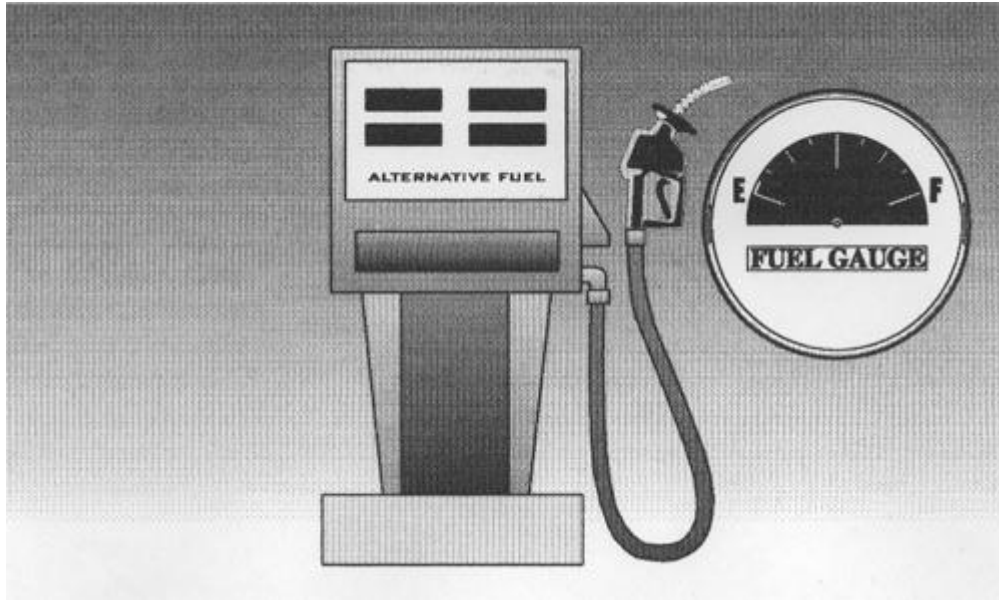


ALTERNATIVE FUELS INCENTIVE GRANT PROGRAM
REPORT TO THE PENNSYLVANIA LEGISLATURE



AFIG 2011

July 1, 2011 – June 30, 2012



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

EXECUTIVE SUMMARY

The Department of Environmental Protection's (DEP) Alternative Fuels Incentive Grant (AFIG) Program Annual Report, as required by Section 4 of the Alternative Fuels Incentive Act of 2004, P.L. 1376, No. 178 is presented herein. In accordance with the act, the annual report has been forwarded to the legislature and contains a summary of the projects awarded grants and their expenditures. This report covers the July 1, 2011, to June 30, 2012, funding year.

This report details continuing progress in growing a market for alternative fuels including the use of biodiesel, natural gas and electricity, as well as the development of fleet vehicles, fuel storage and delivery systems, including fleet refueling stations to deliver alternative fuels to Pennsylvanians.

DEP did not solicit for competitive grant applications in program year 2011; however, DEP did award projects in program year 2011, which were solicited in program year 2010. The awarded projects are described in this years report. DEP continued to manage previous competitively awarded AFIG projects, as well as the Alternative Fuel Vehicle Rebate Program in program year 2011.

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INTRODUCTION

In December 1992, the Pennsylvania Legislature passed Act 166, which created the Alternative Fuels Incentive Grant (AFIG) Fund. In November 2004, the legislature passed Act 178 to expand the AFIG program allowing DEP to offer incentives to stimulate the production and use of biofuels such as biodiesel and ethanol. On July 4, 2008, Act 78, the Biomass-based Diesel Production Incentive Act, was passed amending Act 178 of 2004, providing a subsidy for the production of biodiesel and the establishment of a limited Nitrogen Tire Inflation System Rebate Program. These programs closed in program year 2010.

PROGRAM OVERVIEW

The AFIG program has helped to reduce the state's dependence on imported oil and improve Pennsylvania's air quality by reducing vehicle emissions of carbon monoxide, and particulate matter -- the pollutants that contribute to the formation of ground-level ozone, and carbon dioxide, a principal greenhouse gas.

