

Save Energy Now! Pennsylvania

Pennsylvania's industrial sector accounts for the highest energy consumption in the state—approximately 1.3 billion Btu in 2008—with energy-intensive industries that include aluminum, chemicals, forest products, glass making, petroleum refining, and steel. The Pennsylvania Department of Environmental Protection's Office of Energy and Technology Deployment, as well as its project partners, will establish the *Save Energy Now!* Pennsylvania program to inform industrial facilities about U.S. Department of Energy (DOE) Advanced Manufacturing Office (AMO) *Save Energy Now!* industrial energy efficiency resources. *Save Energy Now!* Pennsylvania will adopt AMO's goal by reducing industrial energy intensity in Pennsylvania 2.5% each year of the three-year project period, or 7.5% overall.

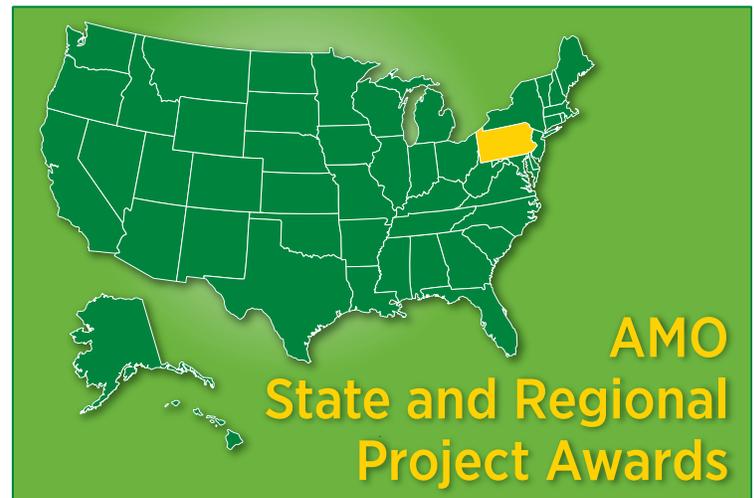
To meet this objective, the project is providing industrial companies with energy assessments, implementation assistance, training, outreach and marketing services, and commercialization of emerging technologies. Further, an American National Standards Institute (ANSI) pilot program for plant certification will be conducted. ANSI is a national standard for energy management that uses certification designations to encourage industrial energy-intensity reduction.

The project is establishing partnerships among DOE, state government, universities, end users, and nonprofit organizations to reduce industrial energy intensity in Pennsylvania. In addition, this project will enhance existing energy efficiency programs in the state and expand the reach of efficiency efforts.

Progress and Milestones

Activity Description	Goal	Completed to Date
Assessments	20	81
Identified Energy Savings (Trillion Btu)	94.2	1.54
Implemented Energy Savings (Trillion Btu)	94.2	0.2
Trainings	6	7
Individuals Trained	60	164
Pilots / Demonstrations	2	2
Plants Impacted	—	589

(As of March 2011)



Project Description

Funding Amount: \$847,257

Funding Source: American Recovery and Reinvestment Act

Program Period: 9/30/2009 to 9/30/2011



Project Success Highlights

- Seven end-user workshops conducted to date, including one fan, two compressed air, two pump system, and two motor system workshops.
- PennTAP helped World Kitchen, LLC develop process maps and energy diagrams to better understand energy consumption.
- The ISO 50001 and SEP M&V methodologies enabled identification of top opportunities for additional improvement at participating plants.
- Website, marketing, and environmental health & safety assistance was provided for six of nine additional companies that were contacted.

Primary Investigators

Pennsylvania Department of Environmental Protection, Office of Energy and Technology Deployment, Harrisburg, PA

Project Partners

Ben Franklin Technology Partners/CNP, University Park, PA

Electrotechnology Applications Center at Northampton Community College, Bethlehem, PA

IMC Business Strategies & Solutions, Williamsport, PA

Penn State University, Statewide Continuing Education, University Park, PA

Pennsylvania Manufacturing Extension Partnerships Centers, Bethlehem, PA

Pennsylvania Technical Assistance Program at Penn State University, University Park, PA

Lehigh University, Industrial Assessment Center, Lehigh, PA

West Virginia University, Industrial Assessment Center, Morgantown, WV

In support of outreach and marketing efforts, the Pennsylvania Technical Assistance Program (PennTAP) is continuing to promote the *Save Energy Now* initiative through various outreach and technical assistance activities. In support of the program's outreach activities, PennTAP has developed and maintains a program website to promote the program and evaluate promotional activities. PennTAP has participated in more than 40 conferences and meetings and continues to increase its outreach through press releases and the delivery of presentations. These outreach activities enable PennTAP to develop relationships through networking opportunities with partnering organizations. The program has conducted more than 80 formal and informal energy assessments, and it has provided technical support to more than 550 industrial clients. Promotional activities are evaluated based upon client requests for service, website activity, participation in training events, and other activities, such as active participation in support-oriented conferences, meetings, and related events that serve to identify available service providers and their resources.

