://www.virginiasbdc.org/>
- West Virginia: <http://wvsbdc.wvcommerce.org/default.aspx>

Banks and Lending Institutions

This is not an all-inclusive list of banks and lending institutions in the Chesapeake Bay Watershed, but it focuses on institutions with agricultural specialists. Banks, including BB&T, PNC, Fulton, and Susquehanna, work in the region and provide loan opportunities directed specifically to the needs of agricultural producers. In addition, the Farm Credit System is a nationwide network of borrower-owned lending institutions and specialized service organizations geared specifically to the needs of farmers. Farm Credit branches in the Chesapeake Bay Watershed include MidAtlantic Farm Credit, Farm Credit of the Virginias, Colonial Farm Credit, and Ag Choice Farm Credit. A local bank in your area with which you have a history is also a valuable resource and can provide similar opportunities to those listed here.

BB&T Bank

Website: <http://www.bbt.com/business/products/agribusiness/default.html>

BB&T Bank has about 1,800 branches in 12 states and Washington, DC. This includes Maryland, Virginia, and West Virginia. In West Virginia, BB&T ranks number one in financial market share. It is the top small business lender in Virginia. BB&T has a special division that handles agricultural projects. Financing is available for a variety of agribusiness needs including warehouse operations, grain storage, agricultural products, agricultural supplies, farm machinery, livestock production, equipment purchases, and agricultural land purchases. Loans can be structured on a revolving, seasonal, or term basis, and repayment can be structured to work with your cash flow.

Contact:

Heath W. Campbell
Senior Vice President
10260 Baltimore Avenue, 2nd Floor
College Park, MD 20740
Phone: (301) 513-5848
Fax: (301) 513-0846
HCampbell@BBandT.com



PNC Bank

Website:

<https://www.pnc.com/webapp/sec/ProductsAndService.do?siteArea=/pnccorp/pnc/home/small+business/agriculture/agriculture+solutions>

PNC Bank operates approximately 2,500 branches in 16 states and Washington, DC. This includes Delaware, Maryland, Pennsylvania, Virginia, and West Virginia. PNC Bank has a division specifically dedicated to agriculture. In the Chesapeake Bay Region, bankers specializing in agriculture are located exclusively in Maryland and Pennsylvania. However, bankers in the other states are able to assist with agricultural needs. PNC helps farms finance crops, livestock, and major equipment purchases among other things. Loan requirements include credit rating, 3+ years of tax returns, financial statements, personal assets, equipment costs, and collateral (usually real estate). PNC works on a case-by-case basis and loan repayments must be demonstrated out of current cash flows (i.e. without the new technology).

Contact:

Maryland

Andrew McLean
Vice President for Agricultural Banking
211 High Street, Chestertown, MD 21620
Phone: (410) 778-7514
Email: andrew.mclean@pnc.com

West Central PA
Mike Dixon
Hanover, PA
Phone: (717) 524-2109
Email: michael.dixon@pnc.com

Pennsylvania

Central PA
Stan Michonski
Lancaster, PA
Phone: (717) 481-7109
Email: stanley.michonski@pnc.com

East Central PA
Ken Darlington
Christiana, PA
Phone: (610) 593-7208
Email: kenneth.darlington@pnc.com

Fulton Bank

Website: <http://www.fultonbank.com/viewpage.asp?n=262>

Fulton Bank operates 115 offices in Delaware, Pennsylvania, and Virginia. It has been active in south central Pennsylvania since 1882. Fulton Bank has an agricultural section that specializes in agricultural lending and leasing. There are officers in some counties in Delaware and Pennsylvania that specialize in agricultural lending. Funds are available for lines of credit, term loans, operating expenses, livestock and poultry financing, loans for Improvements, production facilities and expansion projects, and leasing of equipment.

Contact:

Delaware

Coverage Area: New Castle and Sussex Counties
Delaware Agricultural Lender: 1-877-362-1570



Pennsylvania

Coverage Area: Berks, Bucks, Centre, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Montgomery, Schuylkill, and York Counties

Lancaster Agricultural Lender: John Moose, 717-291-2844

Lebanon Agricultural Lender: Mike Firestine, 717-274-6906

Reading Agricultural Lender: Travis Werley, 610-898-8323

State College Agricultural Lender: Barry Sands, 570-743-8515

Virginia

Coverage Area: Cities of Charlottesville, Chesapeake, Herndon, Manassas, Newport News, Richmond, and Virginia Beach

Susquehanna Bank

Website: <http://www.susquehanna.net/BusinessBanking/BusinessCreditSolutions/AgriculturalServices.aspx>

Susquehanna Bank has 250 office locations in the Mid-Atlantic Region. Offices are located in 19 counties in Pennsylvania, 9 counties in Maryland, and Berkeley County in West Virginia.

Susquehanna Bank has a division that includes agri-specialists to help with the specific lending needs of agricultural projects. Services include credit and lending, leasing, cash management, investments, and wealth management.

Contact:

Pennsylvania

Main Office: Lancaster, PA

1570 Manheim Pike

PO Box 3300

Lancaster, PA 17604-3300

Phone: (717) 735-8730

Farm Credit System

Website: <http://www.farmcreditnetwork.com/>

The Farm Credit System is a nationwide network of borrower-owned lending institutions and specialized service organizations. They provide more than \$160 billion in loans, leases, and related services for farmers, ranchers, rural homeowners, aquatic producers, timber harvesters, agribusinesses, and agricultural and rural utility cooperatives. They have more than 12,000 employees and coverage in every county in all 50 states plus Washington, DC and Puerto Rico.

MidAtlantic Farm Credit

Website: <http://www.midatlanticfarmcredit.com/>

MidAtlantic Farm Credit is one of the largest agriculture lenders on the East Coast. They have a variety of loan options including: long-term loans with a payment schedule up to 30 years,



short-term loans, and intermediate term loans with payment schedules from 1 to 10 years. Real estate purchases, construction loans, farm improvements, labor costs; feed, fertilizer, and operating expenses; operation expansion, machinery and equipment purchases, lot loans, refinance of short-term debts, fencing, and home improvements are eligible for funds. Low-interest loans are also available for the implementation of best management practices.