The AFIG program has fostered economic development in the state by encouraging the transfer and commercialization of innovative energy technologies and the use of the state's indigenous fuels. The fuels promoted by the program include ethanol, biodiesel, compressed and liquefied natural gas (CNG and LNG), hydrogen, hythane (a combination of compressed natural gas and hydrogen), liquefied petroleum or propane gas, electricity and fuels derived from coal and biomass.

The AFIG program supports DEP's objectives of reducing emissions from mobile sources to improve air quality and stimulating the use of domestically produced fuels. DEP has encouraged the development of partnerships among Pennsylvania businesses, the alternative fuel providers and key local, state and federal government agencies to accomplish the objectives of the AFIG program. The AFIG program also offers compliance incentives to fleet operators impacted by the Energy Policy Act (EPACT) of 1992 and 2005.

Act 178 of 2004, specifies the following criteria for the selection of projects to receive grant awards:

1. The improvement of Pennsylvania's air quality.
2. The fulfillment of the commonwealth's responsibilities under the Clean Air Act (69 Stat. 322,42 U.S.C. § 7401 et seq.).
3. The protection of Pennsylvania's natural environment, including land water and wildlife.
4. The advancement of economic development in the state and the protection of Pennsylvania's indigenous resources.
5. The reduction of the state's dependence on imported crude oil and other petroleum products.
6. The most cost-effective use of private and public funding.
7. The transfer and commercialization of innovative alternative energy technologies.

Additional criteria may be added as needed to respond to changing alternative fuel and vehicle technologies, federal and commonwealth legislative requirements and energy policy directives.

The AFIG program is funded with an annual allocation from the General Fund that ranges from \$5 - \$6 million annually. The actual amount is 0.25 mills of the utilities' annual gross receipts Tax revenues collected each year. Of that amount, up to 1.5 percent of the funds may be used to promote and administer the program, and up to 0.5 percent may be used for education and public outreach. The unspent portion of the fund does not lapse and can be used for projects in the following year.

In accordance with Act 178 of 2004, the incentive grants will pay a percentage of each applicant's eligible project costs. The remaining amount will be paid by the grantee from other sources.

The programmatic year for AFIG is the 12-month period from July 1 of each year through June 30 of the following year. Prior to each funding program, DEP announces the program and the selection criteria in the *Pennsylvania Bulletin*. DEP must receive a completed application within the application period, typically 45 to 60 days. Project costs cannot be incurred prior to July 1 of the calendar year the application is submitted. Project costs may be expended over the total grant period of performance.

The AFIG program typically offers a yearly competitive solicitation. All applications are evaluated at the close of an application opportunity. The review, selection and grantee announcements take approximately eight to 10 weeks. The awarding of incentive grants is subject to the following limitations:

- 1) A single grantee can receive no more than 10 percent of the funds available in any one funding year;
- 2) The total dollar amount of awards to grantees operating within and including any county, cannot exceed 15 percent of the funds available in any one funding year;
- 3) If the total grant money to be awarded in a funding year is less than the total grant money available for that year, DEP may increase the established 10 percent and 15 percent funding levels in (1) and (2) above, not to exceed 40 percent of the fund;
- 4) DEP reserves the right to not award any additional funds to applicants that have not completed projects funded with previous AFIG monies. This will be determined by DEP on a case-by-case basis;
- 5) Applicants who have received grants and completed AFIG funded projects, but have failed to submit the proper reporting forms, may not be considered for funding. This determination will be made by DEP on a case-by-case basis; and,
- 6) Project costs cannot be incurred prior to July 1 of the year the application is submitted and may be expended over the total grant period of performance.