PennTAP staff has made a concerted effort to promote energy assessment resources to industry contacts and to leverage assessment activity for its upcoming *Save Energy Now* DOE-funded demonstration projects. PennTAP staff is working closely with partners World Kitchen, LLC—manufacturers of Pyrex—in Charleroi and General Dynamics Ordnance and Tactical Systems in Scranton to implement ISO 50001 and DOE Superior Energy Performance (SEP) energy management requirements. Activities with these companies include developing objectives, target goals, and action plans; identifying key variables affecting performance; developing staff training and competency; developing operational controls; and documenting that pathways are focusing on current activities. A new version of the Energy Performance Indicator Tool is being utilized by World Kitchen and General Dynamics. The tool assists with the evaluation of facility energy usage. PennTAP is planning the recruitment of four additional Pennsylvania industrial clients to become registered to the ISO 50001 standard by duplicating the efforts undertaken with General Dynamics and World Kitchen.

PennTAP promoted the *Save Energy Now* initiative through participation in four seminars, five outreach presentations, and four energy assessment training workshops conducted for the National Electrical Contractor Association (NECA). More than 231 attendees participated in these NECA events.

PennTAP has been exceedingly successful in providing assessments to industrial manufacturing facilities throughout Pennsylvania. To date the program has conducted two comprehensive, 29 targeted and 45 walkthrough assessments.

PennTAP kicked off its demonstration projects by participating in an initial training session in State College in July 2010. The training was conducted by Georgia Tech energy management system experts/trainers and included other Mid-Atlantic project partners, West Virginia University, and the program's two industrial partners—General Dynamics Ordnance and Tactical Systems and World Kitchen, LLC.

Benefits

- Projected savings of 300 billion Btu each year of the three-year project period.
- Anticipated direct emissions reduction of approximately 12.4 million metric tons each year of the three-year project period, with an additional 10.7 million metric tons of indirect emission savings annually.
- Estimated energy cost savings of \$2.8 million each year of the three-year project period.
- Increased energy efficiency educational opportunities through training sessions and outreach services.

Applications in Our Nation's Industry

The project aims to establish partnerships between DOE, state government, universities, end users, utilities, and nonprofit organizations to reduce industrial energy intensity. In addition, this project will provide industrial companies with energy assessments, implementation assistance, training, outreach and marketing services, an ANSI pilot program for plant certification, and commercialization of emerging technologies.

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

A second training hosted by PennTAP's counterparts at West Virginia University was conducted for the entire Mid-Atlantic region in January in Morgantown, West Virginia. This training was expanded to include representatives from Arkansas University and its industrial partners. The first two training events addressed the requirements of the ISO 50001 standard and the Council for Energy Efficient Manufacturing's (CEEM's) measurement and verification (M&V) protocol.

World Kitchen hosted the 3rd Georgia Tech Training in July 2011. The company's goal is to be prepared for a mock audit of specific operational elements for meeting the ISO50001 standards and the SEP M&V protocols.

The Maryland Energy Administration approached PennTAP to provide guidance and technical support for two Maryland companies that expect to become certified under the ISO 50001 standard. PennTAP also anticipates working with four Pennsylvania industrial clients.

PennTAP continues to support the commercialization of emerging energy technologies through its website, marketing and outreach, and services provided to the industrial sector, including information technology, sustainability, energy efficiency, environmental, and health and safety services. In addition, PennTAP promotes products and services that the industrial sector offers to prospective users in order to assist industry with survival, growth, and prosperity.

The program continues to support local training centers through end-user training workshops. Additional information regarding the most recent training workshops can be found in the chart below.

U.S. Department of Energy End-User Energy System Workshops

Date	Campus	Training	# Participants
January 2011	York	Fans	15
January 2011	Fayette	Pumps	11
February 2011	York	Motors	22
February 2011	Fayette	Motors	36
March 2011	DuBois	Compressed Air	16
March 2011	Hazleton	Pumps	36
April 2011	York	Compressed Air	18

For Additional Information:

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