Contact:

Kenny Bounds

MidAtlantic Farm Credit; Vice President, Business Development & Government Affairs

379 Deep Shore Road

Denton, MD 21629

Office: (410) 479-2323

Cell: (410) 430-1001

Fax: (410) 479-3345

Email: kbounds@mafc.com

Coverage Area

- Find your local office here: <http://www.mafc.com/loans-branch.asp?mapage=locations>
- Delaware—all 3 counties
- Maryland—Mid-MD Region and Delmarva Region: 19 counties
- Pennsylvania—Penn Region: 15 counties
- Virginia—Shenandoah Valley Region: 5 counties
- West Virginia—Valley Region: 3 counties (Morgan, Berkeley, and Jefferson counties)

Farm Credit of the Virginias, ACA

Website: <http://www.farmcreditofvirginias.com/>

The Farm Credit of the Virginias is a financial cooperative owned by its member-borrowers since 1917. Long-term, intermediate-term, and short-term loans are available for farms, machinery, equipment, land, construction, livestock, and improvements among other purposes. A portion of the profits generated from lending activity is returned to borrowers in the form of patronage refunds.

Contact:

Trey Kaiser

Romney Office

Phone: (304) 822-4414

Find your local branch here:

<http://www.farmcreditofvirginias.com/loan-office-locations.asp>

Coverage Area

- Largest branch is Harrisonburg, VA (based on percentage of loans given)
- Maryland-Garrett County
- Virginia—44 counties (mostly in Northern and Western VA)
- West Virginia—48 counties (all of WV except Morgan, Berkeley, Jefferson, Marshall, Ohio, Brooke, and Hancock Counties)



Colonial Farm Credit**Website:** <http://www.colonialfarmcredit.com/>

Colonial Farm Credit operates in 50 counties in Maryland and Virginia. It provides loans for land purchases, improvements, buildings, machinery, livestock, and equipment among other things. Their programs are designed for and by people living and working in rural areas or small communities.

Contact:

Find your local branch here: <http://www.colonialfarmcredit.com/locations.html>

Coverage Area

- Largest offices are Mechanicsville and Farmville (based on percentage of loans given)
- Maryland—5 counties (Calvert, Charles, Anne Arundel, Prince George's, St. Mary's)
- Virginia—45 counties in Eastern VA

Ag Choice Farm Credit, ACA**Website:** <http://www.agchoice.com/>

Ag Choice Farm Credit has almost \$1.4 billion in gross loan assets. Some members of the staff specialize in dairy and poultry farming. Loans are available for both agriculture and equipment. They have an active patronage program. It has paid back \$140.7 million to borrowers who purchased stock or participation certificates in the cooperative and, as a result, became customer-owners.

Contact:

Find your local branch here: <http://www.agchoice.com/about/about-us>

Coverage Area

- Pennsylvania—52 counties in Central, Western, and Northern PA
- West Virginia—4 counties (Hancock, Brooke, Ohio, and Marshall Counties; the Northern arm of WV)
 - The New Stanton Office in Pennsylvania works with the 4 counties in WV



Organizations

The organizations listed below can provide valuable knowledge and guidance for poultry litter-to-energy technology projects. AgSTAR focuses exclusively on anaerobic digestion, but may expand to poultry litter in the future. The Department of Energy's Database of State Incentives for Renewables and Efficiency (DSIRE) is a resource for the most up-to-date information on incentives and policies at the federal and state level. The USDA Energy Website provides information on projects that the USDA has invested in and possible funding opportunities. The eXtension provides knowledge from various qualified stakeholders on animal manure management and includes the Livestock and Poultry Environmental Learning Center for information specifically related to poultry. The EPA-Green Power Partnership encourages the purchase of green power and could be a useful program for farmers installing technology that can produce energy.

EPA - AgSTAR

Website: <http://www.epa.gov/agstar/>

AgSTAR is an outreach program supported by the Environmental Protection Agency, U.S. Department of Agriculture, and U.S. Department of Energy that promotes the use of biogas recovery systems in order to reduce methane emissions from livestock waste management operations. Currently, AgSTAR's sole focus is on anaerobic digestion, but there is a possibility of future expansion. A variety of information is available through this database including technical knowledge, possible federal and state funding sources, expert contact information, and profiles of farms presently using anaerobic digesters. Those interested in adopting this technology on their farm can contact AgSTAR to conduct a pre-feasibility study to decide if anaerobic digestion is a viable option. Individual applicants can also use FarmWare, a free analytical software available for download on the AgSTAR website, to conduct a pre-feasibility study on their own. However, in both cases an engineer must conduct a detailed feasibility study before design and construction can begin.

Department of Energy - Database of State Incentives for Renewables and Efficiency (DSIRE)

Website: <http://www.dsireusa.org/>

DSIRE is funded by the U.S. Department of Energy. It is a comprehensive source of information on federal, state, local, and utility incentives and policies that promote renewable energy and energy efficiency. DSIRE identifies financial incentives that include tax incentives, rebates, industry recruitment/support, grants, loans, green building incentives, performance-based incentives, and other incentives, as well as, rules, regulations, and policies. All federal resources are compiled together and resources can be searched by state. Each resource includes a description, eligibility requirements, and contact information. Links to other useful resources can be accessed on the website.



USDA - United States Department of Agriculture Energy Website

Website: <http://usda.gov/wps/portal/usda/usdahome?navid=ENERGY>

The USDA Energy website compiles useful information and tools to make it easier to access energy resources. The main page links to state energy office locations. Information can be accessed with three tools: Energy Investments Map, USDA Energy Matrix, and the Renewable Energy Tool. The Energy Investments Map is an interactive map that lets users explore the areas where USDA is providing investment support for renewable and sustainable energy initiatives. Users can identify energy projects by type, state, and county. In addition, they can download reports for different energy technologies that identify particular investment projects and their funding source. The USDA Energy Matrix allows users to search for alternative and affordable energy solutions, funding for projects, available programs and program information, or research and development. The Renewable Energy tool is still in development, but currently users can access a map of energy resources and contact information for additional energy organizations.

eXtension

Website: <http://www.extension.org/>

Acting as an interactive learning environment, eXtension delivers knowledge from the smartest land-grant university minds across the U.S. The website provides credible expertise and research on a variety of topics including farm energy and animal manure management. The goal of the organization is to provide data to solve real-life problems in real time. Connections are made to both scholarly research and news articles on many topics. If the broad library of information does not answer a users particular question, they can send a question to one of eXtension's experts. There is also a database of learning lessons that users can enroll in to delve further into a topic of interest. Users can navigate between eXtension offices in states and university offices. The Livestock and Poultry Environmental Learning Center (LPELC) can be found within the Animal Manure Management section of eXtension. The LPELC provides information on various poultry issues through newsletters, webcasts, and other resources. The LPELC can be found at http://www.extension.org/animal_manure_management.