2011 PROGRAM YEAR REVIEW

The following programs were available for project submission under the Alternative Fuels Incentive Fund during the period of this report, July 1, 2011 thru June 30, 2012:

Annual Competitive Grant Solicitation

In the 2011 AFIG program year, the annual competitive grant solicitation opened on April 15, 2011, was closed on June 17, 2011, and awards were made Oct. 17, 2011. Twelve grant recipients received \$4.4 million in AFIG funding. The grant awards leveraged over \$43 million of funding from other sources. The projects are anticipated to result in approximately 5,431,987 gallons of gasoline/diesel displaced annually.

PA Turnpike Electric Vehicle Infrastructure Grant Competitive Grant

DEP announced an opportunity to apply for the Pennsylvania Turnpike Electric Vehicle Infrastructure Grant as part of a special solicitation. DEP partnered with the Pennsylvania Turnpike Commission (TPC) to provide a solicitation opportunity to establish the necessary infrastructure to support electric vehicle travel and transport along the turnpike system. The turnpike system includes the main east to west corridor stretching between New Jersey and Ohio, as well as, the northeast and southwest extensions. DEP requested project proposals not to exceed \$1 million. Additionally, the TPC committed \$500,000 towards increased voltage upgrades that may be necessary to facilitate the installation of electric vehicle charging equipment. Four applications were received and one project was competitively selected and announced together with the TPC on Dec. 14, 2011.

Alternative Fuels Vehicle Rebate Program

The Alternative Fuel rebate program was redefined in September 2011. The rebate program supports Pennsylvania residents who purchase a new qualified alternative fuel vehicle (AFV) which is registered in Pennsylvania that is powered by CNG, electricity, fuel cells (FC) or liquid propane gas (LPG). The rebate program provided \$3,500 rebates for qualified battery electric vehicles and plug in hybrid electric vehicles, as well as, \$1,000 for all other qualified AFV's. The following is what was offered:

- \$3,500 rebate for a plug-in hybrid electric vehicles (PHEV) with battery system capacity equal/greater than 10 kWh and battery electric vehicle (EV) with battery system capacity equal/greater than 10 kWh for the first 500 qualified applicants only
- \$1,000 rebate for a PHEV or EV with battery system capacity less than 10 kWh
- \$1,000 rebate for a CNG fueled vehicle OEM/certified retrofit
- \$1,000 rebate for a LPG fueled vehicles
- \$1,000 rebate for a hydrogen and/or FC vehicles
- \$500 rebate for an electric motorcycles/scooters (EMC)

STATEMENT OF REVENUES AND EXPENDITURES

FUND BALANCE JULY 1, 2011	\$21,425,203
REVENUES	
Augmentation from General Fund (May 2012)	\$6,477,806
TOTAL REVENUES	\$27,903,009
EXPENDITURES	
Personnel	\$44,750
Operational	\$393
Grants	\$5,698,664
TOTAL EXPENDITURES	**\$5,743,807
FUND BALANCE JUNE 30, 2012	*\$22,159,202

*The fund balance on June 30, 2012, contains \$11,525,598 of committed grant contract obligations yet to be expended. This leaves an uncommitted balance of \$10,633,604. This uncommitted balance includes the \$6,477,806 of revenue received in May 2012, which was not anticipated to occur due to the 2012 budget proposal.

Note: The remaining uncommitted available balance is planned to be committed and utilized in a competitive solicitation to be offered in program year 2012-2013 for new AFIG awards, alternative fuel vehicle rebates, administrative and operation costs.

**Expenditures

Project Type	Expenditures
Biodiesel Incremental Buy-down	\$450,940
Innovation	\$852,352
Fleet Purchase & Retrofit	\$680,813
Fleet Refueling Equipment	\$2,891,559
Salary/Benefits	\$45,750
Operational costs	\$393
AFV Rebate Program	\$823,000
Total	\$5,743,807

2011 PROGRAM YEAR COMPETITIVE GRANT AWARDS

Program Year 2011 Annual Competitive Grant Solicitation

Dauphin County **\$62,080.00**

Phoenix Contact Inc. - “SunPlug”

The project will build solar powered charging stations for electric vehicles located at the Phoenix Contact facility and at Elizabethtown College. The stations will be monitored using Phoenix Contact equipment with data being posted on the internet. The installation will be used to raise awareness to students and the public in the central Pennsylvania area.

