

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF THE SMALL BUSINESS OMBUDSMAN**

ANNUAL REPORT

**SMALL BUSINESS ENVIRONMENTAL
ASSISTANCE PROGRAMS**

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DEPARTMENT OF ENVIRONMENTAL
PROTECTION

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Small Business Programs

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Small Business Environmental Assistance Program

Environmental Management Assistance Program (EMAP)
(A Program of the Pennsylvania Small Business Development Centers)

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Introduction

The Pennsylvania Small Business Environmental Assistance Program (SBEAP) has been helping small businesses comply with environmental laws and operate more efficiently since the mid-1990s. This year, the SBEAP, which includes the Small Business Ombudsman of the Department of Environmental Protection (DEP), the Compliance Advisory Committee and the Small Business Technical and Environmental Compliance Assistance Program (SBAP) continued to work together to provide confidential compliance assistance, educational opportunities, and financing programs to small businesses in Pennsylvania.

The SBEAP was created in recognition of the challenges faced by small businesses in complying with environmental regulations. This program is required by the Clean Air Act Amendments of 1990 and the Pennsylvania Air Pollution Control Act (APCA) and is made up of three parts: The Office of the Small Business Ombudsman, SBAP and the Small Business Compliance Advisory Committee (SBCAC).

The Small Business Ombudsman represents DEP to the small business community, provides free confidential compliance assistance to small businesses, sits on the Compliance Advisory Committee, and administers small business financing programs. The SBAP, currently outsourced to the Pennsylvania Small Business Development Centers (SBDCs), provides free compliance assistance through a toll-free hotline and on-site visits. The SBDCs also provide assistance with permit applications and can refer the small business to general business and financial assistance professionals if appropriate. The Compliance Advisory Committee meets quarterly to address issues that impact the small business community; including environmental regulations, as well as technical and financial assistance programs. These inter-related programs, created by the Clean Air Act and the Pennsylvania APCA, originally addressed only air issues; however, all have been expanded to provide small businesses with assistance in relation to all environmental media, when feasible. These three programs are funded by the Title V Air Quality Permitting Program as required by the Clean Air Act and the APCA. The Bureau of Air Quality, Compliance Assistance and Monitoring Section is the administrator for the SBAP and the Small Business Compliance Advisory Committee.

Small Business Environmental Assistance Program – Technical Assistance Provider

The SBAP provides technical assistance to small businesses through a third-party contractor. Pennsylvania has traditionally outsourced this function because many small businesses are more comfortable discussing environmental matters with someone outside the department. The contractor provides free, confidential environmental assistance to help business owners determine their regulatory requirements and the best environmental management strategies for meeting those requirements. The technical assistance provider can help business owners with grant applications, emissions calculations, regulatory paperwork, plan approvals or operating permits.

The department partners with the SBDCs to provide technical assistance through the SBDCs' Environmental Management Assistance Program (EMAP). Providing no-cost, confidential environmental consulting assistance since 1997, EMAP has built a considerable assistance network and presence. EMAP has five environmental professionals working through 18 college and university-based centers around the state. Assistance can be accessed directly through a toll-free hotline at 877-ASK-EMAP (877-275-3627) or through the website, www.askemap.org.

The five-year cooperative agreement between the department and EMAP was renewed in June 2013 for \$375,000 for the 2013-14 fiscal year. This partnership has been effective at improving the ability of the DEP sponsored technical assistance program, or SBEAP, to reach the greater Pennsylvania small business community. For the 2012-2013 Fiscal Year, EMAP reports:

- 110 Hotline contacts
- 105 Non-hotline contacts (emails or direct calls)
- 254 Businesses provided with in-depth assistance
- 41 Site Visits

EMAP Program Project Examples:

During the 2012-13 Fiscal Year, EMAP continued to provide environmental assistance to small businesses to help them meet their environmental compliance goals. Four examples of EMAP assistance are provided below:

An **aluminum foundry** was approached by a customer that wanted to melt a large amount of scrap aluminum on a continuing basis. While the foundry did not have the capacity to melt that much metal, it had the space to install a new melt furnace. The DEP regional office

suggested the foundry contact EMAP for assistance. The foundry needed to choose between two distinctly different furnaces with each furnace type having significantly different corresponding regulations. EMAP outlined the differences allowing the foundry to determine the configuration that worked best. Once the decision was made, EMAP helped the facility gather the information and perform the calculations needed for the plan approval application. After the application was submitted an EMAP consultant went through the draft plan approval with the foundry and pointed out the ongoing requirements and reporting deadlines. With EMAP's free and confidential assistance, the aluminum foundry was able to understand the different regulatory requirements for different aluminum melt furnaces, complete a plan approval application in a timely fashion, understand the ongoing requirements for operating the new equipment, and double the size of its business with the new customer.

A **pipe manufacturer** that is part of the secondary supply chain created by the Marcellus Shale industry is expanding its business as a result of the natural gas pipeline construction in Pennsylvania. EMAP was contacted for compliance and permitting assistance. EMAP consultants helped the small business owner prepare and submit an abatement plan that addressed non-compliance issues, assisted the business with preparing an Air Quality Plan Approval for expanding the current State Only Operating Permit (SOOP) limits and also assisted with the SOOP renewal. EMAP worked with the business to provide education on the applicable environmental regulations and recordkeeping needed to demonstrate compliance with its permits. This also helped identify lower volatile organic compound (VOC) coating products for its surface coating operation, reducing emissions from the process.

An air quality inspector visited a **manufacturer that coats parts for building construction** and informed the business that a permit may be required for its operations. EMAP materials were provided during the inspection, which prompted a call for assistance. After a site visit to understand the particular operations at the facility, EMAP reviewed the coating's material safety data sheets to begin calculations for the permit application. It was noted that the VOC content of the coatings was above the limits for VOC content as applied. EMAP assisted in identifying various alternatives to the manufacturer's current paints. A powder coating trial proved to be unsuccessful. The company then contacted its paint manufacturer to reformulate its paint line with a lower VOC content. After several reformulations, a new coating was developed. This new formulation was able to reduce the manufacturer's overall VOC emissions by 67 percent. After the application was submitted, an EMAP consultant went through the draft permit with the manufacturer and pointed out the ongoing requirements and reporting deadlines. EMAP also developed a recordkeeping spreadsheet and reporting calendar to assist the facility in maintaining compliance.

An **electrical component manufacturer** contacted EMAP after hearing about EMAP services from its local SBDC. The manufacturer was applying for ISO 14001 certification¹ and wanted to learn how it could improve the management of its environmental issues. EMAP performed an onsite assessment at the manufacturer's facility and evaluated all three major media areas: air, waste and water. For air, EMAP helped to calculate the facility's air emissions and helped the company demonstrate that it was below the state's permitting thresholds. For waste, EMAP assisted the company in managing its hazardous and universal wastes and helped eliminate some waste streams. For water, EMAP discussed potential storm water issues and suggested the company implement a Preparedness Prevention and Contingency Plan to prepare for any unexpected spills or emergencies. The company received a report from EMAP outlining the various recommendations and helped identify sources to find more information. EMAP continued to work with the manufacturer while it implemented the environmental recommendations and improved its own environmental footprint before finally applying for its ISO certification.

DEP Bureau of Air Quality, Compliance Assistance and Monitoring Section (BAQ CAM)

BAQ CAM also assists small businesses. This section oversees the planning, development, coordination, implementation and evaluation of the statewide air quality compliance assistance and pollution prevention program. It develops compliance assistance outreach tools and materials and pollution prevention programs.

Examples of these activities that affect Pennsylvania small businesses are outlined below.

