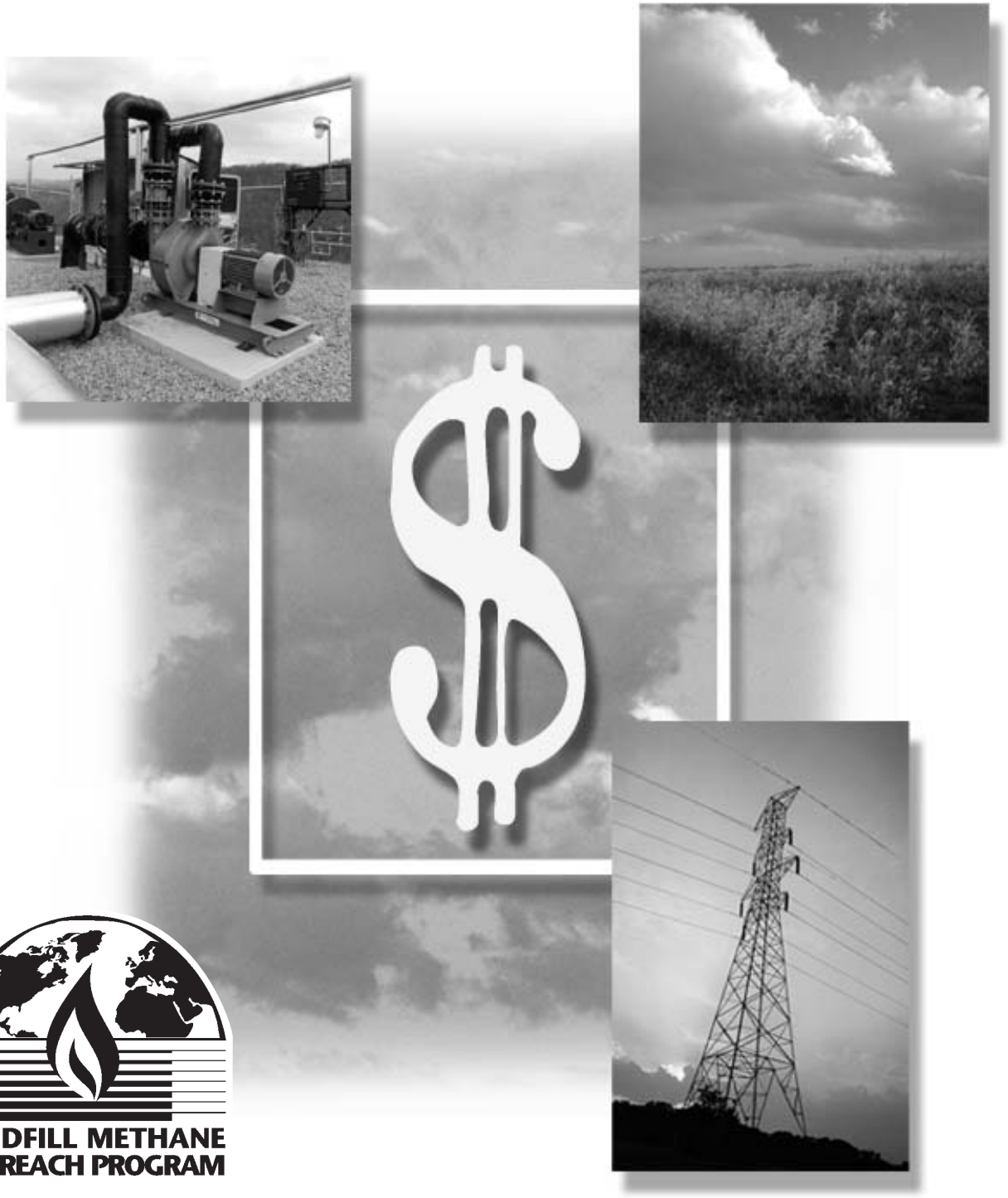
EPA United States Environmental Protection Agency

Funding Landfill Gas Projects

A Guide to State, Federal, and Foundation Resources



LANDFILL METHANE OUTREACH PROGRAM

Office of Air and Radiation
EPA-430-R-01-010
www.epa.gov/lmop
Winter 2004

Contents

Note: This guidebook is not intended to provide an exhaustive listing of all funding programs available for landfill gas energy projects. LMOP continually revises this publication to update information about state, federal, and foundation programs and resources and to include information on new initiatives.

State Resources

Funding Landfill Gas Projects: A Guide to State, Federal, and Foundation Resources

Introduction

Purpose of this Guidebook

More than 340 communities, landfill owners and operators, and state officials across the U.S. are learning that landfill gas is an important local and regional resource. To develop landfill gas utilization projects, landfill owners and operators capture landfill gas and convert it into energy. Converting landfill gas into energy reduces odors and hazards associated with landfill gas emissions and helps reduce reliance on fossil fuel-based energy. Landfill gas is also a valuable renewable resource that, when used, helps prevent landfill methane from migrating into the atmosphere and contributing to local smog and global climate change.

While landfill gas recovery offers significant environmental, energy, and economic benefits to communities and developers, there are still barriers to project development. This guidebook focuses on one barrier in particular–financing for landfill gas project development.

Included in this guidebook are many innovative funding programs and strategies that can help developers overcome financial barriers. These programs and strategies include, among other things, loans, grants, renewable portfolio standards, renewable energy trust funds, and property, sale, and use tax exemptions. Whether you are a state agency official, a landfill owner or operator, or a developer, the programs described in this guidebook will provide you with important information as you consider ways to facilitate and/or develop successful landfill gas utilization projects.

The guidebook is not intended to provide an exhaustive listing of all state, federal, and foundation funding programs available for landfill gas energy projects; instead, it is intended to provide information about a broad range of the types of funding options available for landfill gas energy projects. This guidebook is also intended to provide examples of successful funding approaches that can be replicated around the country to promote landfill gas utilization. LMOP continually revises this publication to update information about programs and resources and to include information on new initiatives.

How to Use this Guidebook

This guidebook is divided into three sections: State Resources (which includes both state agencies and private foundations located in that state); Canadian Resources (for which projects in the United States are eligible); and Federal Resources. Table 1, following this Introduction, organizes the programs by funding type, making it easy to locate the program that best meets your needs. The types of funding covered in this guidebook include:

- *Grants* provide direct financial support and are usually awarded by government and non-profit agencies. Grants are often, but not always, made for research activities in a particular subject area (e.g., to develop or demonstrate a landfill gas energy project or technology).
- *Loans* are arrangements in which a lender (e.g., a government agency or a non-profit organization) provides money to a borrower (e.g., a landfill gas energy project developer), and the borrower agrees to repay the money, along with interest, at some future date.
- *Tax credits and exemptions* reduce the tax liability of eligible parties. A tax exemption for a landfill gas energy project might exclude equipment and facilities used in generating energy from landfill gas from property taxes. Tax credits for landfill gas energy projects are generally offered on a specified cents-per-kWh basis.
- *Production incentives* are financial payments, usually on a cents-per-kWh basis, for electricity generated by qualifying landfill gas energy facilities.

Each resource entry contains the following information:

- *Program Description:* This section contains background

information about the program, as well as program guidelines and requirements, such as eligibility (applicant and technology), funding availability, and deadlines (if applicable).

- *Actions You Can Take:* This section provides suggestions for individuals and/or government employees about actions they can take to learn more about the funding source or to explore similar options in their state.
- *For More Information:* This section contains contact information for each funding source, including contact name, address, phone and fax numbers, email address, and Web site address, if available.

The Net Metering and Renewable sections contain Portfolio Standard tables summarizing state net metering programs. The table provides information about eligibility, system capacity limits, purchase rate, program background, and contact information for each program.

About the Landfill Methane Outreach Program (LMOP)

To promote the use of landfill gas as an energy source, the U.S. Environmental Protection Agency (EPA) has established the Landfill Methane Outreach Program (LMOP). LMOP's goal is to reduce methane emissions from landfills by encouraging environmentally and economically beneficial landfill gas project development. To achieve this goal, LMOP establishes voluntary partnerships with five key constituencies:

- State environmental and energy agencies
- Energy users/providers
- Industry (including developers, engineers, and equipment vendors)
- Community partners (including community organizations and landfill owner/operators)
- Endorsers (non-profit organizations coordinating with EPA to publicize and promote the use of LFG among their members and constituents)

LMOP currently has nearly 360 Partners that have signed voluntary agreements to work with EPA to develop cost-effective landfill gas energy projects, including every major landfill gas project development company. LMOP helps its Partners develop or participate in landfill gas energy recovery projects that are considered technically and economically feasible. LMOP provides–free of charge–information, software tools, marketing assistance, and access to technical experts to facilitate development of landfill gas projects. The program then promotes the success of landfill gas energy recovery projects and participants.

To date, LMOP has assisted in the development of more than 230 landfill gas utilization projects. Together, these 230 projects are responsible for significant reductions in the emission of methane, a potent greenhouse gas. They also are preventing the emission of other greenhouse gases, including carbon dioxide, since using landfill gas for energy offsets the need to use other, more polluting fuels. In 2002, all operational landfill gas energy projects in the United States prevented the release of 17.3 million metric tons of carbon equivalent (MMTCE, the basic unit of measure of greenhouse gases) into the atmosphere. This reduction is equivalent, in pollution terms, to removing the emissions from 13.9 million cars from the road for one year.

To learn more about LMOP, visit www.epa.gov/lmop.

LMOP Wants to Hear from You!

This guidebook is a "living" document that will be updated and expanded periodically. If you know of an option or resource that should be added, or if you have suggestions about how to make this document more useful, please contact:

Brian Guzzone
U.S. Environmental Protection Agency
Landfill Methane Outreach Program
1200 Pennsylvania Avenue, NW
Washington, DC 20460
202-343-9248
E-mail: guzzone.brian@epa.gov

Table 1 Resources by Funding Type

Grants

Loans

Loans (cont.)

Tax Credits/Exemptions

Production Incentives

Other

State Resources

Alabama: Renewable Fuels Development Program

Program Description

For over a decade, the Science, Technology, and Energy Division of the Alabama Department of Economic and Community Affairs (ADECA) has administered the Renewable Fuels Development Interest Subsidy Program. The Program aims to utilize renewable fuels while reducing air and water pollution. It encourages the use of biomass as an alternative energy source through interest subsidy payments on loans to install qualified biomass projects. Program participants receive up to $75,000 to offset interest costs. Interest costs are paid directly to the facility on a reimbursement basis.

Despite its initial focus on waste wood, the program scope has expanded over time to integrate switchgrass, landfill gas, and municipal solid waste projects. Loans can be used to fund energy conversion equipment, biomass fuel storage, preparation, transport, other necessary equipment, and interest costs related to technical assistance and feasibility studies. Industrial, commercial, institutional facilities, agricultural property owners, and state and local government institutions may qualify for funding.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Alabama:
An eligible facility submits an application including project details to the ADECA for interest subsidy consideration. A facility must also obtain a loan from a commercial lending institution and establish a payment plan. Assistance is given only for loans with interest rates no greater than two percent above the prime rate.

If you are a state agency employee:
Become more familiar with the approach used by the ADECA. Consider whether your state could offer a similar incentive to encourage development of landfill gas projects.

For More Information

Contact:
Clarence Mann
Alabama Department of Economic and Community Affairs
Science, Technology, and Energy Division (ADECA-STE)
P.O. Box 5690
Montgomery, AL 36103-5690
334-242-5330
E-mail: clarencem@adeca.state.al.us

Web site:
www.adeca.alabama.gov/content/ste/ste_biomass_fuel_dev.aspx

The Renewable Fuels Development Program encourages the use of biomass as an alternative energy source through interest subsidy payments on loans to install qualified biomass projects.

Alaska: Alaska Conservation Foundation

Sustainable Community Development Grants Program

Program Description

The Alaska Conservation Foundation (ACF) is a public foundation that awards grants throughout the state to projects and organizations that protect the integrity of Alaska's ecosystems and promote sustainable livelihoods for Alaska's communities and peoples. ACF's Sustainable Community Development Grant Program funds projects that focus on promoting sustainable human communities.

ACF established the program in 1997 with a gift from the William and Flora Hewlett Foundation. The program funds projects that link quality of life with a healthy economy based on the sustainable use of natural resources. Specific focuses include:

- Community/regional planning, including land use planning, which focuses on people and their surroundings and explores solutions to environmental, social, and economic problems.
- Improving quality of life as an impetus for economic growth.
- Generating new employment opportunities through the sustainable use of natural resources–the integration of the economy and the environment.

The program has a stated interest in projects that increase resource efficiency or reduce dependence on non-renewable resources. Past grant recipients have included pilot projects focused on alternative energy sources.

Grants awarded by the program range from $8,000 to $15,000 over one year. In fiscal year 2000, 11 grants were awarded, totaling over $104,000. Nonprofit organizations, local governments, associations, individuals, or others may apply. However, applicants must demonstrate that their work is being conducted on behalf of a "community" (which can mean anything from a village, city neighborhood, or region to a tribe, cooperative, or coalition of community groups). In particular, proposals must demonstrate:

- How the project's goals will contribute to the integration of economic, environmental, and quality-of-life issues.
- How the project fits into the larger picture of the community's needs and development process. Projects outside of Alaska are ineligible.

Applicants can begin the application process by submitting a two-to-three page letter of inquiry. The annual deadline for inquiries is in early February; applicants will be notified by mid-March if a full proposal is requested. Visit the Program's Web site, listed on the following page, for proposal requirements.

The program has a stated interest in projects that increase resource efficiency or reduce dependence on non-renewable resources.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Alaska:
Contact ACF or visit the Foundation's Web site to determine your eligibility for a Sustainable Community Development Grant and view proposal requirements.

If you are a state agency employee:
Investigate whether nonprofit environmental organizations in your state operate grant programs that support

sustainable development or renewable energy. If so, determine if landfill gas projects would be eligible for grant funding.

For More Information

Contact:
Julie Jessen
Alaska Conservation Foundation
441 West 5th Avenue, Suite 402
Anchorage, AK 99501
907-276-1917
E-mail: jjessen@akcf.org

Web site:
www.akcf.org/grants/sustainable_grant.htm

Alaska: Power Project Loan Fund

Program Description

The Alaska Energy Authority's (AEA's) Power Project Loan Fund provides loans to local utilities, local governments, regional and village corporations, nonprofit marketing cooperatives, and independent power producers for the development or upgrade of small-scale power production facilities. Eligible projects include those involved in conservation, bulk fuel storage, and waste energy conservation, as well as potable water supply projects. Nearly $3 million has been made available for loans annually in recent years. Landfill gas utilization projects are eligible for funding.

The average loan is for $500,000 with a 20-year payback period. The AEA currently has an informal loan cap of $1 million, although entities requiring additional funding can apply for concurrent loans. The interest rate is calculated at a rate equal to the average weekly yield of municipal bonds for the 12 months prior to the loan date. The AEA, however, has statutory authority to offer a lower or zero-interest loan to allow an entity to meet the financial viability requirements. The loan term is related to the life of the project.

The AEA evaluates the technical and economic feasibility of each applicant on a per-project basis. Since 1993, the program has funded transmission and distribution extensions, generator replacements, and a few small hydroelectric projects. The program has not received many applications for renewable projects, although such projects, including landfill gas energy projects, are eligible.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Alaska: For a project in Alaska, contact AEA to determine your eligibility and to obtain application forms.

If you are a state agency employee: Become more familiar with the approach used by Alaska. Consider whether your state has similar support programs that might be used to support the development or upgrade of small-scale power production facilities.

For More Information

Contact:
Jim McMillan
Deputy Director
Alaska Energy Authority
813 West Northern Lights Boulevard
Anchorage, AK 99503
907-269-3000
Fax: 907-269-3044
E-mail: jmcmillan@aidea.org

Web site:
www.aidea.org/powerloan.htm

Nearly $3 million has been made available for loans annually in recent years.

California: Public Interest Energy Research (PIER) Program

Program Description

Administered by the California Energy Commission (CEC), an LMOP State Partner, the Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by delivering environmentally safe, affordable, and reliable energy services and products to the marketplace. The PIER Program awards up to $62 million annually and brings new energy services and products to the marketplace to create statewide environmental and economic benefits. PIER funding efforts focus on the following RD&D program areas:

- Renewable energy technologies
- Environmentally preferred advanced generation
- Energy-related environmental enhancements
- End-use energy efficiency
- Strategic energy research

In 2002, PIER issued a solicitation for up to $5 million in grants for the development of anaerobic digestion technologies (ADT), including landfill gas. The solicitation specified that CEC is specifically interested in landfill gas energy projects in the following areas:

- Innovative prime movers and advanced concepts currently not being demonstrated.
- Projects that demonstrate cost-effective electricity production at transfer stations.
- Co-production of electricity and value-added products at landfills.
- Research, development, and demonstration focused on reducing the capital cost of microturbines or extending the life of microturbines using landfill gas.

The maximum amount of funding for a single proposal was $500,000.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in California:
Contact the PIER Program to determine if a current solicitation is in place for which landfill gas beneficial use projects are eligible. Determine whether your projects meets the program requirements, then contact the CEC to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee:
Visit CEC's PIER Web site, www.energy.ca.gov/contracts, to learn more about the PIER Program and consider whether it can serve as a model for your state. If your state has an existing alternative energy grant program, find out if landfill gas projects are eligible for funding.

For More Information

Contact:
Valentino Tiangco
Research and Development Office
California Energy Commission
1516 Ninth Street, MS-43
Sacramento, CA 95814
916-654-5129
Fax: 916-653-6010
E-mail: vtiangco@energy.state.ca.us

Web site:
www.energy.ca.gov/contracts/index.html#pier

In 2002, PIER issued a solicitation for up to $5 million in grants for the development of anaerobic digestion technologies (ADT), including landfill gas.

California: Renewable Resource Trust Fund

Program Description

LMOP State Partner, the California Energy Commission (CEC), administers funds collected from the state's investor-owned utilities to support renewable energy technologies through the Renewable Resource Trust Fund. Assembly Bill 1890 (AB 1890), which deregulated the state's electricity industry, established a statewide renewables policy by providing $540 million collected from Southern California Edison, Pacific Gas and Electric Company, and San Diego Gas & Electric to support existing, new, and emerging renewable technologies. The funds are divided among four different accounts, with landfill gas utilization projects being eligible for funding under the New Renewable Resources Account.

Funds available under the New Renewable Resources Account are distributed via a financial incentives auction, through a production incentive based on a competitive solicitation process, with a cap of 1.5 cents per kilowatt-hour (kWh). The funds are paid over a five-year period after a project begins generating electricity. In its first financial incentives auction, held in June 1998, the CEC allocated $162 million to 55 new wind, geothermal, landfill gas, biomass, digester gas, and small hydroelectric projects. LMOP Industry Ally, Browning-Ferris Gas Services, was awarded over $6 million through the auction.

Facilities eligible for funding are required to use a renewable resource technology, be located in California, and be constructed on or after September 26, 1996. Companies whose bids are accepted receive production incentive payments for electricity generated and sold (not self-generated electricity used on-site) during the first five applicable years of operation after the project is completed.

Bids are submitted in a simple cents-per-kWh basis for electricity production, not to exceed 1.5 cents per kWh. To date, renewable resource technologies determined eligible to receive funding at an average incentive of 1.2 cents per kWh have included approximately 300 megawatts (MW) of wind; 157 MW of geothermal; 70 MW of landfill gas; 12 MW of biomass; 1 MW of digester gas; and 1 MW of small-scale hydro.

In June 1998, the CEC allocated $162 million to 55 new projects, including some landfill gas utilization projects.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in California: Contact the CEC for information about the next auction and to determine whether your project is eligible for funding.

If you are a state agency employee: Examine the approach used by the CEC to determine whether such an approach would work in your state. If your state is currently undergoing or considering restructuring of its electric utility industry, investigate whether renewable energy incentive programs are or will be established as a part of that process.

For More Information

Contact:
California Energy Commission
Energy Efficiency Division
1516 Ninth Street, MS-26
Sacramento, CA 95814-5512
916-654-5168
E-mail: renewable@energy.state.ca.us

Web site:
www.consumerenergycenter.org

California: Self Generation Incentive Program

Program Description

California's Assembly Bill 970, enacted in September 2000, ordered the establishment of additional energy supply and programs in the state. In March 2001, the California Public Utilities Commission introduced the Self Generation Incentive Program. This program encourages the installation of renewable energy technologies by providing financial incentives to businesses. Incentives are available to customers of Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison, and Southern California Gas Company for the installation of self-generation units, which reduce the electricity load on the power grid. Approximately $100 million is available annually through 2004 for direct customer incentives.

Approximately $100 million is available annually through 2004 for direct customer incentives.

Funding awards are based on three different technology-based levels:

- Level 1 funding is available to photovoltaics (solar panels), wind turbines, and fuel cells powered by renewable fuel (i.e., digester or landfill gas). Projects utilizing these technologies may qualify for $4,500 per kW for up to 50 percent of the total project cost. The minimum system size for Level 1 projects is 30 kW.
- Fuel cells powered by natural gas and utilizing waste heat recovery may qualify for Level 2 funding, which provides $2,500 per kW up to 40 percent of total project cost.
- The Level 3 category of microturbines, small gas turbines, and internal combustion engines has been divided into two subcategories, 3R for renewable fueled and 3N for non-renewable fueled. Level 3N is funding of $1,000 per kW up to 30 percent of total project cost, while 3R funding provides $1,500 per kW up to 40 percent of total project cost.