NOTE THIS PROJECT WAS TERMINATED DUE TO LACK OF PROGRESS IN 2012

Bucks County **\$400,000.00**

Waste Management of Pennsylvania, Inc. - “Waste Management CNG Fueling Station and Fleet Conversion in Bristol, PA”

Waste Management of Pennsylvania, Inc. (WM) will construct a CNG fueling station at its Delaware Valley North Hauling facility in Bristol, PA. The basis of the construction of this facility is for the utilization of CNG in their fleet of trash and recycling trucks. Public access fueling will be available for other local fleet operators.

Allegheny County **\$400,000.00**

UPMC- “UPMC Employee Transit - Transition to Natural Gas Vehicles Project”

University of Pittsburgh Medical Center (UPMC) will replace 20 diesel shuttle buses with 20 CNG shuttle buses to demonstrate that CNG vehicles can be utilized effectively and efficiently in business operations. These vehicles will provide environmental benefits and add to the quality of life in the region, battle the economic impacts of imported oil, provide significant fuel cost savings, and increase local/regional employment.

Lycoming County **\$400,000.00**

River Valley Transit - “RVT CNG Project”

River Valley Transit's (RVT) CNG facility will provide central fueling for the City of Williamsport and Lycoming County including police, fire, emergency response vehicles, as well as, all buses operated by the Williamsport Area School District. RVT operates a 30-bus transit fleet and has plans to transition their fleet to CNG. The primary function of the project is to add CNG to the facility's fuel offerings.

Allegheny County **\$238,467.00**

Pittsburgh Region Clean Cities, Inc. - “Energy Corridor 376: Connecting Southwestern PA’s Transportation Corridor”

Phase II Energy Corridor 376 will establish 45 EV charging stations along Interstate 376 and surrounding areas. With 19 regional partners, Energy 376's EV infrastructure will expand from nine EV charging stations to a total of 54, setting the stage for subsequent expansion and EV adoption. The project is expected to displace an estimated 79,463 gallons of fuel/year.

Butler County **\$1,000,000.00**

Butler Transit Authority - "BTA CNG Fueling Station and Fleet Vehicle Conversion"

The project will help construct Butler County's first public access CNG fueling station at Butler Transit Authority's (BTA) new transit center in Butler, PA. BTA is initially committing to purchase four new natural gas powered coach buses, later replacing six transit buses. BTA is also partnering with Butler Area Rural Transit, who is willing to replace 20 shuttle buses with natural gas powered versions. Project would displace 250,000 gallons of diesel.

NOTE THIS PROJECT AWARD WAS DECLINED BY THE APPLICANT PRIOR TO BECOMING A GRANT CONTRACT

Allegheny County **\$500,000.00**

Talon Logistics, Inc. - "Delivering a Cleaner Future to Pennsylvania"

The Project will replace 20 heavy-duty diesel delivery trucks with 20 CNG trucks. Work to include the purchase of 20 new CNG trucks demonstrating the purchase of the first heavy-duty trucks in Pennsylvania to feature the Cummins Westport ISL G 11.9 liter 400hp engine.

York County **\$500,000.00**

Republic Services of PA, LLC - "York Waste Disposal CNG Refuse Truck Deployment"

This project will purchase and deploy 64 heavy-duty CNG refuse trucks that will provide refuse collection services throughout York, Dauphin, Cumberland and Adams counties. Each year, this project will displace 640,572 gallons of diesel.

Butler County **\$269,000.00**

Cranberry Taxi, Inc. DBA Veterans Taxi - "Pittsburgh CNG Taxi Deployment Project"

Cranberry Taxi will purchase and deploy 25 new CNG taxis. The taxis will be based out of Pittsburgh and will provide service throughout Allegheny and Butler Counties. Annually, this project will displace 97,548 gasoline gallons.