Contact:

Delaware

University of Delaware & Delaware State
University Cooperative Extension
<http://ag.udel.edu/extension/>

Maryland

University of Maryland
<http://extension.umd.edu/>
University of Maryland, Eastern Shore
<http://www.umes.edu/1890%2Dmce/>

Pennsylvania

Pennsylvania State University
<http://www.extension.psu.edu/>

Virginia

Virginia Cooperative Extension-Virginia
Polytechnic Institute and Virginia State
University
<http://www.ext.vt.edu/>



West Virginia

West Virginia State University

<http://www.wvstateu.edu/>

West Virginia University

<http://www.wvu.edu/%7Eexten/>**EPA-Green Power Partnership****Contact:**

Blaine Collison

(202) 343-9139

collison.blaine@epa.gov

Mollie Lemon

(202) 343-9859

lemon.mollie@epa.gov

Matt Clouse

(202) 343-9004

clouse.matt@epa.gov**Website:** <http://www.epa.gov/greenpower/>

The Green Power Partnership is a program established by the EPA to encourage the purchase of green power. The partnership is used to help organizations acquire green power by offering expert advice, technical support, tools, and resources. Green power includes electricity produced from a subset of renewable resources, including solar, wind, geothermal, biomass, and low-impact hydro. Organizations must meet minimum purchase requirements based on their total annual energy use. There is potential to include electricity produced from manure to energy technology in the future. By taking part in this partnership, organizations would be able to expand the market for renewable energy resources.



Delaware

Financing opportunities for thermochemical conversion of poultry litter to heat and/or electricity in Delaware are limited. Delaware hosts a Nutrient Management Relocation Program, Poultry Best Management Practices Loan Program, and net metering. Recently funding for the Nutrient Management Relocation Program was increased to encourage the transportation of manure to areas that have a need for it. The Delaware Department of Natural Resources and Environmental Control (DNREC) has some funding available for manure to energy technology and should be contacted directly. Net metering provides retail credit for farms that produce energy using poultry litter-to-energy projects.

Farmers interested in poultry litter technology should also contact their local bank for available funding opportunities (see Banks and Lending Institutions section). Other agencies including your local Small Business Development Center (SBDC), local Natural Resources Conservation Service (NRCS) office, and eXtension can provide invaluable knowledge when beginning the process of financing and acquiring new technology (see Federal and Organization sections). As interest in manure to energy technology grows in Delaware, these opportunities may grow.

Delaware Department of Agriculture-DE Nutrient Management Commission

Contact:

Larry Towle
Program Administrator
2320 South DuPont Highway
Dover, Delaware
Phone: (302) 698-4555
Email: Larry.Towle@state.de.us

Nutrient Management Relocation Program

Type: Misc

Website: http://dda.delaware.gov/nutrients/nm_reloc.shtml

The Nutrient Management Relocation Program is a cost assistance program that enables farmers in Delaware to transport their excess manure to farmers in need of nutrients for crop production or to approved alternative use projects. The Delaware Nutrient Management Commission directs this program. Starting June 1, 2012, the reimbursement rate to farmers will increase. Manure being moved from one farm to another or from a farm to an alternative project site where manure is needed will receive a rate of 16 cents per ton-mile with a cap of \$18 per ton. Manure being moved from an alternative use project off the Delmarva Peninsula will receive a rate of 6 cents per ton-mile with a cap of \$10 per ton. The service identifies manure providers, as well as, receivers and the amount of supply available or needed. Contact information for brokers and transporters is available to aid in relocating the excess manure.



Delaware Department of Natural Resources and Environmental Control (DNREC)
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Contact:

Sharon Webb
 Nonpoint Source Program
 Div. of Soil and Water Conservation
 Phone: (302) 739-9922
 Email: sharon.webb@state.de.us

Michelle Jacobs
 Kent Conservation District
 Phone: (302) 741-2600 ext. 115

Deanna Bradley
 Sussex Conservation District
 Phone: (302) 856-3990 ext. 109

The DNREC's mission is to protect and manage natural resources, educate citizens about conservation, provide quality outdoor recreation, and protect public health and safety. Currently, manure to energy technology is eligible for some of the department's loans, grants, and cost-share programs.

Poultry Best Management Practices Loan Program

Type: Loan

Website: <http://www.dnrec.state.de.us/water2000/Sections/FAB/FABPoultryBMP.htm>

This program provides low-interest financing for managing poultry manure, dead poultry, and other sources of poultry related pollution in an environmentally sound and cost-effective manner to reduce pollution. Any poultry producer is eligible to apply if they have a grower contract with Allens Hatchery, Inc., Mountaire Farms of Delmarva, Inc., Perdue Farms, Inc., Townsends Inc., and Tyson Foods. Projects eligible for loans include: construction of poultry manure storage structures, construction of dead-bird composters, purchase of a front-end loader or bucket attachment for use in dead-bird composting, purchase of a calibratable spinner manure spreader, purchase of nutrient reduction equipment, purchase of precision farming equipment as part of a precision farming system, and purchase of composting equipment for on-farm composting of poultry litter and dead-bird carcasses. The minimum loan amount is \$1,000 and the maximum is \$60,000 at an interest rate of 3% for 1 to 7 years. Cost share dollars may be available.

Delaware Public Service Commission

Contact:

John Farber
 Delaware Public Service Commission
 861 Silver Lake Blvd.
 Cannon Bldg., Suite 100
 Dover, DE 19904
 Phone: (302) 736-7500
 Fax: (302) 739-4849
 Email: john.farber@state.de.us



Delaware Net Metering

Type: Misc

Website: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=DE02R&RE=1&EE=1

In Delaware, all utilities are required to offer net metering for residential and non-residential customers with eligible systems including agricultural sectors. Eligible technologies include photovoltaics, wind, biomass, hydroelectric, fuel cells, anaerobic digestion, small hydroelectric, and fuel cells using renewable fuels. The system capacity limit for non-residential Delmarva Power and Light (DP&L) customers is 2 MW, while it is 500 kW for non-residential Delaware Electric Cooperative (DEC) and municipal utility customers. Limits are 25 kW for all residential customers and 100kW for all farm customers on residential rates. It is important to note that while state law requires the DEC and municipal utilities to offer net metering under certain terms, the administrative rules adopted by order of the Delaware Public Service Commission (PSC) only apply to DP&L. The aggregate capacity limit is 5% of peak demand, but utilities may increase the limit. Utilities must provide net-metered customers with electric service at nondiscriminatory rates identical to customers that do not net meter. Customers are allowed to aggregate individual meters, as well as participate in net metering via a community-owned system. Net metering can provide up to 110% of a customer's expected aggregate electricity consumption. Excess generation will be credited to the customer's next bill at retail rate and, after a year, the customer can roll over the credit or receive payment for credit at the energy supply rate.