The maximum eligible project size is 1.5 MW with the incentive provided only for the initial 1 MW of generation capacity. Retroactive incentive funding is available to customers with Level 1 projects that were completed on or after January 1, 2001 and to customers with Level 2 and Level 3 projects that were completed on or after March 27, 2001.

A project must meet the following eligibility requirements:

- The applicant must be a customer of one of the following companies: Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison, or Southern California Gas Company.
- All self-generation equipment must be connected to the electricity grid and installed on the customer's side of the utility meter.
- Self-generation equipment must be new and permanent: demonstration units are not eligible.
- A portion of the facility electric load must be offset by the equipment.
- Any portion of the applicant's electric load that is enrolled in interruptible rate schedules or load management programs cannot be used in computing the applicant's total onsite load for program eligibility.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in California: First, check the Self-Generation Incentive Program Handbook to make sure you meet all the eligibility requirements for this program. Then, complete the Reservation Request Form/Checklist. These documents can be downloaded from each Program Administrator's Web site, as listed on the following page. Finally, send all completed documentation to the Program Administrator in your service territory, using the addresses provided on the following page.

After the Program Administrator reviews your materials, he or she will send you a letter explaining the next steps.

If you are a state agency employee: Become more familiar with the approach to funding landfill gas energy projects used by the California Public Utilities Commission. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote installation of renewable energy technologies.

For More Information

Contact:
Southern California Gas Company
Self-Generation Incentive Program Administrator
555 West Fifth Street, GT15F4
Los Angeles, CA 90013
800-GAS-2000
Fax: 213-244-8384
E-mail: selfgeneration@socalgas.com

Web site:
www.socalgas.com/business/selfgen

Pacific Gas & Electric Co.
Self-Generation Incentive Program
P.O. Box 770000
Mail Code B29R
San Francisco, CA 94177
415-973-6436
Fax: 415-973-2510
E-mail: selfgen@pge.com

Web site:
www.pge.com/002_biz_svc/selfgen/index.shtml

San Diego Regional Energy Office (Administrator for San Diego Gas & Electric)
401 B Street, Suite 800
San Diego, CA 92101
619-595-5630
Fax: 619-595-5305
E-mail: selfgen@sdenergy.org

Web site:
www.sdenergy.org/selfgen

Southern California Edison
Program Manager, Self Generation Incentive Program
2131 Walnut Grove Avenue
3rd floor, MS B10
Rosemead, CA 91770
800-736-4777
Fax: 626-302-6253
E-mail: greenh@sce.com

Web site:
www.scespc.com/sgip.nsf

Colorado: State Purchasing of Renewable Energy

Program Description

In August 1997, the Governor of Colorado issued an executive order (EO) committing state agencies and state-run facilities to expand their use of renewable energy, where possible. It stated:

> *All state agencies should directly utilize renewable energy resources or purchase electricity from renewable resources wherever cost-effective and practical.*

Specifically, the EO mandated the state Office of Energy Conservation to:

> *…determine standards for the cost-effective use of specific renewable energy applications by state agencies… [and] develop a plan for a state program that allows a price preference for the purchase of electricity from renewable energy resources.*

All state agencies should directly utilize renewable energy resources or purchase electricity from renewable resources wherever cost-effective and practical.

Colorado's commitment to renewable energy purchasing is broad, ranging from encouraging the development of cost-effective solar or wind power generation projects at state facilities to the purchase of green power from electricity utilities. The Governor's EO could enable the purchase of landfill gas for direct use in nearby facilities or include energy generated from landfill gas as part of a renewable energy package offered by a utility. The state also incorporated a price preference for electricity purchases from green power sources, signaling a significant commitment to renewable energy. This provision will encourage the development of stable energy purchasing agreements that landfill gas and other renewable energy providers need to move their projects forward.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Colorado: If you are considering developing a landfill gas utilization project near a Colorado-owned facility, consider whether the state itself would be willing to purchase landfill gas under a direct use project. If the sale of landfill gas for direct-use is not possible, you might instead be able to include energy generated from landfill gas in green power packages offered by utilities that service Colorado's facilities. If you are developing a project in another state, inquire whether that state has in place, or is considering, a similar commitment to renewable energy production and use.

If you are a state agency employee: If your state has implemented electricity industry deregulation or energy providers are offering green power packages, research whether an EO concerning renewable energy similar to Colorado's has been implemented or could be beneficial.

For More Information

Contact:
Ed Lewis
Colorado Office of Energy Management Conservation
303-620-4292

Web site:
www.state.co.us/oemc

Connecticut: Connecticut Clean Energy Fund

Program Description

Created in 1998 as part of Connecticut's utility deregulation activities, the Connecticut Clean Energy Fund (CEF) invests in enterprises and other initiatives that promote and develop sustainable markets for energy from renewables and fuel cells. These projects can be based anywhere in the world, as long as they benefit Connecticut ratepayers. Managed by Connecticut Innovations, CEF aims to: build a strong green power market in the state; establish a strong statewide economic base in clean energy products and services; and deliver investment returns that allow the Fund to sustain its operation.

CEF makes early stage capital investments in projects that build consumer demand or produce clean power. Companies that are building clean energy products are also eligible for venture capital investments. To be considered for investment by the fund, projects and companies must:

- Provide a clear benefit to the ratepayers of Connecticut.
- Involve renewable or clean energy technologies, as listed below.
- Offer financial returns commensurate with the risk level.

CEF will invest in the following renewable and clean energy technologies:

- Fuel cells
- Landfill gas
- Low emission biomass conversion
- Ocean thermal energy
- Solar
- Wave or tidal energy
- Wind
- Emerging non-fossil, non-nuclear technologies

Investments range from $100,000 to $3 million; $120 million is available for investment by 2004.

Actions You Can Take

If you are interested in developing a landfill gas energy project in Connecticut or in a market beneficial to Connecticut utility customers: If you already have a solid business plan and are seeking financing for your project, submit your business plan to the address listed below. Your business plan should include (at a minimum):

- The extent of your market research.
- A marketing strategy for your business, product, or project.
- The experience of your management team.
- The technical characteristics of the product or project.
- Financial projections.

CEF will acknowledge receipt of your materials, and contact you to discuss your project.

For More Information

Contact:
Charlie Moret
Connecticut Clean Energy Fund
999 West Street
Rocky Hill, CT 06067
860-563-0015
E-mail:
charlie.moret@ctinnovations.com

Web site:
www.ctcleanenergy.com

CEF makes early stage capital investments in projects that build consumer demand or produce clean power. Companies that are building clean energy products are also eligible for venture capital investments.

Georgia: Solid Waste Loan Program

Program Description

The Georgia Environmental Facilities Authority (GEFA), an LMOP State Partner, provides environmental and energy efficiency financing, coordination, and education to governmental units and nonprofit organizations in Georgia. GEFA makes state-backed loans and grants to cities, counties, and solid waste management authorities for water, sewer, and solid waste management projects. GEFA is the primary funding agency for solid waste management projects in the state.

Under the Solid Waste Loan Program, GEFA offers low-interest loans for solid waste management projects, particularly those that help minimize waste streams or mitigate environmental hazards. Loan applications are accepted year-round. While GEFA loans are available only to Georgia local governments, partnerships with private-sector developers may be allowed, depending on the specific project arrangements at a rate directly indexed to the interest rate of the State's bonds. Contact the Solid Waste Program Manager for current rates.

In 2002, the City of LaGrange, Georgia, received a $1 million low-interest loan from GEFA to upgrade landfill management equipment, including the installation of a landfill gas collection system and construction of a landfill gas generating facility. LMOP Industry Partner, Interface, Inc., purchases the landfill gas for direct use at its facility LaGrange, Georgia.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Georgia: Review the program information on the GEFA Web site. Contact GEFA to discuss the specifics of your project. If you are a city or county employee, review the Guidelines and Special Requirements of the grants program.

If you are a state agency employee: Visit the GEFA Web site to learn more about Georgia's program and consider whether it can serve as a model for your state. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects.

For More Information

Contact:
Jason Bodwell
GEFA
Suite 2090 Equitable Building
100 Peachtree Street NW
Atlanta, GA 30303-1911
404-656-0938
E-mail: jason@gefa.ga.org

Web site:
www.gefa.org

The City of LaGrange, Georgia, received a $1 million low-interest loan from GEFA to upgrade landfill management equipment, including the installation of a landfill gas collection system and construction of a landfill gas generating facility.

Idaho: Renewable Resource Project Loans

Program Description

In 1993, the Energy Division of the Idaho Department of Water Resources expanded a conservation program to encourage renewable energy usage among business and agricultural consumers in the state.

Under the state's Renewable Resource Project Loans program, commercial and industrial customers may borrow up to $100,000 at four percent interest, with a five-year payback period. The project must be installed within 90 days after the project has been approved. To be eligible for a loan, a project must demonstrate an estimated payback period from energy savings of 10 years or less; conserve energy through the use of renewable energy resources, resulting in energy savings based on a net reduction or displacement of non-renewable resources; utilize existing reliable technologies; and meet federal and state air and water quality standards.

The renewables component of the loan program has processed 346 loans totaling $1.6 million and has resulted in almost 775,000 kWh of new renewable energy generation. Funded projects have included solar energy and wind power systems for livestock watering, geothermal space heating and ground source heat, hydropower systems for onsite use, wood and pellet stoves, and biomass energy sources. Although no landfill gas utilization projects have been funded to date, they are eligible under the program.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Idaho: Contact the Idaho Department of Water Resources, or review the Renewable Resource Loan application available from the Agency's Web site (see below).

If you are a state agency employee: Learn more about Idaho's program and consider whether it can serve as a model for your state. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects.

For More Information

Contact:
John Crockett
Idaho Department of Water Resources
P.O. Box 83720
Boise, ID 83720-0098
800-334-SAVE (7283)
E-mail: jbcrocke@idwr.state.id.us

Web site:
www.idwr.state.id.us

To be eligible, a project must conserve energy through the use of renewable energy resources.

Illinois: Illinois Clean Energy Community Foundation

Program Description

The Illinois Clean Energy Community Foundation provides funding for clean energy development and works with communities and citizens to improve environmental quality in Illinois. The Foundation supports the development of renewable energy resources and improvements in energy efficiency.

The Illinois Clean Energy Community Foundation will consider grant requests from public charities, educational institutions, and state and local government agencies in Illinois. Its renewable energy funding priorities focus on advancing the use of wind and solar power, as well as emerging renewable energy technologies–especially biomass energy and fuel cells. Landfill gas projects are not an explicit priority for the Foundation, but it may consider providing support for innovative landfill gas projects (e.g., siting wind turbines or photovoltaics on a landfill) through its biomass energy support program.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Illinois: If your project fits within one of the Foundation's program priorities, you begin the grant application process by submitting a brief (no more than three pages) letter of inquiry. The letter of inquiry should describe the proposed project, explain the need for the project, and include a brief summary of the total project expenses and proposed sources of funding, including the specific amount requested from the Foundation. It also must identify which specific Foundation program priority the project advances. The Foundation will contact all applicants to let them know whether they have been selected to develop and submit a full proposal. Generally, there are two competitive grant cycles per year. Visit the Foundation's Web site, listed below, for current letter of inquiry deadlines and complete information about its current program priorities.

For More Information

Contact:
Ed Miller
Program Director
Illinois Clean Energy Community Foundation
2 North LaSalle Street, Suite 950
Chicago, IL 60602
312-372-5191
Fax: 312-372-5190
E-mail: emiller@illinoiscleanenergy.org

Web site:
www.illinoiscleanenergy.org

The Foundation may consider providing support for innovative landfill gas projects (e.g., siting wind turbines or photovoltaics on a landfill).

Illinois: Renewable Energy Resources Program

Program Description

The Renewable Energy Resources program fosters investment in and the development and use of renewable energy resources in Illinois. Administered by the Illinois Department of Commerce and Community Affairs (DCCA), an LMOP State Partner, the program provides equipment rebates and grants for projects that create renewable energy in Illinois. Eligible technologies include: hydropower, photovoltaic technology, solar, wind, and biomass (including landfill gas). DCCA may fund up to, but not more than, 50 percent of equipment costs with a maximum grant of $550,000 for biomass project equipment.

DCCA has funded two landfill gas energy projects to date. The Dixon/Lee Landfill, a 3 MW project, and the 15 MW Livingston Landfill project, located in Chicago, both received DCCA grants.

Applications are accepted on an ongoing basis. Eligible applicants include associations, individuals, private companies, public and private schools, colleges and universities, not-for-profit organizations, and units of state and local government.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Illinois:
Determine whether your projects meets the program requirements, then contact the DCCA to learn more about how to submit an application. (See contact information.)

If you are a state agency employee:
Become more familiar with the approach used by the DCCA. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote investment in and the development and use of renewable energy resources.

For More Information

Contact:
Rex Buhrmester
Illinois Department of Commerce and Community Affairs
Bureau of Energy and Recycling
Alternative Energy Development Section
RERP
620 East Adams Street
Springfield, IL 62701
217-557-1925 or 800-785-6055
Fax: 217-785-2618
E-mail: rbuhrmes@commerce.state.il.us

Web site:
www.commerce.state.il.us/com/energy/utility_dereg.html

DCCA has funded two landfill gas energy projects to date. The Dixon/Lee Landfill, a 3 MW project, and the 15 MW Livingston Landfill project, located in Chicago, both received DCCA grants.

Indiana: Alternative Power and Energy Grant Program

Program Description

The Energy Policy Division of Indiana's Department of Commerce offers funding support through the Alternative Power and Energy Grant Program to enable businesses and institutions to install alternative and renewable energy system applications. Businesses, nonprofit institutions, and units of local government (including public schools) can apply for grants ranging from $5,000 to $30,000. Eligible projects include non-transportation applications of solar, wind, geothermal, hydropower, alcohol fuels, waste-to-energy, and biomass technologies. Landfill gas energy projects are eligible for funding and have been funded in the past. The Southside Landfill in Indianapolis received funding to perform pilot testing of a 30 kW microturbine with the landfill gas produced at the site.

The Southside Landfill in Indianapolis received funding to perform pilot testing of a 30 kW microturbine with the landfill gas produced at the site.

Eligible projects can involve the direct generation of electricity (for either onsite use or placement of power onto a utility grid), heating and/or cooling of buildings, or fuel production. To be considered for funding, projects must apply commercially available technologies. The grants program does not fund research projects.

The Energy Policy Division gives priority to projects that involve the participation of industry councils, utilities, local and regional development organizations, and other potential partners. These partnerships should provide expertise, leadership, and financial commitments to projects. The participation of multiple partners enhances an applicant's likelihood of grant approval.

Grant guidelines are available on the Web site listed on the following page. The guidelines provide information about the formulas used to determine grant amounts and on the timing of payments.* Interested parties should contact the Energy Policy Division to discuss their project or request an application. Grant applications are evaluated and scored based on the applicant's ability to demonstrate that the proposed project:

- Is appropriate and technically feasible.
- Will result in fuel and/or energy savings.
- Will contribute to improving the environment of Indiana.
- Will facilitate economic development in the state.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Indiana: Determine whether your projects meet program requirements by consulting grant guidelines on the Web site provided below. Then contact the Energy Policy Division to learn more about how to submit an application. (See contact information on the following page.)

If you are a state agency employee: Become more familiar with the approach used by the Indiana Department of Commerce's Energy Policy Division. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote landfill gas energy projects and the installation of alternative and renewable energy system applications.

*Grants require a 70 percent match.

For More Information

Contact:

Philip Powlick
Indiana Department of Commerce
Energy and Recycling Office
One North Capitol, #700
Indianapolis, IN 46204
317-232-8970
Fax: 317-232-8995
E-mail: ppowlick@commerce.state.in.us

Web site:

www.in.gov/doc/business/EP_transportation.html

Indiana: Distributed Generation Grant Program

Program Description

Indiana's Distributed Generation Grant Program (DGGP) is designed to enable businesses and institutions to install and study alternatives to central electricity generation. These alternatives include fuel cells, microturbines, cogeneration, combined heat and power, and renewable energy technologies (including landfill gas utilization).

Administered by the Energy Policy Division of the Indiana Department of Commerce, the DGGP offers grants ranging from $5,000 to $30,000.

For projects (such as landfill gas projects) where the distributed generation facility uses renewable energy, the eligible amount is equal to 30 percent of the equipment cost or $30,000, whichever is less. Businesses, nonprofit institutions, and units of local government (including public schools) can apply for the grants. All projects must be located in Indiana. Eligibility is limited to companies and organizations that operate in the state or will operate in Indiana as a result of the project.

To be considered for funding, a project must demonstrate measurable energy savings (in kWh, Btu, or other units of measurement) or the offset of the use of significant amounts of fossil fuel. A project must also provide baseload power of at least 20 kW for the facility at which it is located. In addition, the project should either have a thermal efficiency of 50 percent or greater, involve fuel cells, or take advantage of a renewable energy source (e.g., landfill gas).

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Indiana: Grant guidelines are available on the Web site listed below. Determine whether your projects meets the program requirements, then contact the Energy Policy Division of the Indiana Department of Commerce to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by the Indiana Department of Commerce's Energy Policy Division. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote the installation of alternatives to central electricity generation.

To be considered for funding, a project must demonstrate measurable energy savings or the offset of the use of significant amounts of fossil fuel.

For More Information

Contact:
Ethan Rogers
Indiana Department of Commerce
Energy and Recycling Office
One North Capitol, #700
Indianapolis, IN 46204
317-232-8961
Fax: 317-232-8995
E-mail: erogers@commerce.state.in.us

Web site:
www.in.gov/doc/businesses/ep_transportation.html

Iowa: Alternative Energy Loan Program

Program Description

Low-interest loans are becoming an increasingly popular option among states for encouraging landfill gas utilization projects. Typically, up-front capital expenditures, such as landfill gas collection system installation, dominate the cost structure for landfill gas utilization projects relative to the costs of operation and maintenance. As a result, these projects are very sensitive to their cost of capital. States are beginning to assist developers in financing landfill gas utilization projects by providing tax-exempt financing or loans with longer maturities, guarantees, and discounted interest rates.

The Iowa Alternative Energy Revolving Loan Program was created in 1996 to encourage the development of alternative energy production facilities and small hydroelectric facilities in Iowa. To fund the program, a three-year assessment was levied on Iowa's investor-owned utilities, which generated approximately $5.9 million.

Iowa's revolving loan program offers interest-free loans for up to half of a project's costs, up to $250,000. Loan terms are offered up to 20 years, with the average lifetime being seven to eight years. The program will assume half of the debt for a project and will co-fund with any bank, to whom they will assume a secondary position with junior debt. Private lending institutions are responsible for financially qualifying the borrower, while the Iowa Energy Center assists in technically qualifying the borrower.

To ensure fair competition among the different types of eligible renewable energy facilities, specific percentages of the program's funds are set aside each year for each of the alternative energy technologies. Twenty percent of the program's portfolio is directed toward biomass-based projects (this category includes landfill gas utilization projects, as well as resource recovery, agricultural crops or residues, and wood-burning facilities); 30 percent is set aside for wind power; 15 percent for small hydroelectric projects; five percent for solar; and 30 percent is left uncommitted.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Iowa: To learn more about applying for support from the Iowa Alternative Energy Revolving Loan Program, visit the Iowa Energy Center Web site at the address provided below.

If you are interested in developing a landfill gas utilization project in another state: As interest in alternative energy sources has grown, other states have also developed similar programs; for a project in another state, investigate the availability of loan support with the state's energy or environmental agencies.

If you are a state agency employee: A loan program that supports landfill gas utilization projects could be developed in your state through a broadened use of existing alternative energy loan programs. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects.

States can assist developers in financing landfill gas utilization projects by providing tax-exempt financing, or loans with longer maturities, guarantees, and discounted interest rates.

For More Information

Contact:
Keith Kutz
Iowa State University
Iowa Energy Center
2521 Elwood
Suite 124
Ames, IA 50010-8263
515-294-8819
Fax: 515-294-9912
E-mail: kkutz@energy.iastate.edu

Web site:
www.energy.iastate.edu/

Iowa: Iowa Energy Center Grants

Program Description

The Iowa Energy Center is a research, demonstration, and education organization dedicated to increasing Iowa's energy efficiency and use of renewable fuels, such as landfill gas. The Energy Center is supported by an annual assessment on the intrastate gross operating revenues of all gas and electric utilities in Iowa. Assessment funds are used primarily to support research, education, and demonstration projects awarded through competitive grants.

The Iowa Energy Center offers grants only to nonprofit organizations, foundations, and educational institutions. Grants are intended for the support of research and demonstration projects pertaining to one or more of the following: energy efficiency, renewable energy, and the dissemination of related knowledge.

Proposals should:

- Address technologies and processes that will advance the state of renewable energy.
- Include innovative approaches and methods to increase acceptance and implementation of renewable energy in Iowa.
- Involve multidisciplinary approaches and collaboration between institutions, organizations, and businesses.

Applicants should begin the application process by submitting a "pre-proposal." The Energy Center staff will review all pre-proposals. Organizations whose proposed projects are deemed to be most responsive to the research interests of the Energy Center will be provided with detailed guidelines and encouraged to submit a full proposal.