Clearfield County **\$86,500.00**

Clearfield County Area Agency on Aging - "CNG Fleet Conversion"

The Clearfield County Area Agency on Aging, Inc. is a 501 (c)(3) charitable organization providing Meals on Wheels to eligible residents of Clearfield County using a fleet of 11 vans. Funds from the AFIG program will be used to convert four vans to dedicated CNG fuel, and to install three on-site time-fill compressor units. This will reduce meal delivery costs significantly, ensure the program can be sustained, and strengthen the capacity to serve those who need meals.

Berks County **\$100,000.00**

Berks County Intermediate Unit - "BCIU Biodiesel Initiative"

The Berks County Intermediate Unit (BCIU), with the help of 2010 awarded AFIG funds, installed a new biodiesel storage tank for the use of biodiesel blends in its fleet. The program had been very successful in the past year as the new tank has enabled BCIU to use nearly 84,000 gallons of B20 blends of biodiesel in their fleet with no interruptions or issues. They will continue to expand this program with the installation of an additional storage tank and the use of more biodiesel blend gallons.

STATEWIDE \$450,000.00
350GREEN LLC - “Charge PA”

The project intends to develop a more mature EV charging infrastructure network for the state of Pennsylvania. Work will include the construction of approximately 20 direct current (dc) fast and 72 level II charging stations.

PA Turnpike Electric Vehicle Infrastructure Grant Competitive Grant Award

STATEWIDE \$1,000,000.00
Car Charging Group LLC - “The Electric Turnpike: PA Turnpike Plug-in EV Charging Station Deployment”

Car Charging Group, Inc. LLC (CCGI) will install charging station at 17 turnpike service plazas. Two level III and one level II electric vehicle service stations (EVSE) will be installed at each plaza, except at three plazas that are accessible from both directions. These double sided bi-directional plazas will have four level III and two level II EVSEs installed. When completed, the project will strategically place EVSE east-west and along the north-south extension of the PA Turnpike.

Program Year 2011 Alternative Fuel Vehicle Rebate Program

There were 240 rebates processed for alternative fuel vehicles purchased and then registered in Pennsylvania from September 1, 2011 through June 30, 2012.

Large Battery Electric

- 175 – Chevrolet Volt
- 41 – Nissan Leaf
- 9 – Mitsubishi MI-EV
- 3 – Fisker Karma
- 2 – Tesla

Small Battery Electric

- 9 – Toyota Prius

CNG

- 1 – Honda Civic GX

PROJECT SUCCESSES:

Notable projects completed in 2011-2012

Montgomery County

Bryn Mawr College - “Station Expansion and Vehicle Acquisition”

Bryn Mawr College was awarded \$88,683 from the AFIG 2010 grant program to expand its CNG vehicle fleet capacity through infrastructure improvements to its existing CNG station, and the purchase of new CNG vehicles. The funds were used to purchase a new gas dryer and additional fuel storage capacity for the station, a Honda Civic GX passenger sedan, a GMC Savannah 2500 cargo van, and a Thomas Built 41 passenger bus. Increasing the storage capacity of the existing station, and improving the quality of the fuel (through installation of a new dryer),

provided a lynchpin for increasing the natural gas vehicle (NGV) fleet. The additional state funds for the vehicles helped the college acquire more NGV's than would have occurred otherwise, through the purchase of the Honda Civic and the cargo van. The natural gas received from Philadelphia Electric Company (PECO) will include domestically produced in-state gas. The project defers more than 4,200 gallons of petroleum per year, saves an average of \$1.50 per gallon on fuel and improves regional air quality. The CNG engines burn cleaner, and will reduce tailpipe emissions of contaminants of concern in the metro Philadelphia non-attainment area, specifically reducing both nitrous oxides (a precursor to ozone) and small particulate matter, as well as volatile organic compounds (VOC), carbon monoxide and greenhouse gases.