Maryland

Various tax credits, grants, and loans; a manure transport program; and net metering are available in Maryland for the thermochemical conversion of poultry litter to heat and/or electricity. The Maryland Energy Administration (MEA), Maryland Department of Agriculture (MDA), and Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO) have funding available and can provide up-to-date information on any changes in programs for poultry litter-to-energy projects. The Maryland Public Service Commission regulates net metering, which provides retail credit for farms that produce energy using poultry litter-to-energy projects.

Farmers interested in poultry litter-to-energy projects should also contact their local bank for available loan and loan guarantee opportunities (see Banks and Lending Institutions section). Other agencies including your local Small Business Development Center (SBDC), local Natural Resources Conservation Service (NRCS) office, and eXtension can provide invaluable knowledge when beginning the process of financing and acquiring new technology (see Federal and Organization sections).

Future changes in the requirements for nutrient reductions in the Chesapeake Bay Watershed may impact the funding available for this technology. Upcoming proposals to the Maryland General Assembly in the summer of 2012 may lead to increased funding in the coming years.

Maryland Energy Administration

Contact:

Chris Rice

Maryland Energy Administration

Phone: (410) 260-7207

Email: crice@energy.state.md.us

Clean Energy Production Tax Credit (Personal & Corporate)

Type: Tax Credit

Website: <http://energy.maryland.gov/Business/CleanEnergyTaxCredit.html>

Biomass resources eligible for the tax credit include anaerobic digestion, landfill gas, wastewater-treatment gas, and cellulosic material derived from forest-related resources, from waste pallets and crates, or from agricultural sources. To qualify, a facility that "primarily uses" eligible resources to generate electricity must (1) be placed in service on or after January 1, 2006, but before January 1, 2016, or (2) generate electricity from an eligible resource that is co-fired with coal and initially begins co-firing an eligible resource on or after January 1, 2006, but before January 1, 2016, regardless of when the original facility was placed in service. An individual or corporation can claim a tax credit from the MEA equal to \$0.0085/kWh for electricity generated by eligible resources or \$0.005/kWh for electricity generated by co-firing for a 5-year period. The MEA can only issue initial credit certificates for amounts of \$1,000 or more and no greater than \$2.5 million. Credits are issued on a first-come, first-served basis and will not be issued after December 31, 2015.



Strategic Energy Investment Fund: Grants for Alternative Fuels & Renewable Energy

Type: Grant

Website: <http://www.gov.state.md.us/pressreleases/080408FactSheet.pdf>

The MEA uses SEIF to offer a range of incentives and resources directly to Maryland consumers, businesses and communities to help decrease energy bills and increase the supply of clean, renewable energy. SEIF funds are raised through the Regional Greenhouse Gas Initiative (RGGI) auctions of CO2 credits to private industry. Virginia and Pennsylvania are not members of RGGI. As of December 2010, Maryland received \$147,530,363 in proceeds from the sale of CO2 credits at auction since 2008.

Note: *Manure to energy technology qualifies for this program, but in the past other technologies, like wind and solar, have been prioritized over it. However, SEIF provided funds for the digester at the Eastern Correctional Institution. Also, funds were dedicated for a \$100,000 farm digester project, but the project fell through.*

Maryland Department of Agriculture

Contact:

Norman Astle

Phone: (410) 841-5834

Email: astlene@mda.state.md.us

Manure Transport Program

Type: Grant

Website:

http://www.mda.state.md.us/resource_conservation/financial_assistance/manure_management/index.php

The Manure Transport Program helps poultry, dairy, beef and other animal producers cover the costs of transporting excess manure off their farms. Animal producers with high soil phosphorus levels or inadequate land to spread their manure can receive cost-share assistance of up to \$20 per ton to transport excess manure to other farms or alternative use facilities that can use the product safely. To support Maryland's goal of transporting 20 percent of the poultry litter produced on the Lower Eastern Shore to other regions, cost-share rates are 20 percent higher for farms located in Dorchester, Somerset, Wicomico or Worcester counties.

Maryland Agricultural & Resource-Based Industry Development Corporation (MARBIDCO)

Contact:

Kristen Robinson

1410 Forest Drive, Suite 28

Annapolis, MD 21403

Phone: (410) 267-6807

Fax: (410) 267-6809

Email: krobinson@marbidco.org

Stephen McHenry

Executive Director MARBIDCO

Phone: (410) 267-6807

Email: smchenry@marbidco.org



Maryland Value Added Producer Matching Grants for Capital Assets

Type: Grant

Website: <http://www.marbidco.org/business/mvapg.html>

Maryland Value Added Producer Matching Grants (MVAPMG) are available through MARBIDCO to help eligible applicants meet the non-federal financial matching requirement for competitive USDA-Value Added Producer Grants (VAPG). Grants up to 20% of the amount of a federal award are available. Applicants that meet MARBIDCO requirements will receive a letter of commitment for matching funds to be included in their federal USDA-VAPG application. Grants will only be awarded to applicants who receive USDA-VAPG funding. VAPG grants are used to encourage Maryland's agricultural producers to expand or diversify their business operations by installing capital assets to make a product that is "value added". Eligible applicants must be a crop or livestock producer or processor, agricultural cooperative, seafood processor, or timber products processor, and have been in business for a minimum of two years. Manure to energy technologies are eligible for funds.

Maryland Resource-Based Industry Financing Fund (MRBIFF)

Type: Loan

Website: <http://www.marbidco.org/loans/mrbif.html>

MRBIFF offers low-interest loans to established Ag/RB industry firms for the purchase of land and capital equipment for production and processing activities, as well as, to help finance environmental or water-quality enhancement projects. MARBIDCO will provide up to 50 percent of financing needed for a project and a commercial lender and/or another public financing instrumentality must finance an equal amount. Up to \$200,000 is available for acquisition of equipment and fixed assets for 5 to 7 years and \$250,000 for real estate purchases, food/meat processing and bioenergy projects for 10 to 30 years. The interest rate is set at 3% APR for 3 years, but will increase after that.