Full proposals will be reviewed by Energy Center staff and by peer reviewers selected by the Energy Center. After completion of the internal and external reviews, summarized comments and recommendations on funding will be provided to the Energy Center's Advisory Council. Funding recommendations will be reviewed at an Advisory Council meeting and a final decision on funding will be made by the Energy Center's Director.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Iowa:
Contact the Iowa Energy Center or visit the Center's Web site to determine your eligibility for funding and obtain relevant applications. (See contact information below.) Contact the Energy Center Staff with any additional questions you might have.

For More Information

Contact:
Keith Kutz
Iowa State University
Iowa Energy Center
2521 Elwood
Suite 124
Ames, IA 50010-8263
515-294-8819
Fax: 515-294-9912
E-mail: kkutz@energy.iastate.edu

Web site:
www.energy.iastate.edu/

Grants are intended for the support of research and demonstration projects pertaining to one or more of the following: energy efficiency, renewable energy, and the dissemination of related knowledge.

Iowa: Tax Exemptions

Program Description

The recovery and beneficial use of landfill gas prevents a hazardous and environmentally damaging substance from entering the atmosphere and reduces local nuisances, such as odors and explosion threats. Some states encourage landfill gas utilization by providing an exemption on property taxes for areas improved by the construction of a landfill gas utilization project.

Nearly every state has made changes in property tax laws to support a variety of initiatives that benefit the public. Iowa made a change in their tax law designed to support the development of landfill gas projects, implementing an exemption called the "methane gas conversion property" tax exemption.

Under this initiative, the state defined a set of properties and equipment related to the development of landfill gas utilization projects and specifically exempted these from any calculation of property taxes. As explained in Iowa Code 427.1, this category includes personal property, real property, machinery, equipment, and computers used in connection with a publicly owned landfill from which methane gas is produced as a byproduct of waste decomposition and converted to energy.

Property Tax Exemption for Methane Gas Conversion Property–Iowa's property tax exemption for "methane gas conversion property" is available for any organizations owning property used in connection with an operation that collects gases produced as a by-product of waste decomposition and converts the gas to energy.

To apply for the methane gas property tax exemption, an application form must be filed with the "assessing authority" on or before February 1 of each year you wish to claim the exemption. According to the state, the assessing authority for all landfill gas utilization projects in Iowa is the state's Department of Revenue.

Methane Energy Replacement Generation Tax Exemption–All energy generated by methane gas conversion property is exempt from the replacement generation tax of .06 cents per kWh. See Iowa Code 437A.6 for details.

Iowa Code 427.1 exempts 'methane gas conversion property' from property taxation.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Iowa: If you are planning a project in Iowa, this program may help make the project more economically feasible. Contact the program manager or visit the Iowa Department of Revenue and Finance Web site using the information provided on the following page.

If you are a state agency employee: Consult your state's Treasury Department or Office of Taxation to determine whether property taxes apply to equipment and expenses related to landfill gas recovery and utilization. Determine if there are exemptions offered for other objectives (for example, other renewables, or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; and alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

For more information, contact:

Angela Chen
Iowa Department of Natural Resources
Energy Bureau
Wallace State Office Building
Des Moines, IA 50319-0034
515-281-4736
E-mail: angela.chen@dnr.state.ia.us

Web site:

www.state.ia.us/dnr/energy/programs/methane/financialincentives/htm

Iowa: Renewable Fuels Fund

Program Description

Through its Renewable Fuel Fund, Iowa's Department of Economic Development provides loans to assist organizations that are setting up renewable fuel projects, including landfill gas energy projects. The renewable fuels fund is part of Iowa's larger Value-Added Agricultural Products and Processes Financial Assistance Program (VAAPFAP). The Renewable Fuels Fund supplies approximately $2 million in assistance to qualifying projects annually.

Any single project may apply for up to $525,000 in the form of loans and forgivable loans. Generally, assistance of $20,000 or more is awarded as a combination of loans and forgivable loans, with the forgivable portion decreasing as the award size increases.

The selection criteria require that a successful project will:

- Submit a feasible business plan. (35 points)
- Improve the overall market for Iowa commodities, such as corn, soybeans, and hogs. (35 points)
- Increase the overall market for Iowa co-products. (10 selection points)
- Operate in a relatively impoverished part of Iowa. (5 points)
- Operate in a relatively rural part of Iowa. (5 points)
- Obtain a large part of its financial support from local sources. (5 points)

Each of these selection criteria is weighted as indicated above. Assuming sufficient funding, all proposals that score above 65 points (out of a possible 95) will be funded.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Iowa: Determine whether your projects meets the program requirements, then contact the Department of Economic Development to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by the Department of Economic Development. Consider whether your state has, or could benefit from, similar support programs that offers loans and forgivable loans to assist organizations that are setting up renewable fuel projects.

Iowa's Department of Economic Development provides loans to assist organizations that are setting up renewable fuel projects, including landfill gas energy projects.

For More Information

Contact:
Joe Jones
Iowa Department of Economic Development
Bureau of Business Finance
200 E. Grand
Des Moines, IA 50309
515-242-4801
Fax: 515-242-4809
E-mail: joe.jones@ided.state.ia.us

Web site:
www.smart.state.ia.us/financial.htm

Iowa: Solid Waste Alternatives Program

Program Description

The Iowa Department of Natural Resources (DNR) developed the Solid Waste Alternatives Program in response to the evolution of waste reduction, recycling, and other landfill diversion activities currently in place across the state. This program funds statewide development and expansion of waste reduction and recycling projects. It focuses on best practices, education, and market development projects–including landfill gas energy–as they relate to pollution prevention and solid waste management.

According to the hierarchy of solid waste management options established by Iowa's 1987 Groundwater Protection Act, waste reduction at the source is the most preferred method of solid waste management. Recycling and reuse are the next most preferred methods, followed by other approved techniques of solid waste management, such as combustion with energy recovery (including landfill gas energy projects), combustion for waste disposal, and disposal in sanitary landfills.

Under the program, therefore, municipal solid waste management agencies are eligible for financial assistance in connection with a landfill gas energy project. Proposals may be submitted at any time of the year, but they will only be evaluated on a quarterly basis (on January 2, April 1, July 1, and October 1).

Eligible applicants include any unit of local government, public or private group, business, or individual with an interest in or having responsibility for solid waste management. The first $20,000 of an award will be provided in the form of a forgivable loan. The next $150,000 will be provided as a zero interest loan. Any additional award will be provided as a three percent interest loan (compounded annually).

DNR will pay only 75 percent of eligible expenses, which include:

- Waste reduction equipment purchase and installation.
- Collection, processing, or hauling equipment including labor for installation.
- Development, printing, and distribution of educational materials.
- Planning and implementation of educational forums including, but not limited to, workshops.
- Materials and labor for construction or renovation of buildings.
- Salaries directly related to implementation and operation of the project.
- Laboratory analysis costs.
- Engineering or consulting fees.

Applicants are required to provide a minimum of 50 percent of the overall total cost of the project. An applicant's cost share may include: cash; salaries of individuals pertinent to the project; buildings, land, office space, and equipment; or other expenses directly related to the project.

The program focuses on best practices, education, and market development projects–including landfill gas energy.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Iowa:
Determine whether your project meets the program requirements, then contact the DNR to learn more about how to submit an application. (See contact information on the following page.)

If you are a state agency employee: Become more familiar with the approach used by the Iowa DNR. Consider whether your state has, or could benefit from, similar support programs that fund development and expansion of waste reduction and recycling projects.

For More Information

Contact:
Valerie Drew
Iowa Department of Natural Resources
Energy & Waste Management Bureau
515-281-8672
E-mail: valerie.drew@dnr.state.ia.us

Web site:
www.iowadnr.wmad.org

Kansas: Renewable Energy Property Tax Exemption

Program Description

Section 11 of Kansas Statute No. 79-201 states that, for tax years commencing after December 31, 1998, the following property shall be exempt from all property taxes or ad valorem taxes levied under Kansas law:

...all property actually and regularly used predominantly to produce and generate electricity utilizing renewable energy resources or technologies. For purposes of this section, "renewable energy resources or technologies" shall include wind, solar, thermal, photovoltaic, biomass, hydropower, geothermal, and landfill gas resources or technologies.

This exemption applies to real estate, facilities, and equipment used to generate electricity from renewable energy resources, including landfill gas.

An application form for the renewable energy property tax exemption is available at the Web site listed below. Completed applications should be sent to the Kansas Department of Revenue, Division of Property Valuation, at the address shown below. Upon receipt of an application, the Kansas Department of Revenue's Division of Property Valuation will review the application, make a recommendation, and file each application with the state board of tax appeals.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Kansas: If you are planning a project in Kansas, this tax exemption might help make the project more economically feasible. Review the application form available online. If you have further questions, contact the state official listed below to determine if your property would be eligible for an exemption.

If you are a state agency employee: Consult your state's Treasury Department or Office of Taxation to determine whether property taxes apply to equipment and expenses related to landfill gas recovery and utilization.

Determine if your state provides exemptions for other objectives (e.g., other renewables, or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

Contact:
Robert M. Badenoch
Chief of State-Appraised Properties
Division of Property Valuation
Kansas Department of Revenue
Docking State Office Building
Fourth Floor
915 SW Harrison Street
Topeka, KS 66612
785-296-2365
E-mail: bob_badenoch@kdor.state.ks.us

Web site:
www.ink.org/public/bota/apps.html

This exemption applies to real estate, facilities, and equipment used to generate electricity from renewable energy resources, including landfill gas.

Kansas: State Energy Program Grants

Program Description

The Kansas State Energy Program promotes energy conservation and efficiency and annually awards grants to projects that support these objectives. The program supports projects that accelerate deployment of and facilitate the commercialization of emerging and underutilized renewable energy technologies.

Kansas's energy grants program is administered by the Kansas Corporation Commission (KCC). The KCC funds the program through both a U.S. Department of Energy grant and Petroleum Violation Escrow funds. Approximately $350,000 to $400,000 in funding is available each year. In a typical year, the KCC funds roughly one-third of the applications received, with the grants averaging between $10,000 and $25,000. (There is, however, no funding cap.)

Applications for grants must fall into one of six categories: buildings, general energy education, industrial, transportation, utilities, and miscellaneous. The utilities category includes renewable energy applications. Past grants in this category have supported projects deploying or demonstrating solar, wind, and biomass energy generation. All renewable energy technologies, including landfill gas energy technologies, are eligible for support.

Nonprofit organizations, government entities, businesses, and others may apply for grants. Commercial projects are eligible, although the State Energy Program favors projects that seek to benefit society as a whole.

A grant application package is available on the KCC Web site, listed below. The KCC reviews applications once a year. The annual deadline for submitting applications is the beginning of March, and grant awards are typically announced in June.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Kansas:
Review program requirements on the Web site shown below. Determine whether your project meets the program requirements, then contact the KCC to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee:
Become more familiar with the approach used by the KCC. Consider whether your state has, or could benefit from, similar support programs that promote the deployment of and facilitate the commercialization of emerging and underutilized renewable energy technologies.

The program supports projects that accelerate deployment of and facilitate the commercialization of emerging and underutilized renewable energy technologies.

For More Information

Contact:
Jim Ploger
Kansas Corporation Commission
Energy Office
1500 SW Arrowhead Road
Topeka, KS 66604-4027
785-271-3349
Fax: 785-271-3268
E-mail: j.ploger@kcc.state.ks.us

Web site:
www.kcc.state.ks.us/energy/energy.htm

Maryland: Clean Energy Incentive Act

Program Description

Maryland's Clean Energy Incentive Act, which went into effect in July 2000, provides tax incentives for individuals and businesses in Maryland that purchase or invest in clean energy. The act is structured to expand the market in Maryland for advanced technologies that save energy or generate electricity from renewable sources of energy. These technologies include:

- Landfill gas, wind, or biomass power systems
- Energy-efficient appliances, heating systems, and cooling systems
- Electric and hybrid vehicles
- Solar energy equipment

The act provides income tax credits for the production and sale of electric power from landfill gas. Landfill gas energy facilities can qualify for the tax credit if they are located in Maryland and were or will be placed into service between January 1, 2001 and January 1, 2005. To be eligible, facilities must produce electricity primarily from landfill gas, and all electricity must be sold to parties unrelated to the owner. Corporations or individuals who own such facilities can claim a state income tax credit of 0.85 cents per kWh of electricity produced during the 10-year period after the facility is originally placed in service.

A facility is also eligible if it produces electricity from landfill gas that is co-fired with coal, as long as the facility began or will begin utilizing landfill gas between January 1, 2001 and January 1, 2005. The tax credit for such facilities is 0.5 cents per kWh of electricity produced from landfill gas during the 10-year period beginning on the date of the initial co-firing. To apply for the tax credit, corporations or individuals must submit Maryland Tax Form 500CR with their income tax return (Form 500 for corporations, Form 502 or 505 for individuals).

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Maryland: If you are planning (or already operating) a project in Maryland, contact the official from the Maryland Energy Administration, an LMOP State Partner, listed below to discuss the Clean Energy Incentive Act. To access online tax forms and instructions, visit the Web site shown below.

If you are a state agency employee: Consult your state's Office of Taxation to determine if there are tax credits or exemptions offered for renewable energy projects or other activities that might be related to landfill gas recovery. These incentives might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Michael Li
Maryland Energy Administration
1623 Forest Drive, Suite 300
Annapolis, Maryland 21403
410-260-7183
E-mail: mli@energy.state.md.us

Web site:
http://business.marylandtaxes.com/taxinfo/taxcredit/cleanenergy/default.asp

Landfill gas energy facilities can qualify for the tax credit if they are located in Maryland and were or will be placed into service between January 1, 2001 and January 1, 2005.

Massachusetts: Renewable Energy Trust

Program Description

The Massachusetts Renewable Energy Trust was created following the restructuring of the state's utility industry in 1997. The Trust is funded through a monthly charge on customer electric bills, known as a systems benefit charge. For residential customers, this charge is about $0.50 a month or $6 a year. The Trust is managed by the Massachusetts Technology Collaborative (MTC), an economic development organization whose mission is to foster sustainable economic growth by promoting and strengthening Massachusetts's economy through partnerships among businesses, academia, and government.

Approximately $150 million will be available between 1998 and 2003 for the development of renewable energy industry and to promote the use of cleaner energy sources in the state.

Approximately $150 million will be available between 1998 and 2003 for the development of renewable energy industry and to promote the use of cleaner energy sources in the state. After 2003, the Trust will receive approximately $20 million per year.

The following technologies are eligible for support:

- Solar photovoltaic and solar thermal electric energy
- Wind energy
- Landfill gas
- Naturally flowing water and hydroelectric
- Low emission, advanced biomass power conversion technologies
- Storage conversion technologies connected to qualifying generation projects
- Fuel cells

The type of funding provided to approved applications may vary from program to program, and even within a particular program as specified in that program's implementing documents. According to the law that established the Trust, funds may be provided "to make grants, contracts, loans, equity investments, energy production credits, bill credits, or rebates to customers, to provide financial or debt service obligation assistance, or to take any other actions, in such forms, under such terms and conditions and pursuant to such selection procedures as the Board deems appropriate and otherwise in a manner consistent with good business practices."

The Trust periodically issues solicitations and requests for proposals, which can be reviewed on the Trust's Web site. (See the following page.) Specific eligibility for funds varies from solicitation to solicitation, and each has its own application. General criteria for funding include:

- Potential public benefits – preference is given to renewable energy technologies that are produced in the state.
- Net cost per kWh – the Trust may consider the renewable energy system's net cost per kWh.
- Commercial potential – a project may be reviewed based on its potential to advance the commercial prospects of the renewable energy technology.
- Geographic location – the Trust supports applications in all regions of Massachusetts.
- Leverage of the Trust's resources – financial leverage is important to demonstrate commitment, to validate commercial potential, and to maximize the impact of the Trust.

- Contribution to public debate – projects that considerably increase awareness of renewable energy benefits will be favored.

An example of Trust financing is a $150,000 loan awarded to LMOP Industru Partner Ameresco, Inc., for predevelopment activities related to the siting of a 4 to 6 MW landfill gas facility in Chicopee, Massachusetts.

The Trust can also fund unsolicited proposals. These are applications for financial or technical assistance support of a project, idea, method, or approach that is submitted by individuals, businesses, and organizations solely at the proposer's initiative and/or timing. Guidelines for submitting unsolicited proposals are available on the Web site listed below.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Massachusetts: Determine whether your project meets the program requirements. Specific eligibility for funds will vary from program to program. Contact the Trust to learn more about how to submit an application. Each program will have its own application mechanism. (See contact information below.) Also, review the program's Web site to see if any specific solicitations that apply to landfill gas energy projects have been issued by the Trust.

If you are a state agency employee: If your state has restructured its utility industry or is considering doing so, become more familiar with the approach used by the Trust. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote the development of renewable energy.

For More Information

Contact:
Nils Bolgen
Massachusetts Technology Collaborative
75 North Drive
Westborough, MA 01581
508-870-0312
Fax: 508-898-2275
E-mail: bolgen@mtpc.org

Web site:
www.mtpc.org/massrenew/massrenew.htm#

Michigan: Michigan Biomass Energy Program

Program Description

The Michigan Biomass Energy Program (MBEP) encourages increased production and use of biomass energy through information dissemination and financial assistance. MBEP receives the majority of its funding from the Great Lakes Regional Biomass Energy Program (GLRBEP), which is one of five regions in the U.S. Department of Energy's Regional Biomass Energy Program.

MBEP offers state project funding to increase public awareness, assist in the development of production capacity, and expand markets for energy/fuel, including landfill gas, derived from Michigan biomass resources. This program defines biomass as any organic matter that is available on a renewable basis through natural processes or as a by-product of human activity, such as agricultural crops and crop residues, wood and wood waste, and municipal solid waste. Funding is typically available for projects in the following categories: biofuels/bioenergy education, biofuel infrastructure, and biomass technology development/demonstrations. All projects must be based in Michigan.

Biofuels/bioenergy education activities highlight the availability and benefits of bio-based fuels and lubricants or biomass energy. Biofuels infrastructure projects increase the number of public refueling facilities. Biomass technology development/demonstrations projects increase biofuels/bioenergy production, production efficiency, and/or markets. An example of a biomass technology development/demonstrations project would be a project that addresses the management and conversion of municipal solid waste to energy at a host site or in cooperation with potential users of the technology.

Public and nonprofit organizations are eligible for funding. Maximum funding for projects is $30,000. Projects must be completed within 12 months of the award, and there is a match requirement (except for education projects). Matching funds cannot be from a federal funding source and must be applied to costs directly related to the project.

MBEP offers state project funding to expand markets for energy/fuel, including landfill gas, derived from Michigan biomass resources.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Michigan: If you would like to receive funding notices, contact the MBEP Coordinator. Determine whether your projects meets the program requirements, then contact MBEP to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by MBEP. Consider whether your state has, or could benefit from, similar support programs that encourage increased production and use of biomass energy.

For More Information

Contact:
Kelly Launder
Program Coordinator
Michigan Biomass Energy Program
P.O. Box 30221
Lansing, MI 48909
517-241-6223
Fax: 517-241-6229
E-mail: klaund@michigan.gov

Web site:
http://michiganbioenergy.org

Mississippi: Energy Investment Loan Program

Program Description

The Mississippi Development Authority (MDA), an LMOP State Partner, offers a variety of programs intended to support existing Mississippi businesses and encourage the establishment of new businesses. The Energy Investment Loan program provides loans at below-market rates to qualifying organizations that are working to either make their energy consumption more efficient or make alternative energy sources available (e.g., landfill gas).

The Energy Investment Loan Program is managed by MDA's Energy Division. The program is part of the Energy Division's larger goal of encouraging projects that enhance the state's access to energy resources (and thereby benefit Mississippi's economy).

The Loan Program is open to sole proprietors, partnerships, corporations, or nonprofit organizations that are designing, developing, or installing certain kinds of energy-related equipment for use in Mississippi. This equipment must be intended to allow either for more efficient consumption of energy or for harnessing alternative forms of energy, such as landfill gas.

Funding is available for two categories or projects, as described below:

Retrofit Projects - Improvements made to a building or modifications to equipment not used in a manufacturing process that will reduce utility costs or allow for the use of an alternative energy source. Examples of such projects include:

- Heating and cooling systems
- Lighting fixtures
- Insulation
- Cogeneration systems
- Furnaces, burners, boilers, waste recovery systems, ignition systems
- Automatic energy management control systems

Energy Efficient Processes - Includes the implementation of equipment that enhances the efficiency of any industrial process by reducing energy consumption or allowing for the use of alternative energy sources. Examples of such projects include:

- Kilns
- Boilers - natural gas or wood
- Billet ovens
- Optimizing saws
- Refrigeration systems
- Variable steam and hydraulic equipment

The program offers loans between $25,000 and $300,000 at a rate of two percent below the prime interest rate prevailing at the time the loan is issued. The loan must be secured by a lien or liens on either the facilities to be installed and/or other unencumbered business assets, personal guarantees, surety bonds, or some combination of the above. Any individual owning 20 percent or more of a business obtaining a loan under this program must offer a personal guarantee for the loan.

All applications for an MDA loan must be accompanied by a technical analysis performed by a licensed architect or engineer chosen by the applicant. The technical analysis evaluates the ability of the business to conserve energy or improve the efficiency of an industrial process through the installation of ener-

The program provides loans at below market rates to organizations working to make alternative energy sources available.

gy saving measures or the use of an alternative energy source. MDA will consider only those projects recommended by the technical analysis.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Mississippi: Determine whether your projects meets the program requirements, then contact the MDA to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by the MDA. Consider whether your state has, or could benefit from, similar support programs that make alternative energy sources available.