Mercury Switch Program

On Nov. 9, 2004, the department announced the creation of the Pennsylvania Mercury Automobile Switch Removal Program (MASRP). The MASRP was a voluntary program that encouraged the removal of mercury switches from automobiles in a safe, effective and relatively easy manner. In December 2005, Pennsylvania Automotive Recyclers Trade Society was awarded a sole-source grant from the department to administer the voluntary program until Sept. 30, 2007. The program offered a reimbursement of \$2 per switch to participating auto recyclers at least until the grant's expiration date. On Aug. 11, 2006, the

¹ "The ISO 14000 family addresses various aspects of environmental management. It provides practical tools for companies and organizations looking to identify and control their environmental impact and constantly improve their environmental performance. ISO 14001:2004 and ISO 14004:2004 focus on environmental management systems. The other standards in the family focus on specific environmental aspects such as life cycle analysis, communication and auditing." See: <http://www.iso.org/iso/home/standards/management-standards/iso14000.htm>.

U.S. Environmental Protection Agency announced the creation of the National Vehicle Mercury Switch Removal Program (NVMSRP). In the fall of 2006, the MASRP was merged with the NVMSRP. There are 340 Pennsylvania recyclers registered in the program. A total of 101,874 mercury-containing switches, or 224.12 pounds of mercury, have been removed since the inception of the program.

2013 Dry Cleaner Calendar

The 2013 Dry Cleaner Compliance Calendar² was distributed in October 2012 to approximately 790 dry cleaners in Pennsylvania. The calendar is available on the department's website, and it provides a convenient way for dry cleaners to maintain required federal and state records. The department has distributed this compliance assistance tool since 2001. The 2013 calendar also includes a five-page Korean translation of the instructions.

Emerging Technology Applications Center (ETAC)

ETAC helps small businesses gain a competitive advantage by applying alternative technologies to improve heating, drying, coating and curing processes, as well as reducing their energy usage and carbon footprint. With support from the department, ETAC helps businesses investigate new equipment, materials and processes before making large investments or production changes. The following chart summarizes the assistance that the BAQ CAM has provided through its grant with ETAC.

² To view the calendar:
<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-89671/2013%20Drycleaners%20Compliance%20calendar%20-%20English%20with%20Korean%20Instructions%20insert.pdf>

Summary of ETAC Activities and Benefits

Calendar Year	2008	2009	2010	2011	2012	Total
Pennsylvania Companies Consulted	81	35	41	39	42	238
Different Industry Types	77	33	36	37	37	220
Different Counties	30	15	20	17	13	95
Demonstration Projects Completed	19	13	17	7	5	61
Emissions Reductions (short tons per year) of VOC	0	0.5	0	6.6	0.81	7.91
Emissions Reductions (short tons per year) of HAPS	0	0	0	0	0	0
Emissions Reductions (short tons per year) of Particulates	0.23	0.25	2.41	0.08	0.25	3.22
Emissions Reductions (short tons per year) of CO _x	10,625.48	95,559.59	27,979.93	1,893.67	7,691.75	14,3750.42
Emissions Reductions (short tons per year) of SO _x	56.37	78.76	81.12	2.18	9.16	227.59
Emissions Reductions (short tons per year) of NO _x	13.26	23.98	20.54	1.15	6.81	65.74

ETAC Program Project Example:

In the fall of 2012 ETAC at Northampton Community College completed a comprehensive **Investment-Grade Energy Efficiency Assessment** of a 127,000 square-foot munitions foundry, located in northeastern Pennsylvania, fifty miles south of the New York border. The facility is a primary source of munitions to the U.S. military, and it employs less than 150 people; operating three shifts, seven days per week. The facility's major users of energy included air compressors, heat-treating furnaces, induction heaters and large forge presses. The foundry's annual energy consumption exceeds 70,000 MMBtu³ at a cost exceeding \$1 million.

³ MMBtu is equivalent to one million British Thermal Units. See: [http://www.energyvortex.com/energydictionary/british_thermal_unit_\(btu\)_mbtu_mmbtu.html](http://www.energyvortex.com/energydictionary/british_thermal_unit_(btu)_mbtu_mmbtu.html)

Using sophisticated metrology equipment, ETAC's technical team measured the direct energy use of every component. The team's analysis identified multiple energy management opportunities as well as a process improvement opportunity that yielded an estimated annual savings of 14,800 MMBtu (14,600 million cubic feet (mcf)) of natural gas and an estimated annual reduction of 2,273,000 kilowatt hours (kWh) of electricity. This represents a total annual energy savings 22,500 MMBtu/year, which is 31 percent of this company's annual energy use. The estimated total implementation cost for this project was less than \$120,000, giving an average simple payback of less than one year.