Rural Business Equipment and Working Capital Fund Loan (RBEWCL)

Type: Loan

Website: <http://www.marbidco.org/loans/rbwc.html>

The RBEWCL offers low-interest loans to established Ag/RB-industry firms and producers for working capital and equipment purchases. This program is supported by MARBIDCO (utilizing state funds) and the U.S. Department of Agriculture - Rural Development. In some cases a combination of MARBIDCO and USDA-RD funding will be used; therefore, applicants must receive approval from the State USDA-RD office, which MARBIDCO will help to facilitate. A Commercial Lender endorsement is required and the maximum loan is \$75,000 at an interest rate of 4.75%.



Maryland Public Service Commission

Contact:

Jerry Hughes
Maryland Public Service Commission
6 St. Paul Street, 16th Floor
Baltimore, MD 21202-6806
Phone: (410) 767-8114
Fax: (410) 333-6495
Email: Jthughes@psc.state.md.us

Maryland Net Metering

Type: Misc

Website: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MD03R&re=1&ee=1

Net metering in Maryland identifies photovoltaics, wind, biomass, fuel cells, combined heat and power (CHP)/cogeneration, anaerobic digestion, small hydroelectric, and fuel cells using renewable fuels as eligible technologies. Agriculture is considered an applicable sector. All utilities are required to provide net metering until a statewide capacity limit of 1,500 MW (about 8% of peak demand) is reached. The individual system limit is 2 MW (30 kW for micro-CHP) and the system must be intended to primarily offset all or a portion of a customer's on-site energy requirements. It is also limited in size to meet 200% of the baseline customer electricity usage. Excess generation is credited to the customer's next bill at the retail rate and reconciled annually in April at the commodity energy supply rate. Both physical and virtual aggregation is allowed for agricultural customers, non-profit organizations, and municipal governments or their affiliates. Utilities must offer non-discriminatory rates to net metering customers compared to those offered to customers that do not net meter.

Maryland Clean Energy Center

Contact:

Kathy Magruder
Executive Director, Maryland Clean Energy Center
9636 Gudelsky Drive, Rockville, MD 20850
Phone: 301-738-6280
Email: ikm@mdcleanenergy.org
Website: <http://mdcleanenergy.org/>

The Maryland Clean Energy Center (MCEC) was started in 2008 to encourage the growth of the energy market in Maryland. Their goal is to increase energy related businesses and jobs, as well as, make clean energy technologies, products, and services affordable and viable for Maryland residents. MCEC has a bonding authority and can release a request for proposal (RFP) for projects. This authority has not been used for manure-to-technology to date, but they are interested in the advent of renewable energy from farm animal manure.



Pennsylvania

Loans, loan guarantees, grants, and net metering are available for the thermochemical conversion of poultry litter to heat and/or electricity in Pennsylvania. In the past few years, multiple anaerobic digester projects were funded in PA; this leaves open the opportunity for poultry litter-to-energy projects in the future. The PA Department of Community and Economic Development (DCED) frequently update the funding opportunities available through the department in a searchable database on their website. PENNVEST administers federal and state funding programs in PA, but is not a funding source in itself. The PA Department of Environmental Protection (DEP) works with grant funding available each fiscal year that can be used for poultry litter-to-energy projects among other purposes. The Sustainable Energy Fund and PennCap provide loans and loan guarantees for these projects. The PA Public Utility Commission regulates net metering, which provides retail credit for farms that produce energy using poultry litter technology.

Farmers interested in poultry litter-to-energy projects should also contact their local bank for available loan and loan guarantee opportunities (see Banks and Lending Institutions section). Other agencies including your local Small Business Development Center (SBDC), local Natural Resources Conservation Service (NRCS) office, and eXtension can provide invaluable knowledge when beginning the process of financing and acquiring new technology (see Federal and Organization sections).

PA Department of Community and Economic Development

Contact:

General Contact:

Ryan Emerson
Economic Development Analyst
Department of Community & Economic
Development
Commonwealth Keystone Building
400 North Street, 4th Floor
Harrisburg, PA 17120-0225
Phone: (717) 346-8191

Machinery and Equipment Loan Fund Only:

Private Capital and Loans Office
PA DCED
Commonwealth Keystone Building,
4th Floor
400 North Street
Harrisburg, Pennsylvania 17120-0225
Phone: (717) 787-6245
Fax: (717) 772-2890
Email: ra-dcedloans@state.pa.us

The PA Department of Community and Economic Development (DCED) works to create opportunities and provide assistance for businesses and communities in the state. All funding opportunities available through the department are kept in a database on their website. Interested applicants can search for programs that apply to their particular project. There is a single application used to apply for all funding programs, which also collects information about the applicant's needs in order to find programs that fit their interests.



Alternative and Clean Energy Program

Type: Loan

Website: <http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/alternative-and-clean-energy-program>

The Alternative and Clean Energy Program provides grants and loans to be used for the utilization, development and construction of alternative and clean energy projects in the Commonwealth. The Program is administered jointly by the DCED and the Department of Environmental Protection (DEP), under the direction of the Commonwealth Financing Authority. The program has funded anaerobic digesters, and gasification projects are eligible to receive funding. This is a competitive program; therefore, the more renewable energy a system provides at the least cost, the more likely it will receive funding. Grants up to \$2 million and loans and loan guarantees up to \$5 million are available. There is a matching investment requirement of at least \$1 for every \$1 of program funds awarded. The repayment term for most loans is 10 years with interest rates of 1% for energy efficiency and geothermal technology projects 4% - 5% for other types of projects.

Note: Funds for this program are limited and could run out in the next few years. There are no immediate plans to renew the funding.

Machinery and Equipment Loan Fund (MELF)

Type: Loan

Website: <http://newpa.com/find-and-apply-for-funding/funding-and-program-finder/machinery-and-equipment-loan-fund-melf>

This program provides low-interest loans to acquire and install new or used machinery and equipment. Funds can also be used to upgrade existing machinery and equipment. Loans up to \$5 million or 50% of the project cost, whichever is less, are available. Depending on the useful life of the machinery being financed, there will be up to a 10-year term with a fixed interest rate. MELF agriculture projects are limited to \$500,000.