For More Information

Contact:
Wes Miller
Mississippi Development Authority, Energy Division
P.O. Box 850
Jackson, Mississippi 39202
601-359-6600
Fax: 601-359-6642

Web site:
www.mississippi.org/programs/energy/financial_assistance.htm

Missouri: Financing Direct Use of Landfill Methane in Public Buildings

Program Description

The Energy Center in the Missouri Department of Natural Resources has established a revolving loan initiative called the Energy Loan Program to provide low-interest loans to public schools and local governments for energy efficiency and renewable energy projects. Projects qualify for funding of up to 16 times the estimated energy savings they will produce, or the estimated project cost, whichever is less. Landfill gas utilization projects are among the projects funded by the program.

More than $38 million has been lent through this program since its inception in 1989. One example, Pattonville High School in St. Louis County, Missouri, used a $150,000 loan from the fund to retrofit the school's boilers to run on methane and installed a 1,600-foot pipeline from the school's boilers to a nearby landfill. In a good-neighbor gesture, the landfill owner offered the recovered landfill methane to the school free of charge and installed a pipeline from the landfill gas recovery system to the edge of the landfill, connecting it with the school's pipeline. The balance of funding required for the project came from the St. Louis County Solid Waste Commission.

While the Pattonville development benefitted from a proactive school district and a generous landfill owner coming together, the availability of low-cost financing from state authorities also played a critical role.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Missouri:
Determine whether there are public buildings located within five miles of the landfill site (distances greater than that are unlikely to be economically feasible). Contact the facility managers about the possibility of using recovered landfill methane as a fuel. If the public facility manager is not familiar with landfill gas as an energy source, LMOP can provide educational support.

Once you identify a direct-use partner, you can visit the program's Web site, /www.dnr.state.mo.us/de/financial/, to download an information packet and application form. In addition to submitting an application, Missouri requires other information, including a Technical Assistance Report (TAR) or TAR equivalent. TAR report preparation instructions and report forms are available from the Web site at the address shown above. Contact the program manager listed below for complete application instructions.

If you are a state agency employee:
Become familiar with the approach used by Missouri in its Energy Loan Program. Consider whether your state has similar renewable energy or energy alternatives support programs that might be used to help local governments and public schools benefit from landfill gas power.

For More Information

Contact:
Bernard Thompson
Missouri Department of Natural Resources
Energy Center
P.O. Box 176
Jefferson City, MO 65102-0176
573-751-7466
E-mial: nrthomp@mail.dnr.state.mo.us

Web site:
www.dnr.state.mo.us/energy/financial/loan.html

Public buildings such as schools, prisons, offices, and other facilities located within several miles of a landfill make excellent long-term purchasers of landfill gas.

Montana: Alternative Energy Revolving Loan Program

Program Description

In May 2001, Montana Governor Judy Martz signed Senate Bill 506, which established a revolving loan fund to provide loans to homeowners and small businesses (defined as less than 500 employees) for the development of alternative energy sources. The Alternative Energy Revovlving Loan Program, which is administered by the Department of Environmental Quality (DEQ), is funded by penalties for air quality violations. Any interest earned by the account and any funds generated from a loan repayment must be deposited into the account and used to sustain the program. Eligible alternative energy sources include landfill gas, solar, wind, small hydro power, and fuel cells. Loan funds can be used for equipment, installation, and other energy project construction costs, as well as normal loan fees, closing costs, and interest during construction.

The purpose of the Alternative Energy Revolving Loan Program is to provide a financing option to Montana homeowners and small businesses to install alternative energy systems.

The loan amount may not exceed $10,000 and must be repaid within five years. Loan funds can be used for equipment, installation, and other energy project construction costs. The DEQ sets the interest rate at an amount that will cover its administrative costs.

DEQ will accept and evaluate loan applications year round for technical merit and probability of loan repayment. Approved projects will be ranked based on a number of criteria, such as system reliability, return on investment, and avoided fossil fuel consumption. Once a loan is approved, the applicant will be informed as to whether funds are currently available, and if not, when new funds are anticipated. If no funds are available, the application will remain active for one year.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Montana: Review the criteria information available at the Web site listed below and submit your application to DEQ. Applications can be downloaded from the Web site.

If you are a state agency employee: Visit DEQ's web site to learn more about Montana's program and consider whether it can serve as a model for your state. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects

For More Information

Contact:
Kathi Montgomery
Montana Department of Environmental Quality
Planning, Prevention, and Assistance Division
P.O. Box 202901
Helena, MT 59620-2901
406-444-6778
E-mail: kmontgomery@state.mt.us

Web site:
www.deq.state.mt.us/energy/Renewable/altenergyloan.asp

Montana: Alternative Renewable Energy Property Tax Exemption

Program Description

In Montana, a portion of the appraised value of certain alternative renewable energy properties, including generating plants that produce energy using landfill gas, is eligible for limited relief from property taxation. Up to $100,000 of the value of a system installed in a non-residential structure can be exempt from property taxation. Generating plants that produce less than 1 MW or less of energy by means of alternative renewable sources are eligible for a five-year complete exemption from property tax.

Plants that produce more than 1 MW of alternative renewable energy are taxed at only 50 percent of the existing tax rate over the first five years of operation. At these larger plants, the level of property taxation will be phased back to 100 percent of the tax rate over the next five years of their operation. The property tax exemption for the larger plants is subject to approval by the local government.

Taxpayers must submit their applications for property tax exempt status to the county assessor's office by March 1 to be considered for exemption that tax year. For installations made after March 1, taxpayers must submit an application for property exempt status before the following March 1 to be considered for exemption starting the following tax year. Applications may be submitted for installations made within 10 years prior to the given tax year but will be eligible for property tax exemption only for the remainder of 10 years from the date of installation.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Montana:
If you are planning a project in Montana, this tax exemption might help make the project more economically feasible. Contact the state official listed below to determine if your property would be eligible to receive the tax exemption.

If you are a state agency employee:
Consult your state's Treasury Department, Office of Energy, or Office of Taxation to determine whether property tax exemptions are offered for specific activities related to landfill gas recovery. These exemptions might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Mark Hines
Montana Department of Environmental Quality
Planning, Prevention, and Assistance Division
P.O. Box 202901
1520 E. 6th Avenue
Helena, MT 59620-2901
404-444-6769
Fax: 406-444-6836
E-mail: mhines@state.mt.us

Web site:
www.deq.state.mt.us/energy/Renewable/index.asp

Generating plants that produce less than 1 MW or less of energy by means of alternative renewable sources are eligible for a five-year complete exemption from property tax. Plants that produce more than 1 MW of alternative renewable energy are taxed at only 50 percent over the first five years of operation.

Montana: Corporate Income Tax Credits

Program Description

Under Montana's commercial or net metering system investment credits, Montana individuals, corporations, partnerships, or small business corporations engaged in alternative renewable energy projects (such as the generation of electricity from landfill gas) may be entitled to a state corporate tax credit of 35 percent of their investment of $5,000 or more in the project. The energy system must be located in Montana, and the amount of investment eligible for the tax credit is reduced by the value of any state or federal government grants that the project receives.

The credit may only be taken against net income produced by the eligible equipment or by associated new business activity. That is, the income must be from a commercial operation associated with the production of the energy. If the taxpayer claims a federal tax benefit on the energy system, then the state tax benefits for the system cannot exceed 60 percent of the eligible costs of the system. The tax credit for alternative energy systems must be taken the year the equipment is placed in service; however, any portion of the tax credit that exceeds the amount of tax to be paid may be carried over and applied against state tax liability for seven years following.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Montana: If you are planning a project in Montana, this tax credit might help make the project more economically feasible. Contact the state official listed below to determine if your corporation would be eligible to receive the tax credit.

If you are a state agency employee: Consult your state's Treasury Department, Office of Energy, or Office of Taxation to determine whether corporate tax credits are offered for specific activities related to landfill gas recovery. These exemptions might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Mark Hines
Montana Department of Environmental Quality
Planning, Prevention, and Assistance Division
P.O. Box 202901
1520 E. 6th Avenue
Helena, MT 59620-2901
404-444-6769
Fax: 406-444-6836
E-mail: mhines@state.mt.us

Web site:
www.deq.state.mt.us/energy/Renewable/index.asp

Individuals and corporations engaged in alternative renewable energy projects in Montana (such as the generation of electricity from landfill gas) may be entitled to a state corporate tax credit of 35 percent of their investment of $5,000 or more in the project.

Montana: Universal Systems Benefits Grants

Program Description

The Universal Systems Benefit (USB) Program offers market-transforming renewable energy and energy efficiency funding programs. The Montana Legislature delegated responsibility for the USB Program in 1997 to the Montana Department of Revenue. The state's Revenue Department facilitates the program's negotiated rule-making process and acts as the catalyst, bringing interested parties together. Although the program is administered by the Montana Department of Revenue, USB is implemented entirely by NorthWestern Energy (NWE). NWE furnishes grants to Montana residences, businesses, and municipalities seeking to install renewable energy systems.

Past grants ranged from as small as $5,000 to as large as $1.5 million, with approximately $1 million distributed annually. In addition to system installation, projects generally include public education and outreach programs. In 2001, 15 proposals were accepted for funding–over half the number of proposals received by NWE.

NWE does place a priority on funding solar and wind generation projects, but also encourages landfill gas project applications for USB funding. Anyone seeking to operate such a facility may apply, including applicants from the commercial, industrial, and residential sectors. NWE gives preference to projects installed on public facilities, or to projects that develop central electric power generation, particularly in areas with weak distribution systems.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Montana:
Review NWE's funding guide for renewable energy projects in Montana, "Bright Ideas in Renewable Energy," which is available at www.northwesternenergy.com/energy/publications/bright_ideas.pdf. This document explains the application procedure in depth.

If you are a state agency employee:
Become more familiar with the approach used by Montana to provide funding via a universal systems benefits charge.

For More Information

Contact:
Dave Ryan
NorthWestern Energy
40 East Broadway
Butte, MT 59701
406-497-2322
E-mail: David.Ryan@northwestern.com

Web site:
www.northwesternenergy.com/energy/renewables/renewable_energy.htm

In Montana, the universal systems benefits levied on utility customers fund research and development of renewable energy and energy conservation projects.

Nevada: Renewable Energy Property Tax Abatement

Program Description

As part of an effort to attract new businesses to the state, Nevada has adopted its "State Plan for Industrial Development and Diversification." As part of this plan, the Nevada Commission on Economic Development offers a partial abatement of personal property taxes and sales and/or use taxes for Nevada businesses that produce renewable electricity.

Nevada's renewable energy tax abatement provides a 50 percent abatement of real and personal property tax for 10 years to persons developing qualified renewable power systems. These include biomass (e.g., landfill gas), solar energy, or wind installations that generate more than 10 kW of renewable electricity.

Tax abatement applicants must meet two of the three following criteria:

- The company's average hourly wage must equal or exceed 100 percent of the state average hourly wage ($15.09 per hour for FY 2001-2002).
- The company must have at least 75 full-time jobs in Nevada if it is located in a city/county with a population of more than 50,000. The company must have at least 25 full-time jobs in Nevada if it is located in a city/county with a population of less than 50,000.
- If the city/county in which the company is located has a population of more than 50,000, a capital investment of $5 million is required. If the city/county in which the company is located has a population of less than 50,000, a capital investment of $500,000 is required.

All applicants must provide a letter in support of the tax abatement from the local development authority and agree to supply copies of all records necessary to validate the application. The Nevada Commission on Economic Development grants approval for the tax abatement on a case-by-case basis.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Nevada: If you are planning a project in Nevada, this partial tax abatement might help make the project more economically feasible. Contact the state official listed below to determine if your property is eligible for the tax abatement.

If you are a state agency employee: Consult your state's Office of Taxation and determine if there are tax abatements offered for renewable energy projects or other activities that may be related to landfill gas recovery.

For More Information

Contact:
Susan Combs
Nevada Commission on Economic Development
108 E. Proctor Street
Carson City, NV 89701-4240
775-687-4325 or 800-336-1600
Fax: 775-687-4450
E-mail: scombs@bizopp.state.nv.us

Web site:
www.expand2nevada.com

Nevada's renewable energy tax abatement provides a 50 percent abatement of real and personal property tax for 10 years to persons developing qualified renewable power systems.

Nevada: Renewable Energy Systems Exemption

Program Description

In 1991, Nevada implemented a renewable energy systems property tax exemption to encourage the development of renewable energy sources. Nevada's renewable energy systems tax exemption is one of several tax exemptions designed to encourage pollution prevention, including a property tax exemption for solar power facilities and an exemption for properties used to control air and water pollution.

The renewable energy systems exemption, as set forth in Nevada Revised Statutes 361.079, states that any value added by a qualified renewable energy source will be subtracted from the assessed value of the building for property tax purposes. This exemption is valid only if the energy produced by the system is utilized on site. Systems that produce energy for resale do not qualify for the tax exemption. Qualified equipment includes solar, wind, geothermal, solid waste converters (including landfill gas energy), and hydropower systems. This exemption is valid for all the years following installation of the system. Commercial, residential, and industrial sectors are all eligible for this exemption.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Nevada: If you are planning a project in Nevada, this tax exemption might help make the project more economically feasible. Persons interested in using the exemption should apply to their local government assessor's office.

If you are a state agency employee: Consult your state's Office of Taxation to determine whether property taxes apply to equipment and expenses related to landfill gas recovery and utilization. Determine if there are exemptions offered for other objectives (e.g., other renewables, or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

Contact:
Diana Howard
Nevada State Office of Energy
727 Fairview Drive, Suite F
Carson City, NV 89701
775-687-5975
Fax: 775-687-4914
E-mail: dhoward@dbi.state.nv.us

Web site:
http://energy.state.nv.us/

Any value added by a qualified renewable energy source will be subtracted from the assessed value of the building for property tax purposes.

New Jersey: Clean Energy Program

Program Description

New Jersey's 1999 electricity restructuring legislation includes a provision to collect a "Societal Benefits Charge" from all electric public utility customers to fund renewable energy incentives. One of the programs allocated money from this collection is the New Jersey Clean Energy Program, which provides production incentives for renewable energy production. Eligible technologies include fuel cells, solar, wind, and landfill gas.

Eligible landfill projects may be up to 4 MW in size. All of the project's energy production must be consumed on site and not supplied to the power grid. If the proposed system exceeds the applicant's demand, it is not eligible for funding. The New Jersey Board of Public Utilities (BPU) administers the program. Production incentives are paid incrementally based on the size of the system ($0.15/watt - $5.00/watt), with total payment caps of 30 to 40 percent of project costs.

Applications must be submitted prior to equipment installation. Biomass projects must document:

- The availability of at least five years of methane fuel
- The operational process and incremental benefits
- Compliance with emission standards specified in the New Jersey State of the Art Pollution Control Manual.

Upon review and approval the BPU will issue a commitment letter approving the installation of the system and reserving the production incentive rebate. Program administrators inspect installations in the first year prior to distributing funds.

The BPU recently approved the potential receipt of $2.39 million in production incentives by Aluminum Shapes, which will directly use landfill gas from the adjoining Pennsauken Landfill.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in New Jersey: Before you start construction, submit an application to the BPU if you meet the criteria of the production incentive. The biomass criteria guidelines and application forms are available at www.njcep.com/html/4_app_eforms.html.

If you are a state agency employee: Consult your state's Treasury Department, Department of Energy, or Office of Taxation to determine whether production incentives are offered for specific activities related to landfill gas recovery.

For More Information

Contact:
Cassandra King
State of New Jersey Board of Public Utilities
Division of Energy
P.O. Box 350
Trenton, NJ 08625-0350
609-292-7471
E-mail: cassandra.king@bpu.state.nj.us

Web site: www.njcep.com/html/1_overview.html

The New Jersey Board of Public Utilities recently approved Aluminum Shapes' application for production incentives for its direct use of landfill gas from the adjoining Pennsauken Landfill.

New Jersey: Sustainable Development Low-Interest Loan Fund

Program Description

Many state agencies have created sustainable development initiatives. These programs typically focus on reducing energy consumption, improving solid waste recycling programs, and other environmental and community planning concerns. Because initial capitalization can pose a significant barrier to landfill gas utilization project development, many states use sustainable development funds to support new landfill gas projects.

In April 1997, the governor of New Jersey signed an executive order creating the New Jersey Office of Sustainable Business (NJOSB) as part of the Department of Commerce. The purpose of NJOSB is to promote environmentally sustainable actions in both New Jersey's private sector and among the state's agencies. The Governor's executive order created a sustainable development low-interest loan fund at NJOSB to assist in capitalizing projects and the ability to draw upon existing state programs to provide technical assistance to support such projects. One of the initiatives the program supports is the utilization of landfill gas.

Landfill gas project developers, landfill owners and operators, and others planning a project in New Jersey can apply for zero- or low-interest loans or technical assistance. Applicants may either be seeking to expand existing efforts or establish a new, environmentally sustainable project or operation in New Jersey. Applicants requesting a loan must state that the project entails one or more of the following "sustainable actions":

- Pollution prevention
- Resource conservation
- Sustainable production (production of recyclable goods and services from renewable sources with minimal to zero emissions)

Actions You Can Take

If you are interested in developing a landfill gas utilization project in New Jersey: Visit NJSOB's Web site at the address provided below. There you can review the program's eligibility requirements, get instruction on how to apply for a loan, and download the application form.

If you are a state agency employee: Learn more about New Jersey's program and decide whether a sustainability based program might be implemented to support landfill gas utilization projects in your state. If your state has an existing alternative energy or renewable energy loan program, determine if landfill gas projects are applicable.

For More Information

Contact:
Robert F. Young, Executive Director
New Jersey Commerce and Economic Growth Commission
Office of Sustainable Business
609-633-8467

Web site:
www.state.nj.us/commerce/sustain.htm

Landfill gas project developers, landfill owners and operators, and others planning a project in New Jersey can apply for zero- or low-interest loans or technical assistance.

New York: Clean Water State Revolving Loan Fund

Program Description

New York's Clean Water State Revolving Fund (CWSRF) is a low-interest loan fund created to help municipalities construct water quality protection projects. Because they may impact water quality, projects designed to control landfill leachate and reduce landfill emissions are eligible for financing through the program. Municipalities in New York that own landfills are eligible to use the program's low-interest loans to finance certain parts of landfill gas utilization project development. Approved use of CWSRF funds includes construction of landfill gas collection and control systems. However, the program typically does not extend financing to utilization of landfill gas (i.e., energy conversion).

Under the CWSRF, loans are issued to eligible projects; as the loans are repaid, that money is made available for new loans, thus creating a true revolving fund. The CWSRF program has made over $4.7 billion in loans since its inception in 1990, saving municipal borrowers significant interest costs.

The CWSRF application process consists of two distinct steps. First, the proposed project must be listed with the New York State Environmental Facilities Corporation (EFC) in the program's annual "Intended Use Plan." Second, a complete loan application needs to be submitted.

Application packages for the second step in the application process are available by calling EFC. (See contact information below.) Some application materials, as well as the project listing form, are also available from the Web site.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in New York: Review the application material available from the Web site listed below to determine whether your project would be eligible for funding under this program.

If you are a state agency employee: To learn more about how New York adapted its Clean Water State Revolving Loan Fund to help meet their goal of providing financial support to landfill gas utilization projects, you can visit the Web site listed below.

For More Information

Contact:
David Morseman
New York State Environmental Facilities Corporation
518-457-3833

Web site:
www.nysefc.org/srf/CWSRF/CWSRFhome.htm

Municipalities and private landfill owners in New York are eligible to use these low-interest loans to finance certain parts of landfill gas utilization project development.

New York: Industrial Finance Program

Program Description

New York State Environmental Facilities Corporation (EFC), a public benefit corporation, has administered the Industrial Finance Program (IFP) since 1970. More than $545 million has been loaned to New York businesses to finance environmental projects, including: solid waste handling, disposal, and recycling; sewage treatment; drinking water supply and management; limited hazardous waste disposal and remediation; and privatization of New York municipal or state environmental facilities.

IFP provides loans that are financed from the proceeds of special obligation revenue bonds issued by EFC. Generally, these bonds are exempt from federal, state, and local income taxes, which results in reduced interest rates for the borrower. There is no limit on the amount of these bonds, but the minimum size of a bond is approximately $1.5 million. Several projects may be financed with a single IFP bond.

Project costs eligible for an IFP loan include: purchase of land; construction or acquisition of buildings; equipment purchase and installation; appurtenant facilities; other capital costs; project design and engineering; legal fees; and other related costs. Construction of landfill gas energy facilities can be financed on a tax-exempt basis. There are no set application dates for IFP loans.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in New York: Determine whether your projects meets the program requirements, then contact EFC to learn more about how to submit an application. (See contact information below.) There is a $2,500 application fee.

If you are a state agency employee: Become more familiar with the approach used by EFC. Consider whether your state has, or could benefit from, similar support programs that offer loans to assist businesses that are constructing landfill gas facilities.

For More Information

Contact:
John McKeon
Industrial Finance Program
New York State Environmental Facilities Corporation
625 Broadway
Albany, NY 12207-2997
518-402-6924
E-mail: mckeon@nysefc.org

Web site:
www.nysefc.org/ifp/IFPhome.htm

Under the Industrial Finance Program, construction of landfill gas energy facilities can be financed on a tax-exempt basis.