This project presented significant benefits to the commonwealth by providing higher margins and job retentions for this important employer, as well as providing air quality improvements: air emissions will be reduced by 2,100 tons/year and VOC emissions by 0.5 tons/year.

Small Business Ombudsman's Office

Activities of the Small Business Ombudsman's Office

The ombudsman's office provides assistance to Pennsylvania small businesses through a number of avenues. The office provides direct, confidential compliance assistance to small businesses, as well as indirect assistance to small businesses through legislators, associations, small business assistance providers, and federal and state agencies. The ombudsman's office handled a total of 2,803 client contacts concerning environmental and energy matters from July 1, 2012 through June 30, 2013. Of those, 2,542 were direct contacts with small businesses; 104 were contacts with government agencies, other assistance providers, or consultants; and 157 inquiries came from other types of entities, including large businesses and non-profits.

As described below, the ombudsman's office administered two financing programs during the 2012-13 fiscal year.

Small Business Pollution Prevention Assistance Account (PPAA) Loan Program

The Small Business Pollution Prevention Assistance Account (PPAA) Loan Program provides low-interest, fixed-rate loans to small businesses undertaking projects that reduce waste, pollution or energy use. The program opened in April of 1999 and has no expiration date.

The PPAA loan program was initially capitalized with funds from the PA Air Quality Improvement Fund and received funding from the PA Hazardous Site Cleanup Fund. Initial capitalization (over a three year period) was approximately \$5 million. PPAA is a revolving loan fund and receives no additional state funding.

PPAA loans may be used to fund up to 75 percent of total eligible project costs. The maximum loan amount is \$100,000. Small businesses located within the state with 100 or fewer full-time employees are eligible. Terms include a fixed interest rate of two percent and a maximum term of 10 years. DEP and the Department of Community and Economic Development (DCED) jointly administer this program. DEP reviews the technical applications, and DCED reviews the financial application; performs the credit check; and handles the loan closing and maintenance.

For the 2012-13 Fiscal Year:

- Seven technical applications totaling \$341,490 were submitted and accepted;
- Seven technical applications totaling \$341,490 were approved by DEP;
- One commitment letter totaling \$71,477 was issued by DCED;
- No loans closed during this Fiscal Year.

From program inception through June 30, 2013:

- 266 technical applications totaling \$14,068,280 were submitted;
- 257 technical applications totaling \$13,646,180 were approved by DEP;
- 139 commitment letters totaling \$7,789,127 were issued by DCED;
- 104 loans totaling \$6,161,538 have closed.

PPAA Loan Program Project Examples:

During the 2012-13 fiscal year, DEP reviewed several projects to determine their eligibility for funding for the PPAA program. Two types of projects are highlighted below:

A dental practice sought loan funding to assist with the purchase of machinery and equipment associated with upgrading the practice's film-based radiology system to a **digital radiology system**. This upgrade would eliminate the use of chemicals and developer paper, both necessary for conventional film-based radiology, which produce toxic disposables. Additionally, the digital system would allow for the utilization of electronic medical records, substantially reducing the use of paper needed for printing and mailing of records.

A dry cleaning and laundry business sought loan funding to install a **natural gas-fired high-efficiency boiler** and a natural gas booster to ensure proper operation of the new

boiler. This would allow the business to switch fuel sources from oil to natural gas, significantly reducing the business's energy usage as well as reducing carbon emissions.