Sustainable Energy Fund

Contact:

John Orsini
Business Development Specialist
Phone: (610) 264-4440 ext. 7016
Email: jorsini@thesef.org

Sustainable Energy Fund (SEF)

Type: Loan

Website: <http://www.thesef.org/Financing/tabid/72/Default.aspx>

SEF is a revolving loan fund that provides financing for economically viable energy efficiency and renewable energy projects for non-profits and businesses. SEF provides both technical and financial expertise, which helps to customize financing for an individual project. Loan payments are developed for each project, so they are less than the monthly energy savings, creating a



positive cash flow. The Fund has supported 3 digester projects. It provides loans only, at a 6.25% interest rate, ranging in amounts from \$35,000 to \$1,000,000.

PennCAP

Contact:

AgChoice Farm Credit

(Agricultural loans only)

Timothy W. Eshelman

Phone: (570) 523-1201 x321

PNC Bank, N.A.

Hema Gandiga

Phone: (215) 749-4431

Huntington Bank

Jason Wells

Phone: (614) 331-9825

Sovereign Bank

Jennifer Roykouff

Phone: (610) 526-6446

Susquehanna Bank

Mike Brenner, Senior Vice President

Phone: (717) 735-8795

Pennsylvania Capital Access Program

Type: Loan Guarantee

Website: <http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/pennsylvania-capital-access-program-penncap>

Loan guarantees are available through participating banks for a variety of business purposes including land, building, equipment, and working capital. This program provides the guarantee for the bank loan. Guaranteed loans are available up to \$500,000. Rates and terms are negotiated with the participating bank.

PENNVEST

Contact:

PV Region 1: Northwest and North Central PA

Dave Henning

Phone: (717) 783-4490

Email: dahenning@pa.gov

PV Region 3: South Central and Southeastern PA

Tess Schlupp

Phone: (717) 783-8618

Email: tschlupp@pa.gov

PV Region 2: Southwest PA

Larry Gasparato

Phone: (717) 783-6573

Email: lgasparato@pa.gov

PV Region 4: Northeastern PA

Mike Gallagher

Phone: (717) 783-4488

Email: mgallagher@pa.gov



Project Specialists are also available here by county:

http://www.portal.state.pa.us/portal/server.pt/community/financial_assistance/9321/get_regional_assistance/541647

PENNVEST

Type: Misc

Website: <http://www.portal.state.pa.us/portal/server.pt/community/pennvest/9242>

PENNVEST is an administrator of funding programs for the Commonwealth, including federal dollars from the Clean Water State Revolving Fund (CWSRF), Drinking Water State Revolving Fund (DWSRF), and state dollars such as through Growing Greener or bond initiatives. The CWSRF and state funds can be used for manure to energy projects. PENNVEST is the entity that administers these programs, not the program itself. All projects must be consistent with local and county land use plans as well as any applicable agricultural land preservation plans. PENNVEST has \$300 million per year available in low interest loan and grant funding for infrastructure projects that address improvements in drinking water, wastewater, storm water, and non-point source pollution.

PA Department of Environmental Protection

Contact:

Thomas Bell (statewide contact)

Pennsylvania Department of Environmental Protection

Pennsylvania Energy Development Authority

Rachel Carson State Office Building

400 Market Street, 15th Floor

Harrisburg, PA 17105-8776

Phone: (717) 783-8411

Email: tbell@state.pa.us

Dept. Website: http://www.depweb.state.pa.us/portal/server.pt/community/dep_home/5968

The Department of Environmental Protection (DEP) works to prevent pollution from entering the air, land, and water in Pennsylvania in order to protect citizens' health and safety. They work with individuals, organizations, businesses, and governments to protect the State's natural resources. DEP works predominantly with grants from funds available each fiscal year. In 2011, two anaerobic digester projects were funded.



Pennsylvania Public Utility Commission

Contact:

Scott Gebhardt
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265
Phone: (717) 425-7584
Fax: (717) 787-2545
EMail: ra-aeps@pa.gov

Pennsylvania Net Metering

Type: Misc

Website: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA03R&re=1&ee=1

Net metering in Pennsylvania includes solar thermal electric, photovoltaics, landfill gas, wind, biomass, hydroelectric, fuel cells, municipal solid waste, combined heat and power (CHP)/cogeneration, waste coal, coal-mine methane, anaerobic digestion, small hydroelectric, fuel cells using renewable fuels, and other distributed generation technologies as eligible technologies. Agriculture is included as an applicable sector. All investor-owned utilities must provide net metering. Electric generation suppliers are permitted, but not required to offer net metering. There isn't an identified aggregate capacity limit, but there are individual limits including 5MW for micro-grid and emergency systems, 3 MW for non-residential, and 50 kW for residential. Net excess generation is credited to the customer's next bill at the retail rate and reconciled annually at "price-to-compare." This means that the generation and transmission components of a utility's retail rate is included, but not the distribution component. Utilities must provide net metering at non-discriminatory rates identical to non-metered customers and they cannot charge net-metered customers any fees that do not apply to non-metered customers. Virtual meter aggregation is allowed on properties owned or leased and operated by a customer. This is beneficial to farms that are commonly owned and operated.



Virginia

While the Commonwealth of Virginia does not offer any programs specifically targeted to assist the thermochemical conversion of poultry litter to heat and/or electricity, there are a variety of other economic development assistance and incentive programs that could be used to help. Grants, loans, and loan guarantees may be available through the VA Department of Agriculture, VA Department of Environmental Quality, VA Department of Mines, Minerals, and Energy, and the Department of Business Administration. In Virginia, Stephen Versen at the Department of Agriculture and Consumer Services should be your first point of contact to learn more about how these programs can work with your project. Net metering is administered through the VA Department of Mines, Minerals, and Energy, which provides retail credit for farms that produce energy using poultry litter technology. The Tennessee Valley Authority (TVA) will purchase green energy above the retail electric rate for select counties in Virginia.

Farmers interested in poultry litter-to-energy projects should also contact their local bank for available loan and loan guarantee opportunities (see Banks and Lending Institutions section). Other agencies including your local Small Business Development Center (SBDC), local Natural Resources Conservation Service (NRCS) office, and eXtension can provide invaluable knowledge when beginning the process of financing and acquiring new technology (see Federal and Organization sections).

Virginia Department of Agriculture and Consumer Services

Contact:

Stephen Versen

Project Manager - Agriculture and Forestry Development Services

102 Governor St.

Richmond, VA 23219

Phone: (804) 786-6911

Cell: (804) 382-4023

Fax: (804) 371-2945

Email: Stephen.Versen@vdacs.virginia.gov

Department Website: <http://www.vdacs.virginia.gov/>

Within the Department of Agriculture and Consumer Services, the Agriculture and Forestry Development Services (AFDS) unit assists entrepreneurs and existing companies at every stage of their business, from developing the concept to coordinating the opening of a new business, by helping them access all available economic development assistance and overcome barriers to the successful completion of their project.