New York: New York State Energy Research and Development Authority

Program Description

Established in 1975 as a public benefit corporation, the New York State Energy Research and Development Authority (NYSERDA) provides funding for research and development to help businesses, municipalities, and residents of New York solve problems related to energy and the environment. NYSERDA also supports the development of innovative technologies, services, and products. It emphasizes the development-to-commercialization process, rather than the implementation of individual systems.

NYSERDA publicly requests proposals using Program Opportunity Notices (PONs), which are posted year-round on NYSERDA's Web site. (See contact information below.) These PONs cover a range of energy and environmental topics and generally focus on a specific segment. For example, a PON could request proposals for projects that develop renewable fuel, such as ethanol, or projects that promote the generation/use of renewable energy, such as landfill gas, within the state.

Funding is available to engineers, scientists, inventors, entrepreneurs, and organizations with experience in their fields. Generally, funding is awarded by contract and provided in progressive stages. The amount of funding available is specified in the PON and divided among the selected projects. The average award is $200,000, and costs are usually split between the proposer and NYSERDA.

Landfill gas energy projects are funded through NYSERDA's Research and Development (R&D) Department or the Energy Efficiency Services (EES) Department. Approximately $10 million is available per year to support distributed generation projects, which include landfill gas energy projects.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in New York:
Check NYSERDA's Funding Opportunities page at www.nyserda.org/rddopps.html to review current competitive opportunities. Determine whether your project meets the solicitation requirements, then contact NYSERDA to learn more about how to submit an application. Interested parties are also encouraged to contact NYSERDA to discuss project ideas. (See contact information below.)

If you are a state agency employee:
Become more familiar with the approach used by NYSERDA. Consider whether your state has, or could benefit from, similar support programs that support the development of innovative technologies, services, and products.

A NYSERDA Program Opportunity Notice could request proposals for projects that promote the generation/use of renewable energy, such as landfill gas.

For More Information

Contact:
Erin Hogan
New York State Energy Research & Development Authority
17 Columbia Circle
Albany, NY 12203-6399
Phone: 518-862-1090 ext. 3246
Fax: 518-862-1091
E-mail: eph@nyserda.org

Web site:
www.nyserda.org

North Carolina: Energy Improvement Loan Program

Program Description

Encouraging a strong business climate to enhance economic development is a strategy pursued by nearly every state. Increasingly, states also are supporting energy conservation and renewable energy initiatives, intended not only to encourage alternative sources of energy, but also to promote economic development. In 2001, the General Assembly expanded the Business Energy Improvement Program into the Energy Improvement Loan Program to encourage businesses and other types of organizations to reduce energy costs.

The North Carolina State Energy Office administers this program, which provides low-interest loans for onsite renewable energy electricity generation. The loans, which can be for amounts up to $500,000, can be used to support capital improvement projects that utilize reliable and commercially available technologies. The interest rate on the loans is three percent, with and interest rate of one percent for some renewable and recycling energy projects. The time period of the loan equals the average payback time of the project, which is calculated from the avoided energy costs, and is limited to a 10-year maximum.

Any business, school, local government, and nonprofit located within the state can apply for a loan. The North Carolina State Energy Office processes loans on a first come, first served basis.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in North Carolina: If you represent a business in North Carolina considering a possible landfill gas project, review the Energy Improvement Loan Program eligibility criteria (available on the Web site provided below) to determine whether your intended project is eligible.

If you are a state agency employee: State loan programs increasingly are used to support both energy-related projects and business development activities. If you are looking for ways to support landfill gas utilization projects in your state, tapping into energy conservation and renewable energy support funding is one possible approach. Review the program materials and consider whether your state might offer this type of loan program or expand an existing initiative. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects.

For More Information

Contact:
Starlette Brown
State Energy Office
1340 Mail Service Center
Raleigh, NC 27699-1340
919-733-1897
E-mail: starlette.brown@ncmail.net

Web site: www. energync.net

Any commercial or industrial business in North Carolina that owns the site where energy conservation activities will be undertaken or renewable energy sources are tapped is eligible for the loan program.

North Carolina: Golden LEAF Foundation

Program Description

North Carolina's Golden LEAF Foundation provides grants to governments and organizations in the state for activities that will improve social and economic conditions in economically affected or tobacco-dependent regions of the state.

North Carolina established the Foundation in 1999 to distribute a portion of the funds the state receives as a result of the settlement of *North Carolina v. Philip Morris Incorporated, et al.*

The Golden LEAF Foundation supports programs that promote or sustain economic development, such as education assistance, job training, employment assistance, alternative crop research, economic hardship assistance, public works, industrial recruiting, health and human services, and community assistance.

Applicants must explain how their proposed projects or initiatives will benefit individuals and/or communities that have been directly or indirectly affected by the decline of the tobacco sector. The Foundation does not provide grants directly to individuals, and all funds must be used for public purposes. Any recipient of funds from the Foundation must agree to use the funds exclusively for charitable, scientific, educational, or other exempt public purposes.

The Foundation funded up to $5 million of grants in 2000. The Foundation does not specify a minimum or maximum amount for its grant awards. At the close of the fiscal year ending June 30, 2000, the Foundation had a total-assets value of approximately $96 million. Over the next 25 years, the Foundation anticipates that it will receive approximately $2.3 billion in principal from the State of North Carolina as a result of the tobacco settlement.

To date, the Foundation has provided funds for one landfill gas utilization project. In 2000, the Foundation awarded $45,000 to EnergyXchange in Burnsville, North Carolina to help fund a complex of greenhouses at the EnergyXchange Renewable Energy Center. The greenhouses are heated using landfill gas. In addition, the center also features a glass blowing and pottery business incubator fueled by landfill gas.

In 2000, the Foundation awarded $45,000 to EnergyXchange to help fund a complex of greenhouses fueled by landfill gas.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in North Carolina: If you are interested in applying for a Golden LEAF grant, visit the Foundation's Web site or contact the Foundation directly (see below).

If you are a state agency employee: Tobacco settlement funds are increasingly used to support community and economic development activities. Review your state's tobacco settlement program to determine whether landfill gas-related activities would meet its criteria.

For More Information

Contact:
Valeria Lee
Golden LEAF Foundation
800 Tiffany Plaza, Suite 200
Rocky Mount, NC 27804
252-442-7474 or 888-684-8404
Fax: 252-442-7404
E-mail: info@goldenleaf.org

Web site:
www.goldenleaf.org

North Carolina: Renewable Energy Tax Credit

Program Description

In 1999, the North Carolina legislature combined its various renewable energy statutes into one comprehensive Renewable Energy Tax Credit program. This new statute expanded the allowable tax credit to 35 percent of the cost of the renewable energy property constructed, purchased, or leased, including landfill gas energy projects. Renewable energy costs eligible under the tax credit include the design and equipment costs, along with the construction and installation costs less other funding assistance, such as discounts, rebates, and installation assistance credits. The tax credit can be taken against franchise or income taxes.

There is a tax credit cap of $250,000 per commercial or industrial installation. A system is not eligible for the tax credit until it is installed and fully functional. Additionally, the allowable credit cannot exceed 50 percent of the taxpayer's liability for the year. Unused portions of the credit may be carried over to offset taxes for up to five years.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in North Carolina: The allowable credit is calculated on North Carolina's Department of Revenue Form NC-478G. Form NC-478 determines if the credit exceeds the 50 percent tax liability cap. Submit these forms with your main income or franchise tax forms. Tax forms can be found online at www.dor.state.nc.us/downloads/corporate.html.

If you are a state agency employee: Consult your state's Treasury Department, Department of Energy, or Office of Taxation to determine whether tax credits are offered for specific activities related to landfill gas recovery. These exemptions might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Bob McGuffey
North Carolina Solar Center
North Carolina State University
Box 7401
Raleigh, NC 27695-7401
919-515-9781
E-mail: bob_mcguffey@nscu.edu

Web site:
www.ncsc.ncsu.edu/information_resources/renewable_energy_tax_guidelines.cfm

North Carolina's Renewable Energy Tax Credit statue allows for a tax credit of up to 35 percent of the cost of the renewable energy property constructed, purchased, or leased.

Ohio: Air Pollution Control Project Tax Exemptions

Program Description

Many states offer tax incentives to encourage efforts that reduce emissions of a variety of air pollutants. Because landfill gas utilization projects reduce emissions of methane and volatile organic compounds, states can extend their air pollution control project tax exemptions to landfill gas utilization projects.

In Ohio, a LMOP State Partner, the Air Quality Development Authority (OAQDA), issues bonds for air pollution control projects. To be eligible, the project must improve air quality through pollution control, pollution prevention, energy efficiency, or innovative technology. Landfill gas utilization projects in Ohio are eligible for this funding. When applied to landfill gas utilization, OAQDA allows the funding to be used for both the collection and energy recovery components of the project. OAQDA can issue tax-exempt or taxable bonds; eligibility is determined on a project-by-project basis.

There are a series of benefits of financing a landfill gas project through OAQDA bonds, including:

- Terms of up to 40 years, depending on the useful life of the equipment.
- Any real property comprising an air quality project is exempt from real estate taxes and assessments as long as the OAQDA bond remains outstanding.
- All tangible personal property purchased or acquired in relation to an air quality project is exempt from sales and use taxation.
- Interest income on bonds issued by OAQDA is exempt from taxation by the state.

OAQDA financing can cover a broad range of project costs. They have provided bond support for projects ranging from $20,000 to $350 million.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Ohio: If you would like to apply for support from the OAQDA tax exemptions for a landfill gas utilization project in Ohio, contact the program for an application form using the contact information below.

If you are a state agency employee: Research your state's air pollution tax exemption policies to find out whether the tax incentives extend to landfill gas utilization projects. You might also contact the OAQDA to learn more about how Ohio decided to include landfill gas utilization in their policy.

For More Information

Contact:
Mark R. Shanahan
Executive Director
Ohio Air Quality Development Authority
50 West Broad Street
Suite 1901
Columbus, OH 43215
614-224-3383
E-mail:
mark.shanahan@aqda.state.oh.us

Web site:
www.ohioairquality.org

In Ohio, the Air Quality Development Authority issues bonds for air pollution control projects. Landfill gas utilization projects are eligible for this funding.

Ohio: Conversion Facilities Tax Exemption

Program Description

Since 1978, Ohio has provided tax exemptions for energy conversion, solid waste conversion (i.e., the use of waste to produce energy and the utilization of such energy), and thermal efficiency improvements. This incentive rewards corporations for investing in qualified types of energy conservation and reduces businesses' tax liability. Several landfill gas projects have already successfully used the Conversion Facilities Tax Exemption to reduce costs by limiting tax liability.

Commercial and industrial businesses that install and operate qualified facilities for energy conversion, solid waste conversion, or thermal efficiency improvement are eligible for the tax exemption. The exemption covers energy technologies including, but not limited to, solar thermal electric systems, photovoltaic systems, and wind, biomass, and waste recovery systems. To receive the Conversion Facilities Tax Exemption, businesses must file an application with the State Tax Commission for an improvement certificate. The application includes a narrative description of the facility and a list of the energy improvements to be incorporated into the facility. Once the State Tax Commission issues an improvement certificate, the certified improvement is exempt from property taxation, the state sales and use tax, and the state franchise tax.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Ohio: Visit the Ohio Department of Development's Web site or contact the state official (listed below) to determine if your facility would be eligible for an exemption.

If you are a state agency employee: Consult your state's Office of Taxation to determine whether conversion facilities taxes apply to equipment and expenses related to landfill gas recovery and utilization. Determine if there are exemptions offered for other objectives (e.g., other renewables or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

Contact:
Cohn Greenway
Ohio Department of Development
Office of Energy Efficiency
77 South High Street, 26th Floor
P.O. Box 1001
Columbus, OH 43215-6108
614-466-7406
Fax: 614-466-1864
E-mail: jgreenway@odod.state.oh.us

Web site:
www.odod.state.oh.us/cdd/oee/c_i_cfe.htm

Several landfill gas projects have already successfully used the Conversion Facilities Tax Exemption to reduce costs by limiting tax liability.

Ohio: Energy Efficiency Revolving Loan Fund

Renewable Energy Financial Assistance Program

Program Description

Ohio's Energy Efficiency Revolving Loan Fund, issued by the state's Office of Energy Efficiency (OEE), provides reduced interest rate loans to businesses and individuals who invest in products, technologies, and services that use renewable energy. Established under the state's 1999 electric restructuring act, the program is funded by a monthly charge (approximately 9 cents) added to the electric bills of customers of the five participating electric utilities in Ohio. Collections for the Fund started on January 1, 2001, and approximately $100 million will be raised by 2011, at which time the surcharge will be eliminated.

The program provides funding through approved financial institutions for the purchase and installation of renewable energy systems.

The Fund's Renewable Energy Financial Assistance Program provides funding through approved financial institutions for the purchase and installation of the following renewable energy technologies: solar energy (photovoltaic cells), wind energy (wind turbines), and other renewable energy systems (including landfill gas energy systems). Loans range from $5,000 to $500,000, with a term of five or eight years. Residential, commercial, and institutional customers are eligible for these loans, which became available in the first quarter of 2002. Borrowers must apply to one of the 260 financial institutions on the Ohio Treasurer of States' list of eligible interim depositories for state funds. Only these institutions are qualified to participate in this program. This list is available at www.odod.state.oh.us/cdd/oee/elf_lenders.htm.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Ohio:
Determine whether your project meets the program requirements. If your project meets these requirements, you should apply to one of the approved financial institutions for the loan and apply to the OEE for "Energy Efficiency Project" approval. The technical documentation and application are available at www.odod.state.oh.us/cdd/oee/elf_Renewable.htm.

If you are a state agency employee:
Become more familiar with the approach used by the OEE. Investigate whether a surcharge for utility use might be a viable alternative for funding a renewable energy loan program in your state. Consider whether your state has, or could benefit from, similar support programs that promote the use of renewable energy technologies by providing loans with reduced interest rates.

For More Information

Contact:
Carolyn Seward
Office of Energy Efficiency
Ohio Department of Development
77 S. High Street, 26th Floor
P.O. Box 1001
Columbus, OH 43216-1001
614-466-6797
Fax: 614-466-1864
E-mail: cseward@odod.state.oh.us

Web site:
www.odod.state.oh.us/cdd/oee

Oregon: Bonneville Environmental Foundation

Program Description

Founded in 1998, the Bonneville Environmental Foundation (BEF) supports watershed restoration programs and the development of new sources of renewable energy. BEF markets green power and funds renewable energy projects. In 1999, BEF supported the Roosevelt Landfill Gas Project, a 10 MW project that recovers landfill gas and uses it to generate electricity. The project was developed and is owned by Klickatat Public Utility District.

BEF invests in new renewable energy projects such as solar, wind, geothermal, and biomass projects. Any person, organization, or local or tribal government wishing to develop a renewable energy project in Idaho, Montana, Oregon, or Washington can submit a proposal to BEF, which provides funding through grants, loans, convertible loans, guarantees, and direct investments.

Grants range from a few thousand dollars for small installations to significant investments in central station grid-connected renewable energy projects. BEF's share of costs cannot exceed 33 percent of total capital costs and zero percent of operating costs for a generating project. BEF funding cannot go to costs that can be met at prevailing market prices.

Applicants begin the proposal process by submitting a one-to-three page Letter of Inquiry that describes a proposed renewable energy project. Letters of Inquiry may be submitted at any time. BEF reviews renewable energy project Letters of Inquiry on a continual basis and invites full project proposals based on demonstrated consistency within the Foundation's Renewable Energy Program Grant Criteria. Grants or investments may be made year-round in accordance with project merit, needs, and schedules. While most grants will be made on a one-time, one-year basis, BEF will consider multi-year funding where such support is warranted.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in the Pacific Northwest: Contact the Bonneville Environmental Foundation, or review the Renewable Energy Program information available from BEF's Web site, listed below.

For More Information

Contact:
Bonneville Environmental Foundation
133 SW 2nd Avenue, Suite 410
Portland, OR 97204
503-248-1905
Fax: 503-248-1908
E-mail: Information@B-E-F.org

Web site:
www.B-E-F.org

In 1999, BEF supported the Roosevelt Landfill Gas Project, a 10 MW project that recovers landfill gas and uses it to generate electricity.

Oregon: Business Energy Tax Credit

Program Description

Oregon's Business Energy Tax Credit is intended to encourage businesses to invest in energy conservation. To date, more than 6,500 tax credits have been awarded for investments in energy conservation, recycling, renewable energy, or less-polluting transportation fuels. Those investments of over $549 million save or generate energy worth about $100 million a year.

Business Energy Tax Credits are available for solar, wind, geothermal, hydro, and biomass projects that produce, displace, or reclaim energy from waste (e.g., landfill gas projects). The St. John's landfill direct use project–where recovered landfill gas is used to heat kilns at the Ash Grove Cement Company–has qualified for the Business Energy Tax Credit.

The tax credit is for 35 percent of eligible project costs, which includes equipment costs, engineering and design fees, materials, supplies, installation fees, loan fees, and permit costs. The credit may be taken over five years: 10 percent in the first and second years and five percent each year thereafter. Projects with eligible costs under $20,000 may take the credit in only one year. Any unused credit may be carried forward up to eight years.

Trade, business, or rental property owners in Oregon are eligible for the tax credit. A "pass-through option" allows a third party to claim the tax credit and give the business owner a cash payment of approximately 27 percent of the project cost. Non-profits, tribes, schools, and others without tax liability are also eligible under the pass-through option.

In order to claim the tax credit, you must submit an application before starting the project. However, waivers may be granted under certain circumstances that caused a delay in submitting an application. Once the project is approved, the Office of Energy will issue a Preliminary Certificate and you may begin work.

Renewable energy projects, including landfill gas projects, must replace at least 10 percent of the electricity, gas, or oil used.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Oregon:
Review the application materials, available on the Web site shown below, or consult a program administrator at the Oregon Office of Energy to determine if your project is eligible to receive the tax credit.

If you are a state agency employee:
Consult your state's Office of Taxation, Treasury Office, or Office of Energy to determine whether property tax exemptions are offered for specific activities related to landfill gas recovery. These exemptions might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Oregon Office of Energy
Conservation Resources Division
625 Marion Street, N.E., Suite 1
Salem, OR 97301-3742
503-378-4040
Fax: 503-373-7806
E-mail: energy.in.internet@state.or.us

Web site:
www.energy.state.or.us/bus/tax/taxcdt.htm

The St. John's landfill direct use project–where recovered landfill gas is used to heat kilns at the Ash Grove Cement Company–has qualified for the Business Energy Tax Credit.

Oregon: The Climate Trust

Program Description

The Climate Trust funds projects to reduce greenhouse gases that cause climate change. The Trust was established in 1997 after the passage of Oregon's House Bill 3283, which declares that any new facility built in Oregon must avoid, sequester, or displace a portion of their carbon dioxide emissions, which were previously unregulated by the state.

The Trust undertakes offset projects resulting from the 1997 law and projects that prevent or mitigate emissions from sources other than new energy facilities in Oregon. For instance, the Trust is providing funding for a landfill gas energy project in south central Washington state. Located at the nation's fourth largest landfill, the Roosevelt Regional Landfill, this project captures liquid carbon dioxide, which will be sold to nurseries for use in greenhouses to stimulate plant growth. The project is expected to offset 342,000 metric tons of carbon dioxide over the next 30 years.

The Climate Trust would like to replicate this project at landfills across the country where the landfill gas volume is adequate to support the technology. Requests for carbon offset proposals can be downloaded from the Climate Trust Web site.

Actions You Can Take

If you are interested in developing a landfill gas utilization project: Review information on the Climate Trust's Web site (shown below) to determine if your project meets proposal criteria and to download relevant application materials. Contact the Climate Trust with any additional questions.

For More Information

Contact:
Mike Burnett
Executive Director
The Climate Trust
516 SE Morrison Street, Suite 300
Portland, OR 97214-2343
503-238-1915
E-mail: mburnett@climatetrust.org

Web site:
www.climatetrust.org

The Trust is providing funding for a landfill gas energy project in south central Washington state.

Oregon: Small Scale Energy Loan Program

Program Description

Oregon's Small Scale Energy Loan Program (SELP) promotes energy conservation and renewable energy resource development by providing low-interest loans for projects that:

- Conserve natural gas, electricity, and oil.
- Produce energy from renewable resources, such as water, wind, geothermal, solar, biomass, waste materials, or waste heat (including landfill gas energy).
- Use recycled materials to create products.

The Oregon Office of Energy, which administers SELP, sells bonds to fund the program. A unique provision in the Federal Tax Code exempts the bonds from both federal and state tax.

Most energy efficiency, renewable energy (including landfill gas energy), and waste heat projects are eligible. Loans can be used to offset costs related to engineering and design, permits, loan fees, and project management. The program accepts applications from individual and commercial customers, schools, special districts, and local, state, and federal agencies. Loan terms usually range from 5 to 15 years, depending on available funds and project type. Longer terms may be available. The loan term must be within the expected life of the project. Renewable generation projects, such as landfill gas energy projects, must generate at least 125 percent of the revenue needed to operate and service the loan, or have the backing of an entity to guarantee the loan.

The review and approval process for public agencies applying for loans of $100,000 or less typically takes up to three weeks; for loans of $100,000 or more, this process can take up to two months. For commercial borrowers, loan reviews can take as little as a few weeks for smaller loans and up to several months for large loans.

The Emerald People's Utility District (EPUD) in Goshen, Oregon, funded the expansion of its landfill gas electricity plant at the Short Mountain Landfill with a $1.5 million SELP loan. EPUD installed two new gas engine and generator units alongside its two existing units.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Oregon: To learn more about SELP, visit the Oregon Office of Energy's Web site (see below).