Allegheny County

Waste Management of Pennsylvania, Inc. - "Waste Management CNG Fueling Station and Fleet Vehicle Conversion"

Waste Management of Pennsylvania, Inc. (WM) received \$400,000.00 funds from DEP to install a CNG fueling station and to purchase 30 new CNG refuse collection vehicles. The CNG vehicles replaced WM's existing diesel collection vehicles with CNG that burns cleaner and is an abundant domestic resource. After WM's initial 30 vehicles are in service, WM intends to add more CNG vehicles each year until the entire fleet runs on CNG. The initial 30 trucks will displace nearly 300,000 gallons of diesel fuel per year, and reduce greenhouse gas emissions by an estimated 1,000 metric tons annually.

Montgomery County

Lower Merion School District - "Deployment of CNG School Buses in the Lower Merion School District"

Lower Merion School District utilized \$121,642 in AFIG grant funds, combined with \$1,088,948 of district funds, to purchase nine CNG school buses. The project was implemented immediately, preceded on schedule, and contributed to an on-going improvement of air quality in Montgomery County. The project assisted in saving on fuel costs by use of the less expensive natural gas costing approximately \$1.52/gallon in comparison with gasoline, and \$1.55/gallon in comparison with diesel in the first part of 2011. The project assisted Pennsylvania based companies, including M.A. Bright Bill Body Works, Inc. of Lebanon, PA, the school bus distributor, PECO, and helped maintain jobs by way of the bus fabrication, bus preparation and retained bus driver positions. The nine buses have been deployed and are working well, fueling at the district's internally operated stations, and are on pupil transport routes daily. The school district saved \$42,167 in fuel costs for the nine buses the first year. The district also deferred 30,119 gallons of conventional petroleum fuel for that period. The Argonne National Laboratory's Clean Cities Emission Benefit Tool was utilized to derive the emissions values for the reporting period, and the non-attainment parameters of concern, NOx, PM2.5 and VOC's, were decreased by 2,964.6 pounds, 38.2 pounds and 63.5 pounds, respectively. The buses have also saved 7,635.2 pounds of combined greenhouse gases.

Delaware County

Philadelphia City Treasurer - "Philadelphia International Airport, Passenger Gate Electrification"

This project involved the installation of 24 pre-conditioned air (PCA) units at Philadelphia International Airport's (PHL) Terminal F. The operation of these PCA units allows aircraft to turn off fuel-powered alternative power units and use electricity at the gate to provide conditioned air and ventilation to passengers. AFIG grants totaling \$517,902 assisted PHL in obtaining the necessary funding to install PCA units. Other funding sources totaling \$6.8 million of matching funds for this project included Airport Improvement Program, Voluntary Airport

Low Emissions Program, and the City of Philadelphia. To complete this project, PHL partnered with US Airways, which is the sole airline tenant operating out of Terminal F. Through the addition of 24 PCA units, PHL was able to substantially reduce the amount of jet fuel that aircrafts consume while docked at Terminal F. As a result of this effort, the consumption of nearly 200,000 gallons of jet fuel has been avoided to date. Continued operation of these units will assist in improving air quality at PHL by reducing harmful greenhouse gases and air pollutants like nitrogen oxide, precursors for ozone.

Philadelphia County

Philadelphia City Treasurer, Office of Fleet Management - "City of Philadelphia Bio-Diesel Fuel Incremental Buy Down Project"

Using \$364,817 of awarded AFIG funds, the City of Philadelphia's fleet of nearly 250 trash and recycling trucks as well as construction vehicles were loaded with bio-diesel at five fueling stations. The city's fleet of these municipal vehicles consume approximately 2.9 million gallons of diesel fuel annually. Since all of these vehicles operate in Philadelphia, the emission reductions achieved through use of bio-diesel is a major improvement to local air quality. Under this AFIG award, the City of Philadelphia, through the Office of Fleet Management and the Street and Health departments, were able to use 1,031,928 gallons of bio-diesel blends in FY 2011. These grant funds enabled the city to act upon its commitment to reduce greenhouse gas emissions and improve overall air quality in Philadelphia County at no additional costs to residents and tax-payers. The bio-diesel fueling program represents a collaboration of the named grantee, the Office of Fleet Management, and additional stakeholders including the city's Health and Streets departments. The program has received significant media attention and enjoys widespread public support.