Virginia Department of Environmental Quality

Contact:

Van Gallier

Phone: (804) 698-4243

Email: Van.Gallier@deq.virginia.gov

VA Agricultural BMP Loan Program

Type: Loan

Website: <http://ftp.deq.virginia.gov/cap/aghome.html>

This program provides short and long term low-interest loans for costs associated with implementation of Ag BMPs relating to water quality improvement in the Commonwealth. Eligible BMPs include animal waste control facilities and animal waste structure pumping equipment among others. The minimum loan amount is \$5,000 and there is no maximum. Repayment terms may be up to 10 years with a 3% interest rate.

Virginia Department of Mines, Minerals, and Energy--Division of Energy

The goal of the Virginia Division of Energy of the Department of Mines, Minerals, and Energy is to advance sustainable energy practices and behaviors. They try to achieve this by increasing energy conservation practices, encouraging sustainable energy industries, identifying new energy technologies, and improving the energy efficiency of existing infrastructure in Virginia. In the past, there were incentives and funding opportunities in the form of loans and grants; however, there was no such funding for the Division of Energy in fiscal year 2012.

General Contact:

Robin Jones

Dept. Mines Minerals and Energy

Energy Program Manager

Division of Energy

www.dmme.virginia.gov

Phone: (804)692-3224

Fax: (804)692-3238

Email: robin.jones@dmme.virginia.gov

Dept. Website:

<http://www.dmme.virginia.gov/divisionenergy.shtml>

Net Metering Contact:

Ken Jurman

Dept. of Mines, Minerals, and Energy

Division of Energy

Washington Building

1100 Bank Street, 8th floor

Richmond, VA 23219-3638

Phone: (804) 692-3222

Fax: (804) 692-3238

Email: ken.jurman@dmme.virginia.gov

Virginia Net Metering

Type: Misc

Website:

http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VA02R&re=1&ee=1



Net metering in Virginia identifies solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, municipal solid waste, small hydroelectric, tidal energy, and wave energy as eligible technologies. Commercial, residential, institutional, nonprofit, schools, local government, and state government are included as applicable sectors; however, agriculture is not specifically mentioned. Investor-owned utilities and electric cooperatives provide net metering. The aggregate capacity limit is 1% of the utility's adjusted Virginia peak-load forecast for the previous year. Individual limits include 500 kW for non-residential and 20 kW for residential. However, residential customers of Dominion Virginia Power that own and operate an electric generation system that produces over 10 kW and less than 20 kW must pay \$2.79 per kW in monthly distribution standby charges and \$1.40 per kW in monthly transmission standby charges. Excess generation is credited to the customer's next bill at retail rate. After 12 months the customer may opt to roll over credit indefinitely or receive payment at avoided-cost rate. Net metering is available on a first-come, first-served basis until the aggregate capacity is reached.

Department of Business Administration

Contact:

Scott Parsons
Executive Director, VSBFA
Phone: (804) 371-8256

Virginia Small Business Financing Authority's (VSBFA) Loan Guarantee Program

Type: Loan Guarantee

Website: <http://www.vdba.virginia.gov/vsbfa.shtml>

The VSBFA Loan Guarantee Program is designed to help Virginia's small businesses obtain the funds to start, enhance, or expand their operations. To qualify, businesses must meet at least one of the following conditions: have \$10 million or less in annual revenues over each of the last 3 years, have a net worth of \$2 million or less, have fewer than 250 employees, or be a 501(c) 3 non-profit entity (not eligible for supplemental guaranty). The maximum guaranty is \$750,000 or 85% of the loan amount whichever is less. The bank sets the interest rate and the guaranty fee is 1.5% of the guaranteed amount due at closing of the line or term loan.

Tennessee Valley Authority

Contact:

Bristol Virginia Electric System
Phone: (276) 669-4112

Powell Valley Electric Cooperative
Jonesville Office
P.O. Box 308
Jonesville, VA 24263
Phone: (276) 346-6016



Tennessee Valley Authority

400 West Summit Hill Drive
Knoxville, TN 37902
Phone: (865) 632-2101
Email: tvainfo@tva.gov

Generation Partners Program

Type: Misc

Website: <http://www.tva.com/greenpowerswitch/partners/>

Generation Partners is a pilot program introduced in 2003 to support homeowners and businesses that install small-scale renewable energy generation technologies. The Tennessee Valley Authority (TVA) encourages green power generation in Alabama, Georgia, Tennessee, Mississippi, Kentucky, North Carolina and Virginia. The program supplies energy to TVA's Green Power Switch and creates a market for green power generation in the region. The project must generate at least 0.5 kilowatts, but no more than 50 kilowatts. TVA will purchase green energy at 3 cents above the retail electric rate and new participants will receive an additional \$1,000 to offset start-up costs. Those interested in the program should contact their local energy provider. Bristol Virginia Electric System and the Powell Valley Electric Cooperative are the only eligible energy providers in VA. They serve four counties in southwestern Virginia: Lee and Scott counties and small portions of Washington and Wise counties.

Note: *In 2012 the program will expand and be referred to as the Green Power Providers program. The main change from the previous program to the new program will be to extend contracts from 10 years to 20 years.*



West Virginia

West Virginia has available resources that provide both technical knowledge and financial assistance for thermochemical conversion of poultry litter to heat and/or electricity. The West Virginia Conservation Agency primarily acts as an assistance organization and administers federal and state funding to local conservation offices. This is a useful resource for anyone living in West Virginia who is interested in adopting poultry litter-to-energy technology. The WV Department of Environmental Protection has a revolving loan fund available for non-point source programs and may have additional funding available in conjunction with other organizations. The Department of Agriculture tries to find funding on a project-to-project basis. The Department of Commerce and Energy does not have funding for poultry litter-to-energy technology available currently, but may have funding available in the future. The West Virginia Public Service Commission regulates net metering, which provides retail credit for farms that produce energy using poultry litter technology.

Farmers interested in poultry litter-to-energy projects should also contact their local bank for available loan and loan guarantee opportunities (see Banks and Lending Institutions section). Other agencies including your local Small Business Development Center (SBDC), local Natural Resources Conservation Service (NRCS) office, and eXtension can provide invaluable knowledge when beginning the process of financing and acquiring new technology (see Federal and Organization sections).