If you are a state agency employee: Visit the Oregon Office of Energy's Web site or contact the Oregon Office of Energy to learn more about Oregon's program and consider whether it can serve as a model for your state. If your state has an existing alternative energy or renewable energy loan program, determine if it is applicable to landfill gas projects.

For More Information

Contact:
Oregon Office of Energy
625 Marion Street NE, Suite 1
Salem, OR 97301-3742
503-378-4040 or 800-221-8035
E-mail: energy.in.internet@state.or.us

Web site:
www.energy.state.or.us/loan/selphme.htm

The Emerald People's Utility District (EPUD) in Goshen, Oregon, funded the expansion of its landfill gas electricity plant at the Short Mountain Landfill with a $1.5 million SELP loan.

Pennsylvania: Alternative Fuels Incentive Grant Program

Program Description

Pennsylvania's Alternative Fuels Incentive Grant (AFIG) program, established by the state legislature in 1992, promotes the development of infrastructure for and use of alternative fuel vehicles in Pennsylvania in an effort to improve air quality throughout the state. The program also funds advanced alternative fuel vehicle technology research, development, and demonstration projects.

The AFIG program, administered by the Pennsylvania Department of Environmental Protection (PADEP), promotes the use of alternative fuel vehicles as a means to reduce pollution from automobiles and encourage the use of domestically produced fuels. Among the fuels promoted by the program are compressed and liquefied natural gas, ethanol, methanol, hydrogen, hythane, liquid petroleum (or propane gas), electricity, and fuels derived from coal and biomass.

Each year, PADEP makes millions of dollars in grants available through the AFIG program to companies, organizations, local governments, schools and universities, and private individuals. The grants cover a percentage of the added cost of purchasing alternative fuel and hybrid electric vehicles and converting conventional fuel vehicles to operate on alternative fuels. The remainder is paid by the grantee from other sources. Grants are also available to cover costs directly associated with the design, preparation, and construction of refueling and recharging infrastructure. To date, the AFIG program has awarded more than $20 million dollars to more than 290 projects throughout Pennsylvania.

Approximately $1 million is available each year to a single applicant, and $2 million is available for multiple projects in a single county. Additionally, as AFIG funds do not lapse, any unobligated grant monies are carried over into the next funding cycle. Since the percentage of eligible project costs being covered each funding cycle decreases, the amount of money in the fund gradually increases. As a result, higher dollar amounts are available for a single applicant and a single county for each funding cycle.

The funding cycle for the AFIG program is the 12-month period from July 1 through June 30. Applications are accepted during open windows of opportunity, which generally run from August to October and February to April. (Contact the program coordinator for exact dates.) For a project to be eligible, costs cannot be incurred prior to a dated application being submitted.

Landfill gas utilization projects could receive funding if they meet the following criteria:

1) The applicant must be located in Pennsylvania or registered or incorporated under the laws of the Commonwealth of Pennsylvania to conduct business in the state.

2) The landfill project must operate in Pennsylvania for a minimum of three years.

3) The captured landfill gas must be used as a fuel for vehicles.
Note: Captured landfill gas used for powering anything other than a vehicle is not eligible.

The AFIG program promotes the use of alternative fuel vehicles from fuels such as biomass.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Pennsylvania: Determine whether your projects meet the program requirements, then contact PADEP to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by PADEP. Consider whether your state has, or could benefit from, similar support programs that might be used to help promote alternative fuels made from landfill gas.

For More Information

Contact:
Karen Miller
Grant Officer
Alternative Fuels Incentive Grant Program
Pennsylvania Department of Environmental Protection
Bureau of Air Quality
P.O. Box 8468
Harrisburg, PA 17105-8468
717-772-3359
E-mail: karemiller@state.pa.us

Web site:
Visit www.dep.state.pa.us and type "alternative fuels" under "directLINK."

Pennsylvania: Sustainable Energy Funds

Program Description

The Pennsylvania Public Utility Commission (PUC) established the Sustainable Energy Funds (SEFs) in 1998, as a condition for the final settlement of the electric restructuring plans of the state's five largest electric companies. Under the settlement, five funds totaling approximately $55 million were established to address environmental and economic development issues across the state. The Boards of Directors of the following companies administer the Sustainable Energy Funds: PECO Energy, GPU Energy-Met Ed and GPU Energy-Penelec (which operates one Board of Directors with two separate funds), Pennsylvania Power & Light, and West Penn/Allegheny Power. Monies are received from the distribution utilities, which collect it as part of the distribution rate of 1/100 of a cent per kilowatt hour ($0.0001/kWh).

Landfill gas is considered a renewable resource in Pennsylvania.

The funds were established to:

- Promote the development of renewable energy and advanced clean energy technologies and services.
- Encourage the adoption of energy conservation and efficiency technologies and services.
- Facilitate the growth of sustainable energy businesses that design, manufacture, sell, install, or maintain these technologies.

The funds provide financial assistance in the form of loans, near-equity, and equity investments and grants. Landfill gas is considered a renewable resource in Pennsylvania. As such, landfill gas utilization projects are eligible for funding.

In May 1999, the PUC created a statewide Sustainable Energy Board (SEB) to provide oversight, guidance, and technical assistance to the five regional boards that oversee the Sustainable Energy Funds. The SEB and each regional board work together to identify potential opportunities, prioritize the regional funds' objectives, and develop an outreach plan to garner further support for the initiatives. The SEB also serves as an information clearinghouse and develops educational programs for SEF Boards.

The SEFs differ from most other state funding resources because they actively involve local communities in the decision-making process. Local residents serve on the SEF boards, and the funds are administered locally. Grassroots marketing of the funds draw local project proposals and regional funding opportunities. Hometown projects result in local awareness of the SEFs and of the technologies they promote.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Pennsylvania: Contact the appropriate regional fund administrator (see the information provided on the following page) to learn more about how to apply.

If you are a state agency employee: A loan program that supports landfill gas utilization projects could be developed in your state through a broadened use of existing alternative energy loan programs. Learn about Pennsylvania's program and consider whether it can serve as a model for your state.

For More Information

Contact:
Pennsylvania Public Utility Commission
Maria A. Hanley
PO Box 3265
Harrisburg, PA 17105-3265
717-787-3559

Sustainable Development Fund
(PECO Energy Service Territory)
Roger Clark
Cast Iron Building, Suite 300 North
718 Arch Street
Philadelphia, PA 19106-1591
215-925-1130
Fax: 215-923-4764

Web site:
www.trfund.com/sdf

Sustainable Energy Fund of Central Eastern Pennsylvania
(PPL Service Territory)
Thomas J. Tuffey
The Sovereign Building
609 Hamilton Mall
Allentown, PA 18101
610-740-3182
Fax: 610-433-3090

GPU Sustainable Energy Fund
(Met Ed Service Territory)
Berks County Community Foundation
Kevin Murphy
P.O. Box 212
Reading, PA 19603-0212
610-685-2223
Fax: 610-685-2240

Web site:
www.bccf.org/gpu.htm

Pennsylvania Environmental Council
(Penelec Service Territory)
Mike Kane
64 South 14th Street
Pittsburgh, PA 15203
412-481-9400
Fax: 412-481-9401

West Penn Power Sustainable Energy Fund
Joel L. Morrison
WPPSEF Program Coordinator
The Energy Institute
The Pennsylvania State University
C-211 CUL
University Park, PA 16802-2323
814-863-7432
Fax: 814-863-7432
E-mail: wppsef@ems.psu.edu

Web site:
www.wppsef.org

Rhode Island: Renewable Generation Supply Incentive

Program Description

Created as part of Rhode Island's deregulation of the state's electric utility industry, a systems benefits charge is collected from customers to fund renewable energy resource development projects. The Rhode Island Renewable Energy Collaborative (the Collaborative), managed by the Rhode Island State Energy Office (RISEO), administers the fund. In 2002, the Collaborative announced the availability of $1.25 million in incentives to eligible projects in New England that are developed to serve Rhode Island customer demands. The incentive project is designed to enhance the economics and creditworthiness of renewable projects and ensure the availability of renewable energy supplies.

Technologies eligible under the program include new generation from:

- Sustainable biomass (landfill or digester gas)
- Wind power
- Small-scale hydro
- Solar energy

Facilities may be either customer-sited or bulk power supply projects. Applicants may be:

- Generators
- Wholesale intermediaries/retail electricity suppliers
- End-users proposing supply installations greater than 25 kW

Funds are distributed in the form of production incentives. (In 2003, the Collaborative capped the incentive at $0.03/kWh for a maximum of five years.) There is also a minimum co-funding requirement of 25 percent, which can be collected via premium pricing of the green electricity, money expended on publicizing the green power purchase, or grant funding.

At this time, RISEO does not anticipate any additional funding opportunities, but interested parties should contact the State Energy Office for more information.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Rhode Island or in a market beneficial to Rhode Island utility customers: Visit the RISEO's Web site listed below to determine whether a Request for Proposals is currently open. Contact the RISEO to verify the availability of funds.

If you are a state agency employee: Become more familiar with the approach used by RISEO. Consider whether your state could benefit from a similar support program utilizing systems benefits charge funds to promote alternative fuels such as landfill gas.

For More Information

Contact:
Janice McClanaghan
Chief of Energy and Community Services
State Energy Office
Division of Central Services
1 Capitol Hill
Providence, RI 02908-5853
401-222-3370
E-mail: JaniceM@gw.doa.state.ri.us

Web site:
www.riseo.state.ri.us/riref.html

The Renewable Generation Supply Incentive is designed to enhance the economics and creditworthiness of renewable projects, including landfill gas energy projects.

South Dakota: Renewable Energy Systems Exemption

Program Description

The Renewable Energy Systems Exemption is a property tax exemption for 50 percent of the installed cost of commercial renewable energy systems and the entire assessed value of residential renewable energy systems. There is no maximum limit for the cost of the system, and the full exemption (50 percent of installed costs) can be taken for three years after installation. After the first three years, the tax credit is gradually reduced. Seventy-five percent of the base credit can be claimed in the fourth year after construction, 50 percent in the fifth year, and 25 percent in the sixth year. The tax exemption is valid only for the first six years after installation of the system and is not allowed for systems that produce energy for resale.

The technologies eligible for the exemption include passive solar space heat, active solar water heat, active solar space heat, photovoltaics, wind, biomass (e.g., landfill gas), renewable transportation fuels, and geothermal electric. Applicability of the exemption depends on the characteristics of each individual system, and approval is granted by the Director of Equalization on a case-by-case basis. Although the exemption has yet to be applied to a landfill gas energy project, the South Dakota Department of Revenue has indicated that landfill gas energy projects might qualify.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in South Dakota: If you are planning a project in South Dakota, this tax exemption might help make the project more economically feasible. Contact the state official listed below to determine if your facility would be eligible for an exemption.

If you are a state agency employee: Consult your state's Office of Taxation to determine whether conversion property taxes apply to equipment and expenses related to landfill gas recovery and utilization. Determine if there are exemptions offered for other objectives (e.g., other renewables or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

Contact:
Colleen Skinner
South Dakota Department of Revenue
445 East Capitol Avenue
Pierre, SD 57501
605-773-3311
Fax: 605-773-6729
E-mail: colleen.skinner@state.sd.us

Web site:
www.state.sd.us/revenue/revenue.html

The Renewable Energy Systems Exemption is a property tax exemption for 50 percent of the installed cost of commercial renewable energy systems and the entire assessed value of residential renewable energy systems.

South Dakota: Renewable Resource Electric Power Facilities Tax Refund

Program Description

The South Dakota state legislature authorized the Renewable Resource Electric Power Facilities Tax Refund in March 2001 and its sister legislation, Senate Bill 167, in February 2002. This tax program works in conjunction with several other incentives (including a tax exemption and a grant/loan funding program) to promote the expansion and development of renewable energy sources in South Dakota. The legislation provides for a refund, credit, or deferral of the contractors' excise tax to persons expanding or developing a commercial renewable power facility, including landfill gas energy projects.

To qualify, a taxpayer must expand or construct a commercial power production facility that:

- Has project costs over $500,000.
- Uses renewable resources, such as solar energy, wind, geothermal energy, or biomass materials, including landfill gas.
- Is located within one county and is owned by a person, corporation, nonprofit, or for-profit business organization, tribal council, or government agency.

For projects that produce 10 MW or less of electricity, the refund or credit covers 100 percent of the contractors' excise taxes attributed to project costs (excluding transmission facilities costs), as long as those costs are incurred and paid within 36 months of obtaining approval from the Secretary of Revenue. For projects that produce more than 10 MW of electricity, the refund or credit covers 50 percent of the contractors' excise taxes, with the remaining taxes deferred until the second through fifth years after construction. In order to receive approval, the project developer must apply for a permit from the Secretary of Revenue at least 30 days before starting the project.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in South Dakota: Before commencing a landfill gas energy project, contact the South Dakota Department of Revenue to find out if your planned system will be eligible for the tax refund. Apply for a permit at least 30 days before the project start date.

If you are a state agency employee: Consult your state's Office of Taxation to determine whether renewable resource electric power facilities tax refunds apply to equipment and expenses related to landfill gas recovery and utilization. Determine if there are refunds offered for other objectives (e.g., other renewables or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use.

For More Information

Contact:
Tanna Zabel
South Dakota Department of Revenue
Business Tax Division
445 East Capitol Avenue
Pierre, SD 57501
605-773-3311
Fax: 605-773-5129
E-mail: Tanna.Zabel@state.sd.us

Web site:
www.state.sd.us/revenue/revenue.html

The legislation provides for a refund, credit, or deferral of the contractors' excise tax to persons expanding or developing a commercial renewable power facility, including landfill gas energy projects.

South Dakota: Solid Waste Management Program

Program Description

Established on July 1, 1992, South Dakota's Solid Waste Management Program provides funding in the form of grants and low-interest loans for solid waste disposal, solid waste recycling/use for energy production (e.g., landfill gas energy projects), and waste tire projects. The loan interest rates are set by the Board of Water and Natural Resources. The current interest rate is three percent for seven years, or the useful life of the project, whichever is less.

To be eligible for funding consideration, an application must:

- Clearly show how the project will advance the state's solid waste management hierarchy, as follows:
  - Volume reduction at the source
  - Recycling and reuse
  - Use for energy production
  - Disposal in landfill or combustion for volume reduction
- Show potential cost savings, public health, or environmental benefits in solid waste management, waste tire management, or waste tire processing for energy production.
- Develop a workplan, schedule, budget, and provisions for a final report.

Eligible applicants include individuals, partnerships, limited liability companies, corporations, counties, cooperatives, municipalities, regional or state-wide planning agencies, federally recognized Indian tribes, or special purpose districts that have the authority to construct or operate solid waste, waste tire, or recycling facilities.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in South Dakota: Review program requirements available on the Web site listed below. Determine whether your projects meets the program requirements then contact the South Dakota Department of Environment and Natural Resources to schedule a pre-application meeting. (See contact information below.)

If you are a state agency employee: Become more familiar with the approach used by the South Dakota Department of Environment and Natural Resources. Consider whether your state has, or could benefit from, similar support programs that fund landfill gas energy projects.

The program provides grants and low-interest loans for solid waste recycling/use for energy production (e.g., landfill gas energy projects).

For More Information

Contact:
David Ryan
Department of Environment and Natural Resources
Division of Financial and Technical Assistance
523 East Capitol Avenue
Pierre, SD 57501
605-773-4216
Fax: 605-773-4068
E-mail: dave.ryan@state.sd.us

Web site:
www.state.sd.us/denr/DFTA/WWFunding/solidwastemanagementplan.htm

Texas: LoanSTAR Revolving Loan Program

Program Description

The Texas State Energy Conservation Office (SECO) administers the LoanSTAR (Saving Taxes and Resources) Revolving Loan Program to provide loans to all public entities that provide long-term energy savings. Legislation requires the program to be maintained at a minimum of $95 million at all times.

Projects must pay for themselves through reduced expenditures on energy, and the equipment life expectancy must exceed the payback. In addition to more traditional energy retrofits, renewable energy projects, including landfill gas projects, are eligible. If a landfill gas project induces long-term savings in energy costs, the project is eligible for funding.

The current interest rate is three percent. Loans may be repaid through stream-of-cost savings generated by funded projects. The total financed term is a maximum of a composite 10 years. LoanSTAR funds all aspects of project costs, such as design, installation, and purchases of equipment. SECO performs design specification and on-site monitoring when projects are 50 and 100 percent complete to assure borrowers that projects are constructed according to proper guidelines.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Texas:
Eligible institutions are encouraged to contact SECO as soon as a decision is reached to pursue LoanSTAR funding. Interested parties must sign a Memorandum of Understanding agreeing to complete and submit an Energy Assessment Report within four months. This Memorandum of Understanding instructs SECO to reserve funding for the institution. Applicants must then submit an Energy Assessment Report and loan application to SECO for review and approval. LoneSTAR technical guidelines are available at www.seco.cpa.state.tx.us/ls_guideline.htm.

If you are a state agency employee:
Investigate whether a loan program that supports landfill gas utilization projects could be developed in your state through a broadened use of existing alternative energy loan programs.

For More Information

Contact:
Theresa Sifuentes
LoanSTAR Program Administrator
The State Energy Conservation Office
111 East 17th Street
LBJ State Office Building
Austin, Texas 78701
512-463-1896
E-mail: theresa.sifuentes@cpa.state.tx.us

Web site:
www.seco.cpa.state.tx.us/ls.html

LoanSTAR applicants are encouraged to evaluate renewable energy technologies as part of long-term energy savings strategy.

Utah: Renewable Energy Tax Credit

Program Description

The Utah Renewable Energy Tax Credit, defined in Utah Code Annotated 59-10-134, is intended to encourage individuals and businesses to install renewable energy systems.

Technologies eligible for the credit include active and passive solar systems, photovoltaics, biomass (including landfill gas), hydropower, and wind. Biomass systems must have a conversion system and a separate apparatus to transfer the converted energy to the point of use or storage in order to be eligible. The credit for commercial systems is 10 percent of the cost of installation or improvements up to $50,000.

Applications are available on the Utah Energy Office's Web site and must be submitted, along with any requested receipts, to the Utah Energy Office. If all provisions of the tax credit rule have been met, the Utah Energy Office will certify the system and grant the tax credit. This tax credit expires on December 31, 2006.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Utah:
Review eligibility requirements for the tax credit on the Web site listed below. If your project is eligible, submit an application along with any requested receipts to the Utah Energy Office. Guidance for the application process is available on Utah Energy Office's Web site, listed below.

If you are a state agency employee:
Consult your state's Office of Taxation, Treasury Office, or Office of Energy to determine whether renewable energy tax credits are offered for specific activities related to landfill gas recovery. These exemptions might include other renewables, such as solar, wind, geothermal, or alternative fuels.

For More Information

Contact:
Lora Rees
Utah Department of Natural Resources
Utah Energy Office
1594 W. North Temple, Suite 3610
Salt Lake City, UT 84114-6480
801-538-5428
Fax: 801-521-0657
E-mail: lorarees@utah.gov

Web site:
www.energy.utah.gov/solar/taxcred1.htm

Technologies eligible for the credit include active and passive solar systems, photovoltaics, biomass (including landfill gas), hydropower, and wind. Biomass systems must have a conversion system and a separate apparatus to transfer the converted energy to the point of use or storage in order to be eligible.

Washington State: Sales and Use Tax Exemptions for Landfill Gas Energy Projects

Program Description

Exempting beneficial activities from taxation is a powerful tool states have at their disposal to encourage a wide range of improvements. For example, states can encourage landfill owners and operators to develop landfill gas utilization projects by offering exemptions on sales and use taxes related to landfill methane recovery.

In April 1998, Washington state enacted HB 2278, which exempted electric generating facilities powered by landfill gas from sales and use taxes. The legislation states:

> *The tax…shall not apply to sales of machinery and equipment used directly in generating electricity using wind, solar, or landfill gas as the principal source of power, or to sales of or charges made for labor and services rendered in respect to installing such machinery and equipment, but only if the purchaser develops with such machinery, equipment, and labor a facility capable of generating not less than two hundred kilowatts of electricity...*

This exemption reduces taxes on electric generating facilities by 7.5 to 8 percent, depending on how local governments apply sales tax. The exemption includes installation costs and is limited to facilities capable of generating more than 200 kW of electricity. The exemption expires June 30, 2005.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Washington: For a project in Washington, contact the state official listed below to learn how your landfill gas utilization project can qualify for the tax exemption.

If you are a state agency employee: Consult your state's Office of Taxation to determine which sales and use taxes may apply to landfill gas recovery equipment and expenses related to landfill gas use. Determine if there are any exemptions offered for renewable energy projects or other activities that may be related to landfill gas recovery. Several states, including Arizona, Massachusetts, New Jersey, and Minnesota, have implemented tax exemptions for solar and wind projects, although these initiatives do not yet specifically include landfill gas utilization.

In Washington State, the sale of machinery and equipment used directly in generating electricity using wind, solar, or landfill gas is exempt from sales tax.

For More Information

Contact:
Mike Nelson
Washington State University
Energy Program
925 Plum Southeast
Building 4
Olympia, WA 98504-3165
206-285-1061
E-mail: mikenel@westernsun.org

Website: www.energy.wsu.edu

Wisconsin: Focus on Energy Grants

Program Description

Wisconsin Focus on Energy, a public-private partnership, offers energy information and services to residential, business, and industrial customers throughout Wisconsin. These services are delivered by a group of firms contracted by the Wisconsin Department of Administration's Division of Energy. Focus on Energy promotes activities that encourage energy efficiency and use of renewable energy, enhance the environment, and ensure the future supply of energy for Wisconsin.