Small Business Advantage Grant Program (SBAG)

The SBAG program marked its ninth year of offering grants to Pennsylvania small businesses. This grant program provides 50 percent reimbursement grants, up to a maximum of \$9,500, for a Pennsylvania small business to implement energy efficiency or pollution prevention projects. Energy efficiency and pollution prevention projects can help businesses cut costs and may reduce their regulatory requirements, while simultaneously helping to protect the environment. Each project is required to achieve at least a 25 percent increase in energy efficiency or pollution prevention savings and save the business an additional \$500. Eligible small businesses must be a for-profit business located within the state with no more than 100 full-time employees. Examples of the types of small businesses that are eligible include manufacturers, retailers, service providers, mining businesses and agricultural interests.

The SBAG program awarded \$914,452 in grants during the 2012-2013 fiscal year. The grant program opened July 25, 2012 and closed Sept. 26, 2012. The program received 172 applications during the program year and funding was approved for 121 applicants.

The 121 grant funded projects used \$914,452 of the allocated \$1,000,000 budget and leveraged \$3,386,777 of private sector investment in small business improvements, with the average grant request was approximately \$7,000.

The following table lists the number of approved projects per county for the 2012-13 Fiscal Year:

COUNTY	NUMBER OF GRANTEES	COUNTY	NUMBER OF GRANTEES
Adams	0	Juniata	0
Allegheny	2	Lebanon	1
Armstrong	1	Lehigh	3
Beaver	0	Luzerne	8
Bedford	0	Lycoming	3
Berks	4	McKean	0
Blair	0	Mercer	3
Bradford	0	Mifflin	2
Bucks	2	Monroe	2
Butler	2	Montgomery	2
Cambria	1	Montour	0
Cameron	0	Northampton	5
Carbon	0	Northumberland	0
Centre	1	Lackawanna	7
Chester	0	Lancaster	5
Clarion	0	Lawrence	1
Clearfield	0	Philadelphia	12
Clinton	1	Pike	0
Columbia	0	Potter	0
Crawford	1	Schuylkill	3
Cumberland	2	Snyder	1
Dauphin	3	Somerset	0
Delaware	1	Sullivan	0
Elk	0	Susquehanna	1
Erie	3	Tioga	0
Fayette	0	Union	0
Forest	0	Venango	3
Franklin	1	Warren	0
Fulton	0	Washington	0
Greene	0	Wayne	0
Huntingdon	0	Westmoreland	3
Indiana	1	Wyoming	2
Jefferson	0	York	3

SBAG Program Project Examples:

During the 2012-13 fiscal year, the SBAG program helped to fund a variety of energy-saving and pollution prevention projects. Two types of projects are highlighted as follows:

PAG helped fund **greenhouse projects** that, along with humidity monitoring facilities, reduced the amount of heating fuel used by a green-house by almost 50 percent. Greenhouse owners are using fire protection blankets suspended by support and positioning systems designed on site to reduce the volume of air needing conditioning. The system serves to lower the ceiling and resulting airspace around flowers or other produce by an amount determined by the system owner. Depending on the geometry of the greenhouse, resulting savings can be as much as 50 to 60 percent. Although primarily used in the cooler weather, the artificial ceiling is also used in the hot weather to control space conditioning (temperature and humidification) modifications necessary to maximize yield of products.

To reduce the impact of high energy costs on industrial and commercial businesses, several small businesses have used advantage grant funds to reclaim heat normally vented to the atmosphere while reducing air conditioning demands. Several advantage grant applicants have incorporated **heat economizers** to reclaim process waste heat to preheat water prior to entering boilers and hot water generating systems. The capture of waste heat saves an average of 10 to 15 percent of energy used to generate domestic and process hot water. The reclaiming and reuse of process heat also lowers air conditioning loads and related energy costs to further conserve energy used for process and space conditioning purposes.

Conclusion

Small Business Environmental Assistance Programs continue to provide a significant benefit to small businesses in Pennsylvania that are working to meet their environmental compliance obligations as well as those small businesses that wish to implement cost saving pollution prevention and energy efficiency measures.

For more information, visit

http://www.portal.state.pa.us/portal/server.pt/community/small_business_ombudsman-move_to_grants/10493