West Virginia Department of Environmental Protection

Contact:

Teresa Koon
 DEP Non-Point Source Program
 601 57Th St., SE
 Charleston WV 25304
 Phone: (304) 926-0499 Ext: 1020
 Fax: 304-926-0463
 Email: Teresa.M.Koon@Wv.Gov

John Tingley
 DEP State Revolving Fund Manager
 601 57Th St., SE
 Charleston WV 25304
 Phone: (304) 926-0499 Ext: 1603
 Fax: (304) 926-0496
 Email: John.I.tingley@wv.gov

The West Virginia Department of Environmental Protection (DEP) works to promote a healthy environment. In addition to their Low-interest Revolving Loan Fund, there are a variety of potential funding sources available through the Department. The DEP works with NRCS to provide cost-share dollars. Farmers can approach NRCS for a majority of funding and DEP will try and make-up the rest of the cost. In some cases, there is funding available through Section 319 of the Clean Air Act for non-point pollution projects. Also, periodically funding is available for non-point source projects in priority watersheds. However, areas with poultry farms are mostly limited to Lost River and Millcreek within the designated watershed.



Low-Interest Revolving Loan Program

Type: Loan

Website: <http://www.dep.wv.gov/WWE/Programs/SRF/Pages/default.aspx>

The Low-Interest Revolving Loan Program is a non-point source program that matches grants to farms and acts as a cost share. Funding for this program comes from USDA Rural Development. Farmers develop a 10-year management plan with the Department of Agriculture to secure funds. Interested applicants should contact the program before their local bank. Local banks provide guarantees for the loans. Currently, there are 11 banks signed up for the program, but only 3 active, which includes Pendleton Community, Capon Valley, and First United Bank. Low-interest loans are available at a 2% interest rate for 10 years.

West Virginia Conservation Agency (WVCA)

Contact:

Brian Farkas
Executive Director
Gus R. Douglass Agricultural Center at
Guthrie 1900 Kanawha Blvd. E
Charleston, WV 25305
Phone: (304) 558-2204
Fax: (304) 558-1635
Email: bfarkas@wvca.us

Carla Hardy
Watershed Program Coordinator
Moorefield Field Office
60 C Industrial Park Road
Moorefield, WV 26836
Phone: (304) 538-7581
Fax: (304) 538-7676
Email: chardy@wvca.us

Or contact one of the 14 local WVCA offices here: <http://www.wvca.us/districts.cfm>

The WVCA is primarily an assistance organization. It acts as a connection between the Federal and State governments and the 14 local conservation districts. They are partners with the Natural Resources Conservation Service (NRCS) and rely on them for technical knowledge. The WVCA passes funding from the state government to the local conservation districts. The conservation districts are run by elected officials, often farmers, who work to implement projects at the local level.

Section 319 Nonpoint Source Program

Type: Cost share

Website: <http://www.wvca.us/wvwrc/>

The WVCA administers the Section 319 Nonpoint Source Program (NPS) in targeted watersheds with impaired water quality. Watershed based plans are developed based upon the local TMDL and grant funding is secured through U.S. Environmental Protection Agency via West Virginia Department of Environmental Protection. Cost share rates for agricultural practices can be funded up to 75% with a 25% match required by the producer.



Agricultural Enhancement Program**Type:** Cost share**Website:** <http://www.wvca.us/mission.htm>

The WVCA has secured funding to provide technical and financial assistance to producers within the local conservation districts. Districts will set priority practices and cost-share rates based upon individualized needs. Contact your local WVCA district office for more information.

WV Department of Agriculture – Regulatory and Environmental Affairs Division
Contact:

Matt Monroe

WV Department of Agriculture

Assistant Director, Environmental Programs

Regulatory and Environmental Affairs

60B Moorefield Industrial Park Rd.

Moorefield, WV 26836

Phone: 304-538-2397

Fax: 304-538-7088

Email: mmonroe@ag.state.wv.usDepartment Website: http://www.wvagriculture.org/Division_Webpages/READ-Enviro.htm

Jerry Ours

Poultry & Environmental Specialist

WV Department of Agriculture

Regulatory and Environmental Affairs

Office: 304-538-2397, Ext. 7085

Cell: 304-257-3028

Email: jours@ag.state.wv.us

Regulatory and Environmental Affairs is a division of the West Virginia Department of Agriculture. When the division was created there was a specific concentration on poultry litter and animal manure, but has since expanded to include other issues. There isn't a set program to fund manure to energy technologies; however, they have funded programs in the past. The Department of Agriculture tries to find funding on a project-to-project basis.

WV Department of Commerce and Energy – Division of Energy
Contact:

Jeff Herholdt

Director

Phone: (304) 558-2234

Email: Jeff.F.Herholdt@wv.govDepartment Website: <http://www.wvcommerce.org/info/aboutcommerce/energy/default.aspx>

The West Virginia Division of Energy falls under the umbrella of the WV Department of Commerce and Energy. The Department strives to encourage economic and job growth opportunities, proper use of natural resources, protection of the work force, and preservation of tourism. The Department does not have specific funding for manure to energy projects at this time, but may have available funding in the future.



West Virginia Public Service Commission

Contact:

General Information - PSC
West Virginia Public Service Commission
201 Brooks Street
P.O. Box 812
Charleston, WV 25323
Phone: (800) 344-5113
Fax: (304) 340-0325

West Virginia Net Metering

Type: Misc

Website: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=WV03R&re=1&ee=1

West Virginia includes solar thermal electric, photovoltaics, landfill gas, wind, biomass, hydroelectric, geothermal electric, fuel cells, small hydroelectric, renewable fuels, and fuel cells using renewable fuels as eligible technologies for net metering. Agriculture is considered an applicable sector. All utilities are required to provide net metering until the aggregate capacity limit of 3% of the peak energy demand of the previous year is reached. Investor-owned utilities (IOUs) with more than 30,000 customers can allow up to 2MW for industrial customers, 500 kW for commercial customers, and 25 kW for residential customers. IOUs with less than 30,000 customers, municipal utilities, and co-ops can allow up to 50 kW for commercial and industrial customers and 25 kW for residential customers. Each customer with a net-metered system up to 50 kW must carry a minimum of \$100,000 in liability insurance. Customers with systems greater than 50 kW and up to 500 kW are required to carry a minimum of \$500,000, and customers with systems greater than 500 kW must carry a minimum of \$1 million in liability insurance. Meter aggregation is allowed. Net excess generation is credited to the customer's next bill at the retail rate.