Wisconsin Focus on Energy offers funding opportunities for installing and demonstrating various renewable energy systems. Listed below are a few options:

Equipment Grants for Nonprofit Organizations provide financial support for purchasing renewable energy equipment. Equipment Grants must be used to support the purchase of renewable energy systems that will be displayed to the public and must be accompanied by a proposal for a Demonstration Grant. The grant will cover half the costs of purchasing and installing renewable energy equipment, with a maximum grant of $70,000. Projects should be completed within one year of accepting the grant. Bioenergy systems that generate electricity or thermal energy or both are eligible.

Demonstration Grants provide funding for activities that inform the public about how renewable energy systems work. Nonprofits that generate electricity or thermal energy or both, or bioenergy systems are eligible for funding. These grants support highly visible applications of renewable energy, including landfill gas energy, that are open to the public. Examples of eligible locations include municipal buildings, nature centers, schools and colleges, and museums. Demonstration Grants do not support the purchase of renewable energy equipment. A Demonstration Grant will cover half the costs of demonstration activities, with a maximum grant of $70,000. Projects should be completed within one year of accepting the grant.

Focus on Energy also offers Cash-Back Rewards for the installation and purchase of these renewable energy systems. This funding is based on either an estimate of the amount of energy that the renewable energy system will produce in one year or, for some technologies, the size of the renewable energy system. Both existing (existing renewable energy system that is repaired, modified, or expanded, provided it results in the production of additional renewable energy) and soon-to-be-installed systems are eligible. The maximum Cash-Back Reward is $50,000 or no more than 50 percent of the project cost. Cash-Back Rewards for bioenergy systems that produce electricity and utilize thermal energy could receive up to $100,000, but will not receive more than 50 percent of the project cost. Only commercial, industrial, and agricultural customers are eligible to receive awards for biomass, geothermal heat pumps, or solar space heat systems.

Individuals, businesses, organizations, institutions, or divisions of state, municipal, or tribal government are eligible for Equipment or Demonstration Grants if they are located in the service territory of a participating electric provider. These providers are:

- Alliant Energy
- Argyle Electric & Water Utility
- Barron Light & Water
- Benton Electric & Water Utility

Nonprofit bioenergy systems (e.g., landfill gas energy systems) that generate electricity and/or thermal energy for commercial, industrial, and agricultural applications are eligible for funding.

- Bloomer Electric & Water Utility
- Cadott Light & Water Dept.
- Cashton Light & Water
- Centuria Municipal Electric Utility
- Consolidated Water & Power Co.
- Cornell Municipal Light Department
- Cumberland Municipal Utility
- Dahlberg Light & Power Co.
- Evansville Water & Light Dept.
- Gresham Water & Electric Plant
- La Farge Municipal Utilities
- Madison Gas & Electric Co.
- North Central Power Co. Inc.
- Northwestern Wisconsin Electric Co.
- Pardeeville Public Utilities
- Pioneer Power & Light Co.
- Princeton Light & Water Department
- Shullsburg Electric Utility
- Spooner Municipal Electric Utility
- Stratford Water & Electric Department
- Superior Water, Light & Power Co.
- Viola Municipal Electric Utility
- We Energies
- Westfield Electric Company
- Wisconsin Public Service Corp.
- Wonewoc Water & Light Department
- Xcel Energy

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Wisconsin:
Grant guidelines are available on the Focus on Energy Web site (listed below). Determine whether your project meets the program requirements, then contact Focus on Energy to learn more about how to submit an application. (See contact information below.)

If you are a state agency employee:
Become more familiar with the approach used by Focus on Energy. Consider whether your state has, or could benefit from, similar public-private partnership approach support programs that might be used to help promote renewable energy demonstration projects.

For More Information

Contact:
Larry Krom
Focus on Energy
888-476-9534
E-mail: lk@wisolarelectric.com

Web site:
www.focusonenergy.com

Wyoming: Renewable Energy Sales Tax Exemption

Program Description

Effective July 1, 2003, the State of Wyoming has added a sales and use tax exemption for equipment used to generate electricity from renewable resources. Applicable renewable resources include wind, solar, biomass, landfill gas, hydro, hydrogen, and geothermal energy. The potential savings are 5 to 7 percent for state and county taxes.

The exemption is limited to the acquisition of equipment used to make a project operational up to the point of interconnection with an existing transmission grid; therefore, generating equipment, control and monitoring systems, power lines, substation equipment, lighting, fencing, pipes, and other equipment for locating power lines and poles are included. Equipment not eligible for the exemption includes tools and other equipment used in construction of a new facility, and contracted services required for construction and routine maintenance activities.

The sales exemption for renewable energy equipment sunsets on June 30, 2008.

Effective July 1, 2003, the State of Wyoming has added a sales tax exemption for equipment used to generate electricity from renewable resources, including landfill gas.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in Wyoming: If you are planning a project in Wyoming, this tax exemption might help make the project more economically feasible. If you have any questions regarding the exemption, contact the state official listed below, or visit the program's Web site, shown below.

If you are a state agency employee: Consult your state's Treasury Department or Office of Taxation to determine whether sales taxes apply to equipment related to landfill gas recovery and utilization. Determine if your state provides exemptions for other objectives (e.g., other renewables or alternative fuels; pollution prevention equipment, such as scrubbers; emissions monitoring devices; alternative fuel vehicles) that could be extended to include landfill gas recovery and use equipment.

For More Information

Contact:
Rick Morgan
Department of Revenue
Excise Tax Division
Herschler Building, Second Floor
122 West 25th Floor
Cheyenne, WY 82002-0110
307-777-3632
E-mail: rmorga@state.wy.us

Web site: http://revenue.state.wy.us

Canadian Resources

Canada: Climate Partners Network Inc.

Program Description

Headquartered in Victoria, British Columbia, Climate Partners Network Inc., is a Canadian-based company that provides funding for greenhouse gas offsets projects, environmental education, and tools for evaluating greenhouse gas emissions. Project proposals from around the world are welcomed by Climate Partners. U.S.-based projects are eligible for funding.

Climate Partners will consider projects such as:

- CO_2 sequestration
- Transportation demand management
- Energy efficiency
- Landfill gas recovery
- Renewable energy
- Supply-side energy (i.e., fuel switching)
- Transportation technologies

Applicants must demonstrate that they have the ability and experience to complete the proposed project. Greenhouse gas emissions reduction or sequestration must be measurable. An added benefit is the ability to replicate the project. Both individuals and organizations are eligible for funding.

The project application process involves the following eight steps:

1. Read the project criteria and make sure that your project satisfies as many of the necessary elements as possible.
2. Prepare a proposal using the preliminary proposal format.
3. Your preliminary proposal is reviewed.
4. Climate Partners invite select applicants to submit a detailed proposal.
5. Climate Partners analyze proposal.
6. Select projects are submitted to the Trust's Blue Ribbon Advisory Board (an independent panel representing greenhouse gas expertise, community, government, and consumer interests) for review.
7. Final negotiations occur and a legal contract is created.
8. Applicant provides monitoring information and other reports.

Climate Partners provides funding for greenhouse gas offsets projects, including landfill gas recovery.

Actions You Can Take

If you are interested in developing a landfill gas utilization project: Review information on the Climate Partners Web site (shown below) to determine if your project meets proposal criteria. Contact the Climate Partners Network with any additional questions.

For More Information

Contact:
Dennis Rogoza
Climate Partners Network Inc.
1200 - 865 View Street
Victoria, British Columbia
Canada V8W 3E8
250-381-5550
Fax: 250-381-5517
E-mail: drogoza@climatepartners.com

Web site:
www.climatepartners.com

Federal Resources

U.S. Department of Agriculture

Rural Business Opportunity Grants

Program Description

The U.S. Department of Agriculture (USDA) offers grants that promote sustainable economic development in rural communities with exceptional needs. Typically, the grants go toward paying the costs of providing economic planning for rural communities, technical assistance for rural businesses, or training for rural entrepreneurs or economic development officials. This grant program could be applicable to a landfill gas energy project located in a rural area determined by USDA to have exceptional needs.

This grant program could be applicable to a landfill gas energy project located in a rural area determined by USDA to have exceptional needs.

To be eligible for a Rural Business Opportunity Grant, applicants must be a public body, nonprofit corporation, Indian tribe, cooperative, or any group that conducts activities for the mutual benefit of its members. The group's members should be primarily rural residents. Applicants must have significant expertise in the activities they propose to carry out with the grant funds and financial strength to ensure they can accomplish the objectives of the proposed grant. Applicants must be able to show that the funding will result in economic development of a rural area (defined as any area other than a city or town that has a population greater than 50,000 inhabitants and adjacent areas). Your project must include a basis for determining the success or failure of the project and assessing its impact.

Projects eligible for Rural Business Opportunity Grant funding compete based on certain grant selection criteria. Priority points are awarded to those projects that best meet these criteria and are ranked from the highest to the lowest scoring. The criteria include:

- The sustainability and quality of the economic activity expected as a result of the project.
- The extent to which the project makes use of other funding sources.
- The current economic conditions in the service area.
- The project's usefulness as a new "best practice."

Grant funds may not be used for:

- Duplicating current services or replacing or substituting previously provided services.
- Covering the costs of preparing the application.
- Covering costs incurred prior to the effective date of the grant.
- Funding political activities.
- Acquiring real estate.
- Constructing or developing buildings.

Applications are funded up to the maximum dollars that are available in any given funding cycle.

The statutory limit for funds is $1.5 million. The size of grants approved is limited by the amount of program funds available. USDA expects most grants to be for $50,000 or less.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in a rural area: Review information about the Rural Business Opportunity Grant Program on the USDA Web site shown below. Contact the staff of the USDA's Rural Development Field Office in your area. To find out where your office is located, visit www.rurdev.usda.gov/recd_map.html.

For More Information

Contact:
William F. Hagy III
Deputy Administrator
Rural Business Cooperative Service, USDA
202-720-7287
E-mail: bill.hagy@usda.gov

Diane Berger
Loan Specialist
Specialty Lenders Division, USDA
202-720-2383
E-mail: diane.berger@usda.gov

Web site:
www.rurdev.usda.gov/rbs/busp/rbog.htm

U.S. Department of Commerce
Economic Development Administration

Public Works Program

Program Description

The Economic Development Administration's (EDA's) Public Works Program helps communities in economic decline revitalize, expand, and upgrade their facilities. These changes help attract new industry, encourage business expansion, diversify local economies, and generate long-term private sector jobs and investments. The program seeks to redevelop existing facilities and industrial/commercial locations, whenever possible. EDA supports these types of projects because they promote sustainable economic development by taking advantage of available infrastructure and markets.

The program provided $1 million for the reconstruction of a bioshelter greenhouse and infrastructure for capturing and utilizing waste heat through biomass gasification.

The Public Works Program supports locally developed projects that encourage long-term economic self-sufficiency and global competitiveness. Projects that have been funded in the past include: water and sewer facilities upgrades; technology-related infrastructure development; diversification of natural resource dependent economies efforts; commercialization and deployment of innovative technologies; business/industrial development; and the demolition, renovation, and construction of publicly owned facilities. Although the EDA's Public Works Program has never funded a landfill gas energy project, they have provided $1 million for the construction of a bioshelter greenhouse and infrastructure for capturing and utilizing waste heat through biomass gasification at an electrical generating station. Located in Burlington, Vermont, this project is part of a proposed eco-industrial park within the Federal Enterprise Community.

The following types of applicants are eligible for funding: economic development districts; states, cities, or other political subdivisions of a state or consortium of political subdivisions; Indian tribes; colleges and universities; public or private nonprofit organizations; and associations acting in cooperation with officials of a political subdivision of a state. Projects must be located in an area that exhibits economic distress at the time that the application is submitted. Economic distress is determined based on the level of unemployment, per capita income, or special need. Projects outside these areas will be considered if they directly benefit the distressed area. EDA provides direct grants, on a cost-share basis, generally funding 50 percent of the project cost. The match amount for grants is usually 50 percent.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in your community: Contact the appropriate EDA Regional Office to discuss your project and request pre-application instructions and forms for the Public Works Program. EDA conducts a preliminary review of all projects before requesting that a full application is completed. All projects must meet the criteria as explained in EDA's Regulations at 13 CFR Chapter 3 and in the Agency's annual Notice of Funds Availability published in the Federal Register.

If you are a state agency employee: Contact EDA's Public Works Program to discuss how the program might be applied to encourage landfill gas energy projects in communities in your state that are experiencing economic decline.

For More Information

Contact:
Philadelphia Region (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV, the District of Columbia, Puerto Rico, and the Virgin Islands)
Paul M. Raetsch
Curtis Center, Suite 140 South
Independence Square West
Philadelphia, PA 19106
215-597-4603
Fax: 215-597-1367
E-mail: praetsch@eda.doc.gov

Atlanta Region (AL, FL, GA, KY, MS, NC, SC, TN)
William J. Day, Jr.
401 West Peachtree Street, NW
Suite 1820
Atlanta, GA 30308-3510
404-730-3002
Fax: 404-730-3025
E-mail: wday1@eda.doc.gov

Chicago Region (IL, IN, MI, MN, OH, WI)
C. Robert Sawyer
111 North Canal Street
Suite 855
Chicago, IL 60606-7204
312-353-8143
Fax: 312-353-8575
E-mail: rsawyer@eda.doc.gov

Austin Region (AR, LA, NM, OK, TX)
Pedro R. Garza
327 Congress Avenue
Suite 200
Austin, TX 78701
512-381-8144
Fax: 512-381-8177
E-mail: pgarza@eda.doc.gov

Denver Region (CO, IA, KS, MO, MT, NE, ND, SD, UT, WY)
Anthony J. Preite
1244 Speer Boulevard
Suite 670
Denver, CO 80204
303-844-4715
Fax: 303-844-3968
E-mail: apreite@eda.doc.gov

Seattle Region (AK, AZ, CA, HI, ID, NV, OR, WA)
A. Leonard Smith
Jackson Federal Building, Suite 1856
915 Second Avenue
Seattle, WA 98174
206-220-7660
Fax: 206-220-7669
E-mail: lsmith7@eda.doc.gov

Web site:
www.doc.gov/eda/html/1h_grantreq.htm

U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy

Regional Biomass Energy Program

Program Description

Established by Congress in 1983, the U.S. Department of Energy's Regional Biomass Energy Program (RBEP) seeks ways to facilitate expanded use of biomass resources for the production of renewable transportation fuels and electric power. RBEP also supports bioenergy applications in the industrial and buildings sectors. RBEP has established a network of five regional offices (Southeast, Pacific Northwest, Northeast, Great Lakes, and Western) serving 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

RBEP aims to increase the production and use of biomass for energy by providing information, technical support, and other assistance, and by mitigating barriers to commercialization of biomass energy technologies. The program's long-term objectives are to:

- Improve the capabilities and effectiveness of state and local governments and industry in producing and using bioenergy.
- Support resource availability and planning efforts.
- Encourage economic development by investing in bioenergy technology.
- Accelerate market acceptance of bioenergy technologies by reducing or eliminating market barriers and understanding economic and environmental costs and risks.

Profit, nonprofit, and public entities are eligible for funding. Funding amounts vary from region to region. In 1999-2000, $1 million was available to southern states from the Southeastern Regional Biomass Energy Program.

Landfill gas energy projects are promoted by RBEP. For instance, the South Carolina Energy Office worked with RBEP, local landfill operators, and industrial partners to install a landfill gas recovery system at the 196-acre Palmetto Landfill in Spartanburg County, South Carolina. RBEP also worked with LMOP to conduct a series of workshops in the late 1990s to encourage landfill gas energy development.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in your region: You can submit unsolicited proposals to the appropriate regional office in accordance with DOE Guide for Submission of Unsolicited Proposals. This guide is available online at www.netl.doe.gov/business/unsol.html. Evaluation and award analysis will be performed by personnel at each regional office.

If you are a state agency office: Contact the regional RBEP office that serves your state to learn about funding that might be available for projects at the state level.

The South Carolina Energy Office worked with RBEP, local landfill operators, and industrial partners to install a landfill gas recovery system at the 196-acre Palmetto Landfill in Spartanburg County, South Carolina.

For More Information

For more information regarding RBEP, please visit the following Web site: www.ott.doe.gov/rbep/programs.html.

Contact:
U.S. Department of Energy
Ann Hegnauer
Regional Biomass Energy Program Manager
Forrestal Building
1000 Independence Avenue S.W.
Washington, DC 20585-0001
Mail code: EE-31
202-586-8014
E-mail: ann.hegnauer@ee.doe.gov

Southeast (AL, AR, FL, GA, KY, LA, MS, MO, NC, SC, TN, VA, WV, the District of Columbia, Puerto Rico, and the Virgin Islands)
Kathryn Baskin, Program Manager
Southern States Energy Board
6325 Amherst Court
Norcross, GA 30092
770-242-7711
Fax: 770-242-9956
E-mail: baskin@sseb.org

Pacific Northwest (AK, HI, ID, MT, OR, WA)
Jeff James, Program Manager
U.S. Department of Energy
Seattle Regional Office
Suite 3950
800 Fifth Avenue
Seattle, WA 98104
206-553-2079
Fax: 206-553-2200
E-mail: jeffrey.james@hq.doe.gov

Northeast (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT)
Rick Handley, Program Manager
CONEG Policy Research Center
Suite 382
400 North Capitol Street, NW
Washington, DC 20001
202-624-8450
Fax: 202-624-8463
E-mail: nrbp@sso.org

Web site:
www.nrbp.org

Great Lakes (IL, IN, IA, MI, MN, OH, WI)
Fred Kuzel, Program Manager
Council of Great Lakes Governors
Suite 1850
35 East Wacker Drive
Chicago, IL 60601
312-407-0177
Fax: 312-407-0038
E-mail: fkuzel@cglg.org

Web site:
www.cglg.org/projects/biomass

Western (AZ, CA, CO, KS, NE, NV, NM, ND, OK, SD, TX, UT, WY)
Bruce Hauschild
Nebraska Energy Office
1111 O Street, Suite 223
P.O. Box 95085
Lincoln, NE 68509-5085
402-471-3351
Fax: 402-471-3064
E-mail: bruceh@mail.state.ne.us

Web site:
www.westbioenergy.org

U.S. Environmental Protection Agency
Office of Pollution Prevention and Toxics

Pollution Prevention Incentives for States: P2 Grants

Program Description

Pollution prevention (P2) is the use of practices or processes that reduce or eliminate the generation of pollutants and waste at the source. The Pollution Prevention Incentives for States (PPIS) grant program was created by the U.S. Environmental Protection Agency (EPA) under the Pollution Prevention Act of 1990. EPA's goals for this program are to:

- Empower states to build a pollution prevention infrastructure.
- Learn from and build upon innovative means of implementing pollution prevention at both the state and facility level.
- Provide resources for pollution prevention technical assistance and training.
- Support states in establishing and expanding pollution prevention programs.

The PPIS is an annual grant program that gives state and tribal programs the ability to help businesses and industries identify better solutions and strategies for complying with federal and state environmental regulations. Grants support P2 activities across all environmental media (i.e., air, water, land), aid in the development of state programs, and help improve business competitiveness without increasing environmental impacts. The grant program requires a 50 percent match from the state that receives the grant.

One of the 63 grants supported by PPIS grants in 2001 involves innovative landfill gas energy microturbine cogeneration. Rutgers University in New Jersey, along with the University of the Virgin Islands, Fresh-Culture Systems, Inc., and Enertec, LLC, is growing tomatoes and raising freshwater fish in a closed-loop system powered by landfill gas. Using microturbine-converted methane from a nearby landfill for energy, a desalinization unit will produce fresh water for the fish and pumps will control the water flow through a system of inter-connected tanks. Some of these tanks will contain fish, and tomato plants will be placed over the others. Fish wastewater will provide nourishment for the tomato plants. The plants' roots dangle into the tanks, and as the tomato plants extract nutrients, they will clean the water for reuse by the fish. This system finds new uses for landfill gas, conserves local freshwater supplies, and demonstrates how to grow food with a low impact on the environment. Over a two-year period, EPA will provide funding of $150,000.

One of the 63 grants supported by PPIS grants in 2001 involves innovative landfill gas energy microturbine cogeneration.

Actions You Can Take

If you are interested in developing a landfill gas utilization project in your state: This program is available to states only. States in turn can use the funds for grants to landfill gas projects, if they choose to do so.

If you are a state agency office: Contact the EPA Regional Office that serves your state to learn how to apply for a P2 grant.

For More Information

Contact:
Christopher Kent
U.S. EPA Office of Pollution Prevention
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Mail Code 7409M
Washington, D.C. 20460
202-564-8842
E-mail: kent.christopher@epa.gov

Region 1 (CT, MA, ME, NH, RI, VT)
Rob Guillemin
U.S. EPA Region 1
Office of Environmental Stewardship
1 Congress Street, Suite 1100 (SPP)
Boston, MA 02114-2023
617-918-1841
E-mail: guillemin.robert@epa.gov

Region 2 (NJ, NY, PR, Virgin Islands)
Tristen Gillespie
U.S. EPA Region 2 (SPMMB)
290 Broadway 25th Floor
New York, NY 10007-1866
212-637-3753
E-mail: gillespie.tristen@epa.gov

Region 3 (DC, DE, MD, PA, VA, WV)
Lorna Rosenberg
U.S. EPA Region 3 (3E100)
1650 Arch Street
Philadelphia, PA 19103-2029
215-814-5389
E-mail: rosenberg.lorna@epa.gov

Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)
Dan Ahern
U.S. EPA Region 4
Air, Pesticide & Toxics Mgmt Division
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303
404-562-9028
E-mail: ahern.dan@epa.gov

Region 5 (IL, IN, MI, MN, OH, WI)
Phil Kaplan
U.S. EPA Region 5
Waste, Pesticide and Toxics Division
77 West Jackson Boulevard (DW-85)
Chicago, IL 60604-3590
312-353-4669
E-mail: kaplan.phil@epa.gov

Region 6 (AR, LA, NM, OK, TX)
Eli Martinez
U.S. EPA Region 6 (6EN-XP)
Compliance Assurance and Enforcement Division
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
214-665-2119
E-mail: martinez.eli@epa.gov

Region 7 (IA, KS, MO, NE)
Gary Bertram
U.S. EPA Region 7 (ARTD/TSPP)
Air, RCRA and Toxics Division
901 North 5th Street
Kansas City, KS 66101
913-551-7533
E-mail: bertram.gary@epa.gov

Region 8 (CO, MT, ND, SD, UT, WY)
Linda Walters
U.S. EPA Region 8 (8P-P3T)
Office of P2, State and Tribal Assistance
999 18th Street, Suite 300
Denver, CO 80202
303-312-6385
E-mail: walters.linda@epa.gov

Region 9 (AS, AZ, CA, CN, MI, GU, HI, NV, RP)
Leif Magnuson
U.S. EPA Region 9
75 Hawthorne Street (WST-7)
San Francisco, CA 94105
415-972-3286
E-mail: magnuson.leif@epa.gov

Region 10 (AK, ID, OR, WA)
Carolyn Gangmark
U.S. EPA Region 10
Office of Innovation (01-085)
1200 Sixth Avenue
Seattle, WA 98101
206-553-4072
E-mail: gangmark.carolyn@epa.gov

Web site:
www.epa.gov/opptintr/p2home

Appendixes

Appendix A
Net Metering Programs

Program Description

Net metering is a low-cost, easily administered method to encourage customer investment in renewable energy technologies. It allows the electric meters of customers with generating facilities to turn backwards when the generators are producing energy in excess of the customers' demand. Customers are thus able to use their own generation to offset their consumption over a billing period. This offset means that customers receive retail prices for the excess electricity they generate. Without net metering, a second meter is usually installed to measure the electricity that flows back to the provider, with the provider purchasing the power at a rate much lower than the retail rate.

Arizona

Arizona Corporation Commission

Eligibility	Renewable Energy Technologies
System Capacity Limits	100 kW or less
Purchase Rate	Commercial customers may receive 4.4¢/kWh May through October and 3.5¢/kWh November through April. All other customers receive 4.84¢/kWh May through October and 3.85¢/kWh November through April.
Program Background	Established in 1981. Commercial, industrial, residential, general public, nonprofit, and utilities sectors are eligible.
Contact Information	Ray Williamson Arizona Corporation Commission 1200 W. Washington Street Phoenix, AZ 85007 602-542-0828 Fax: 602-542-2129 E-mail: rwilliamson@cc.state.az.us

Arkansas

Arkansas Department of Economic Development
Arkansas Energy Office

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Geothermal Electric, Fuel Cells, Microturbines
System Capacity Limits	25 kW for residential systems and 100 kW for commercial systems
Purchase Rate	The Arkansas Public Service Commission will develop the net metering rules including the terms and conditions of interconnection and the net metering contracts.
Program Background	The program was established in 2001.
Contact Information	Chris Benson Arkansas Department of Economic Development Arkansas Energy Office One State Capitol Mall, Suite 4B/215 Little Rock, AR 72201 501-682-8065 Fax: 501-682-2703 E-mail: cbenson@1800arkansas.com Web site: www.1-800-arkansas.com

Colorado

Aspen Electric and Holy Cross Electric

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Fuel Cells, Cogeneration
System Capacity Limits	50 kW
Purchase Rate	Aspen Electric and Holy Cross Electric: Full retail credit (7¢/kWh)
Program Background	Net metering is not required by the state, but options are offered by Aspen Electric/Holy Cross Electric.
Contact Information	Aspen Electric/Holy Cross Electric Randy Udall Community Office for Resource Efficiency P.O Box 9707 Aspen, CO 81612 970-544-9808 Fax: 970-544-9599 E-mail: core@aspeninfo.com Web site: www.aspencore.org

Fort Collins Utilities

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Fuel Cells, Cogeneration
System Capacity Limits	Fort Collins Utilities
Purchase Rate	3 kW
Program Background	Net metering is not required by the state, but options are offered by Fort Collins Utilities.
Contact Information	Gary Schroeder 700 Wood Street Fort Collins, CO 80521 970-221-6395 E-mail: gschroeder@fcgov.com Web site: fcgov.com/lightandpower

Connecticut

Connecticut Department of Public Utility Control

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Landfill Gas, Hydro, Fuel Cells
System Capacity Limits	None
Purchase Rate	Net excess generation purchased at spot market energy rate, which is essentially at avoided cost.
Program Background	Established in 1990. All investor-owned utilities must provide net metering to residential customers who own solar, wind, hydro, biogas, fuel cell, or sustainable biomass electrical generators.
Contact Information	Connecticut Department of Public Utility Control Ten Franklin Square New Britain, CT 06051 860-827-2691 Fax: 860-827-2613

Delaware

Delaware Office of the Public Advocate

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Geothermal Electric
System Capacity Limits	25 kW
Purchase Rate	Not available
Program Background	Conectiv Power Delivery (Conectiv) and Delaware Electric Cooperative (DEC) offer net metering for residential and small commercial customers operating renewable energy systems of 25 kW or less. There is no statewide limit on net metered capacity.
Contact Information	Charlie S. Mission Delaware Energy Office 149 Transportation Circle Dover, DE 19901 302-739-5644 E-mail: csmission@state.de.us Web site: www.state.de.us/publicadvocate

Hawaii

Hawaii Department of Business, Economic Development, and Tourism Energy Division

Eligibility	Photovoltaics, Wind, Biomass, Hydro
System Capacity Limits	10 kW
Purchase Rate	Excess power produced is granted to the utility. Customer still pays minimum bill amount.
Program Background	Established in 2001. Residential and “small commercial” customers are eligible. Utilities must offer net metering on a first-come first-served basis to eligible customers until total net metering capacity equals 0.5% of each utility’s peak demand, which corresponds to a total ‘cap’ of approximately 10 MW for the state.
Contact Information	Maria Tome Hawaii Department of Business, Economic Development, and Tourism Energy Division P.O. Box 2359 Honolulu, HI 96804 808-587-3809 Fax: 808-587-3820 E-mail: mtome@dbedt.hawaii.gov Web site: www.state.hi.us/dbedt/ert/netmeter.html

Idaho

Idaho Public Utilities Commission

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste
System Capacity Limits	25 kW for residential systems and 100 kW for commercial systems
Purchase Rate	Not available
Program Background	Since 1986, Idaho Power Company has offered net metering for residential and small commercial customers.
Contact Information	Rick Sterling Idaho Public Utilities Commission Statehouse Mail Boise, ID 83720 208-334-0351 Fax: 208-334-3762 Web site: www.idwr.state.id.us/energy

Illinois

Exelon Corporation ComEd Energy

Eligibility	Photovoltaics, Wind, Biomass
System Capacity Limits	40 kW
Purchase Rate	ComEd will pay the customer, on a monthly basis, the utility's avoided costs for any net excess generation.
Program Background	In April 2000, Commonwealth Edison (ComEd), the investor-owned utility serving the city of Chicago and surrounding areas, established a special billing program that allows for net metering. The program is available to all customers. Generating capacity is not to exceed 0.1% of the utility's annual peak demand.
Contact Information	Denise Bechen Exelon Corporation ComEd Energy ESO Tech. Services, 2nd Floor (02-NE-025) Three Lincoln Centre Oakbrook Terrace, IL 60181-4260 630-576-6783 Fax: 630-576-6353 E-mail: Denise.Bechen@exeloncorp.com

Iowa

Iowa Utilities Board

Eligibility	Photovoltaics, Wind, Biomass (including Landfill Gas), Hydro, Waste
System Capacity Limits	MidAmerican Energy 500 kW, otherwise none
Purchase Rate	Interstate Power & Light purchases net generation at avoided cost. MidAmerican Energy carries the net generation forward, allowing for net metering offsets in future periods.
Program Background	Established in 1983. Allows customers with alternative energy generation systems to sell electricity to their investor-owned utilities on a netted basis against their metered retail usage. The rule applies to all customer classes. Net metering is generally available only from rate regulated utilities. It generally is not available from rural electric cooperatives or municipal utilities.
Contact Information	John Pearce Iowa Utilities Board 350 Maple Street Des Moines, IA 50319 515-281-5679 Fax: 515-281-5329 E-mail: john.pearce@iub.state.ia.us

Maine

Maine State Planning Office

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste, Cogeneration
System Capacity Limits	100 kW
Purchase Rate	Avoided cost
Program Background	Since 1987, Maine's Public Utility Commission Code provided for net metering for the state's qualified facilities. During 1997, however, the state legislature enacted a restructuring law that provided for retail competition, which began March 1, 2000.
Contact Information	James Connors Maine State Planning Office DECD/Energy Division 38 State House Station Augusta, ME 04333-0038 207-287-8938 Fax: 207-287-8059 E-mail: jim.connors@state.me.us

Massachusetts

Massachusetts Division of Energy Resources

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste, Cogeneration
System Capacity Limits	60 kW
Purchase Rate	Avoided cost
Program Background	The program encourages small power production facilities and aims to diversify the resource mix of the state.
Contact Information	Public Information Officer Massachusetts Division of Energy Resources 70 Franklin Street, 7th Floor Boston, MA 02110-1313 617-727-4732 Fax: 617-727-0030 E-mail: DOER.Energy@State.MA.US Web site: www.mass.gov/doer

Minnesota

Minnesota Department of Commerce Energy Division

Eligibility	Renewable Systems
System Capacity Limits	40 kW
Purchase Rate	Average retail utility energy rate
Program Background	Established in 1983. As of 2000, there were 110 facilities with net billing accounts (23 photovoltaic and 87 wind facilities).
Contact Information	Mike Taylor Minnesota Department of Commerce Energy Division 85 7th Place E, Suite 500 St. Paul, MN 55101-2198 651-296-6830 Fax: 651-297-7891 E-mail: mike.taylor@state.mn.us Web site: www.revisor.leg.state.mn.us/stats/216B/164.htmlwww.revisor.leg.state.mn.us/arule/7835

New Mexico

New Mexico Public Utility Commission

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste
System Capacity Limits	10 kW
Purchase Rate	The utility's "energy rate" or carried over to the next month
Program Background	Net metering is offered for cogeneration facilities and small power producers. Municipal utilities are exempt.
Contact Information	Tom Halbin New Mexico Public Utility Commission Marian Hall 224 East Palace Avenue Santa Fe, NM 87501-2013 505-827-6940 Fax: 505-827-6973

North Dakota

Public Utility Commission

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste, Cogeneration
System Capacity Limits	100 kW
Purchase Rate	Utility companies: retail cost Rural electric cooperatives: avoided cost
Program Background	Established in 1991 by the ND Public Utility Commission.
Contact Information	Paul Helgeson Public Service Commission of Wisconsin PO Box 7854 Madison, WI 53707-7854 (608) 266-2072 Fax: (608) 266-3957 Email: paul.helgeson@psc.state.wi.us Web site: http://psc.wi.gov

Ohio

Ohio Biomass Energy Program

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Fuel Cells, Microturbines
System Capacity Limits	Microturbines: 100 kW Total installed capacity is limited to 1% of each utility's in-state customer peak demand.
Purchase Rate	Retail rate
Program Background	Established by the 1999 Ohio electric utility restructuring law.
Contact Information	Anne Goodge Ohio Biomass Energy Program Public Utilities Commission of Ohio 180 East Broad Street Columbus, OH 43215-3793 614-644-7857 Fax: 614-752-8352 E-mail: anne.goodge@puc.state.oh.us Web site: ww.puc.state.oh.us/ohioutil/BioMass/biomass.html

Oklahoma

Oklahoma Department of Commerce

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste, Cogeneration
System Capacity Limits	100 kW
Purchase Rate	Not available
Program Background	Established in 1988. The program is available to all customer classes and there is no statewide limit to the amount of net metering capacity. Although all renewable energy sources are eligible, only wind generating systems have used net metering in Oklahoma to date.
Contact Information	Gordon Gore Oklahoma Department of Commerce Community Affairs and Development P.O. Box 26980 Oklahoma City, OK 73126-0980 405-815-5370 Fax: 405-841-9377 E-mail: Gordon_Gore@odoc.state.ok.us

Rhode Island

Rhode Island Public Utilities Commission

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydro, Renewable Transportation Fuels, Geothermal Electric, Waste, Cogeneration
System Capacity Limits	15 kW or 25 kW
Purchase Rate	Net excess generation is purchased at the utility's avoided cost.
Program Background	Established in 1985. Applies to renewable energy generating facilities and cogeneration facilities.
Contact Information	Doug Hartley Rhode Island Public Utilities Commission Division of Public Utilities and Carriers 100 Orange Street Providence, RI 02903 401-941-8827 Fax: 401-277-6805 E-mail: Dhartley@gwia.ripuc.org Web site: www.ripuc.state.ri.us

Texas

Office of Public Utility Counsel

Eligibility	Photovoltaics, Wind, Biomass, Hydro, Geothermal, Landfill Gas, Tidal, Wave
System Capacity Limits	250 kW or 50 kW
Purchase Rate	Avoided cost
Program Background	There is no statewide limit on the number of customers or total capacity under the net metering program
Contact Information	John McElroy, Jr. Office of Public Utility Counsel 1701 N. Congress Avenue, Suite 9-180 Austin, TX 78701 512-936-7518 Fax: 512-936-7520 E-mail: mcelroy@opc.state.tx.us

Vermont

Department of Public Service

Eligibility	Solar Thermal Electric, Photovoltaics, Wind, Fuel Cells, Biogas
System Capacity Limits	15 kW
Purchase Rate	Excess kilowatt-hours are credited towards the customer's next bill.
Program Background	Established in 1998. As of February 2002, 55 net metering systems had been granted Certificates of Public Good. All equipment purchased to construct and install a net metered renewable energy system is exempt from the state's 5% sales tax.
Contact Information	Tom Franks Vermont Department of Public Service Energy Efficiency Division 112 State Street, Drawer 20 Montpelier, VT 05620-2601 802-828-4035 E-mail: tom.franks@state.vt.us Web site: www.revermont.org and www.state.vt.us/psd/ee/ee20.htm

Wisconsin

Public Service Commission of Wisconsin

Eligibility	All systems Customers of electric cooperatives are not eligible
System Capacity Limits	20 kW
Purchase Rate	Renewable generators: retail rate Non-renewable generators: avoided cost
Program Background	Established in 1983 (Wisconsin Orders 05-ER-11,12,13) and re-authorized in 1993.
Contact Information	Paul Helgeson Public Service Commission of Wisconsin P.O. Box 7854 Madison, WI 53707-7854 608-266-2072 Fax: 608-266-3957 E-mail: paul.helgeson@psc.state.wi.us Web site: http://psc.wi.gov

Appendix B

Renewable Portfolio Standards that Include Landfill Gas

Program Description

A Renewable Portfolio Standard (RPS) is a policy that states can use to remove market barriers to renewable power and ensure that green power continues to play a role in the competitive environment that follows restructuring of the electricity generating industry. In their simplest form, RPSs specify that a percentage of all electricity generated must come from identified renewable energy sources, such as wind, hydro, solar, landfill gas, geothermal, and biomass. Some states require that a minimum percentage must come from new renewable sources, with this percentage increasing gradually over time. Under a more market-based approach, a state or group of states allow the RPS to be met with tradable renewable energy credits (RECs). Under this system, utilities and other electricity retailers earn credits for all renewable-generated power they produce and sell each year, and submit those credits to demonstrate compliance with the standard. Utilities with excess credits can sell them to others that have not met the standard.

State	Requirements	Eligible Technologies	Program Background
Arizona	0.6% in 2003, increasing to 1.1% by 2007 (at least 60% solar by 2004)	Landfill Gas, Solar, Wind, Biomass, Limited Geothermal	Arizona implemented an Environmental Portfolio Standard in 2001. Funding for renewable energy development is from an existing system benefits charge and a new surcharge collected by the state's regulated utilities.
Connecticut	6% by 2000, increasing annually to 13% by 2009	Landfill Gas, Solar, Wind, Biomass, Hydro, Waste, Fuel Cells	Connecticut's 1998 electric utility restructuring law created the RPS. An electricity provider can meet the RPS requirements by participating in a renewable energy trading program. Revisions in 1999 to the RPS legislation allow the Connecticut Department of Public Utility Control to delay RPS targets by up to two years if it finds that requirements cannot reasonably be met. The RPS does not apply to the state's municipal and cooperative utilities.
California	6% in 2003, increasing annually by 1% until 20% by 2017	Landfill Gas, Solar, Wind, Biomass, Hydro, Waste, Geothermal, Waste Tires	On December 20, 1995, the California Public Utilities Commission adopted an RPS that allows for the trading of credits. The RPS was strengthened in 2002 with the establishment of the 20% goal.
Hawaii	7% in 2003, 8% in 2005, 9% in 2009	Landfill Gas, Solar, Wind, Biomass, Hydro, Waste, Geothermal, Ocean Thermal, Wave, Cogeneration, Fuel Cell	Hawaii Legislature's Act 272 of 2001 established goals for electric utility companies in implementing an RPS by requiring the inclusion of a minimum percentage of renewable energy resources within an overall resource portfolio. Existing renewable generation is allowed to be included and no penalties for noncompliance were established.

State	Requirements	Eligible Technologies	Program Background
Illinois	5% by 2010,15% by 2020	Wind, Solar, Closed Loop Biomass, Limited Hydro, Other Environmentally Friendly Technologies	In June 2001, Illinois Governor George Ryan signed legislation (HB 1599) that establishes percentage goals for the state's renewable energy production. However, it does not include an implementation schedule, compliance verification, or credit trading provisions.
Massachusetts	1% in 2003, increasing annually by 0.5% until 4% by 2009, an additional 1% per year will be added thereafter until Department of Energy Resources determines the end	Landfill Gas, Solar, Wind, Biomass, Ocean Thermal, Wave, Tidal, Fuel Cell	As part of its 1997 electric utility restructuring legislation, authorization for an RPS was established. RPS regulations were finalized in 2002. RECs are used to implement the program. Suppliers also have the option of paying either $50 per megawatt-hour or 5 cents per kilowatt-hour, which goes into a renewable energy fund.
Minnesota	1% in 2005, increasing 1% annually until 10% in 2015	Landfill Gas, Solar, Wind, Biomass, Hydro	The RPS targets are not mandated by law, but are good faith efforts. In 2003, legislation was passed that requires the utilities to submit their strategies for meeting the 10% target in 2010.
New Jersey	3.25% currently, 3.5% by 2006, increasing by 0.5% until 6.5% by 2012	Landfill Gas, Solar, Wind, Biomass, Geothermal, Hydro, Wave, Tidal, Waste, Fuel Cell	New Jersey's restructuring legislation requires all retail electric suppliers to provide a percentage of power from renewable energy sources starting in 2001.
New Mexico	5% by 2006, 10% by 2011	Landfill Gas, Solar, Wind, Biomass, Geothermal, Hydro	On December 17, 2002, the New Mexico Regulation Commission approved an RPS. Utilities document compliance with the RPS through the use of RECs. Each kilowatt-hour generated from landfill gas counts as two kilowatt-hours toward compliance with this rule.
Pennsylvania	~2% depending upon utility	Landfill Gas, Solar, Wind, Biomass, Geothermal, Waste	RPS requirements were established through individual utility restructuring settlements with Pennsylvania utilities.
Texas	~2.3% of 2009 sales, in the City of Austin: 5% by 2004	Landfill Gas, Solar, Wind, Biomass, Geothermal, Hydro, Wave, Tidal	Texas requires the development of new generation sources and includes a credit trading program to assist with compliance as part of its electricity deregulation legislation. The Austin City Council adopted Resolution No. 990211-36, which sets a goal for Austin Energy to generate/purchase 5% of its energy portfolio mix from renewable resources.
Wisconsin	0.5% in 2001, 2.2% by 2011	Landfill Gas, Solar, Wind, Biomass, Hydro, Waste, Geothermal, Wave, Tidal, Fuel Cell	Wisconsin was the first state to have a RPS in advance of retail competition. A credit trading program has been established among the utilities.

United States
Environmental Protection
Agency

Please make all necessary changes on the below label, detach or copy, and return to the address in the upper left-hand corner.
If you do not wish to receive these reports CHECK HERE ☐: detach, or copy this cover, and return to the address in the upper left-hand corner.

PRESORTED STANDARD
POSTAGE & FEES PAID
EPA
PERMIT No. G-35

Office of Air and Radiation
Washington, DC 02460

Official Business
Penalty for Private Use
$300

EPA-430-R-01-010
Winter 2004