

Pennsylvania Sustainable Energy Board  
2007 Annual Report

August 2008

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## FOREWORD

This Pennsylvania Sustainable Energy Board (PASEB) report reviews the activities of the regional sustainable energy funds (Regional Funds) during 2007. Collectively, the Regional Funds loaned more than \$6.5 million and provided over \$700,000 in grants during this period. Since their inception eight years ago, the Regional Funds continue to lead in the development of and investment in clean energy technologies such as wind, anaerobic digesters, fuel cells, and solar. However, the future focus of the Funds will be on energy efficiency and demand resources, which will compliment recent statewide energy initiatives.

The Regional Funds are primarily public finance entities which make loans, investments and grants for the benefit of ratepayers and the Commonwealth. Four of the Regional Funds, Metropolitan Edison, Pennsylvania Electric Company, Sustainable Energy Fund (PPL), and the Sustainable Development Fund (PECO) have ceased receiving ratepayer funding. The new challenge for these funds will be to meet their fund mission and remain financially sustainable.

Since their inception, the investment strategies of the funds have evolved with developments in the market. In the last few years, the wind industry in Pennsylvania has changed from modest-sized local companies to major international entities. Gamesa Corp., the second largest wind energy company in the world, has invested \$84 million to create a manufacturing facility at the abandoned Fairless Hills U.S. Steel plant outside of Philadelphia, as well as an American corporate and developmental headquarters in Philadelphia. Iberdrola, a Spanish company and the largest owner and operator of renewable energy facilities in the world, has acquired two of the independent wind developers that the Sustainable Development Fund (SDF) has financed (Atlantic Renewable Energy Corporation and Community Energy, Inc.). These actions bring serious new private capital and project development capacity to Pennsylvania. SDF now believes that large utility-scale wind farms no longer need public subsidy beyond the federal Production Tax Credit, so SDF's wind support will target the smaller community wind projects in the future. The other four funds agree with SDF's strategy. The total capacity for utility scale wind is 257 megawatts and growing. Also noted in the SDF report, "community wind," locally-owned wind projects that use utility-scale turbines, will be an important market niche for communities across Pennsylvania in the future.

The solar industry in Pennsylvania is undergoing similar changes. Mesa Energy, a local solar PV integrator for whom SDF provided funds to obtain initial technical training to become an SDF-qualified Solar PV installer, has merged with SunTechnics, which in turn is owned by Conergy, the world's largest renewable energy system integrator.

More renewable energy has been produced and more energy efficient technology continues to be installed and used every day in Pennsylvania. The need for accelerated development of energy efficiency products, along with the marketing of these products, will become more apparent as the rate caps are eliminated. As the cost of energy

continues to rise, programs such as PA Home Energy will be an asset to the citizens of Pennsylvania. This Energy Star building construction program utilizes a comprehensive whole house approach to improve the energy efficiency of new and existing homes. Investments continue in biofuels, venture capital for weatherization building materials and financing of clean energy technologies. We anticipate more activity in investments as the Regional Funds continue to mature and are aided by the Alternative Energy Portfolio Standards Act (AEPS). The Regional Fund administrators and the boards themselves should be commended for their continued commitment and dedication to the success of these funds and for the creative way these funds invest in new ventures.

## **Background**

The electric utility industry restructuring process in Pennsylvania brought together stakeholder groups representing residential consumers, large commercial and industrial customers, environmental parties, and other interested participants. These groups contributed to the development of the restructuring settlements for Metropolitan Edison Company and Pennsylvania Electric Company (Met-Ed and Penelec)<sup>1</sup>, PECO Energy Company (PECO), PPL Electric Utilities Inc. (PPL) and Allegheny Power/West Penn Power Company (WPP). These settlements provided new opportunities for renewable and sustainable energy production services and enterprises.

Specifically, each of the four settlement agreements established a separate and independent sustainable energy fund to promote:

- The development and use of renewable energy and clean energy technologies;
- Energy conservation and energy efficiency;
- Renewable energy business support; and
- Projects which improve the environment in the Companies' service territories, related to the transmission and distribution facilities (Met-Ed and Penelec only).

## **Funding**

Under terms of the settlements, approximately \$55 million was collected through these companies' distribution rates to promote the development of sustainable and renewable energy technologies. The Sustainable Development Fund (SDF in PECO Energy's territory) received an additional \$18.5 million in funding over a five-year period as a result of the PECO/Unicom merger. On June 14, 2001, the Commission approved the merger of GPU Energy and FirstEnergy. As a result of that merger settlement, the Met-Ed and Penelec funds will receive an additional \$5 million (\$2.5 million each) in funding. During PPL's most recent rate case, the Commission agreed to continue funding the SEF through Dec. 31, 2006. The funding level to be included within the distribution rates for 2005 and 2006 was 0.01 and 0.005 cents per kWh, respectively.

## **Regional Board Administration**

The settlements provided that a seven-member board, nominated by the parties to the agreements, and approved by the Commission, would manage each fund. The board for each fund drafted bylaws that address the responsibilities and powers of the Board and the fund administrators. The bylaws require that directors represent a cross-section of interests - the financial community, consumers, environmental interests, business and

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<sup>1</sup> While Met-Ed and Penelec represent different service territories and in fact have separate boards of directors and administrators, for purposes of this report and in other matters, they are considered a single regional fund. For example, they share the same governing bylaws, and they are entitled to only one seat on the PASEB.

industry, Electric Distribution Companies (EDCs) and Electric Generation Suppliers (EGSs). The bylaws also address project selection and the funds' investment strategies.

The Commission approved the individual bylaws for each Regional Fund on the following dates:

- SDF - Dec. 2, 1999;
- Met-Ed and Penelec SEF - Jan. 27, 2000;
- SEF - June 2, 2000; and
- WPP SEF - June 2, 2000.

### **Regional Fund Administrators**

- The Reinvestment Fund - Sustainable Development Fund;
- Berks County Community Foundation (Met-Ed);
- Community Foundation of the Alleghenies (Penelec);
  - Met-Ed and Penelec follow the same funding approach and guidelines;
- The Sustainable Energy Fund of Central Eastern Pennsylvania (PPL); and
- The Energy Institute of Penn State University (West Penn Power).

The Regional Fund Administrators charge an annual fee for their services. These services and fees vary by Regional Fund and contract. A breakdown of the various charges is listed below:

- Berks County Community Foundation
  - Management fees represent 1.5 percent of assessed value of Fund.
  - Fees for 2007 were \$125,619.
- Community Foundation of the Alleghenies
  - Management fees represent 1.5 percent of assessed value of Fund.
  - Fees for 2007 were \$143,043.55.
- The Sustainable Energy Fund of Central Eastern Pennsylvania
  - Flat Management fee.
  - Fees for 2007 were \$339,914.
- The Sustainable Development Fund
  - Administrative costs included in each annual budget, approved by Board.
  - Fees for 2007 were \$642,345.
- The Energy Institute of Penn State University and the Economic Growth Connection
  - Management fee by contract.
  - Fees for 2007 were \$202,915.

The Regional Funds' boards meet on a regular basis, with Commission staff attending as liaison representatives. The boards are required to submit annual and semi-annual reports to the Commission on the activities, expenditures and investments of the Regional Funds.

### **Statewide Activities**

By Commission Order dated July 1, 1999, the PASEB was created to "provide oversight, guidance and technical assistance to the regional boards." Statewide coordination of the Regional Funds was viewed as essential to establish Pennsylvania as a leader in renewable energy technologies. In its Order, the Commission noted that the success of the renewable power initiative required a partnership between the regions and the state. The Commission held that the PASEB should operate in conjunction with the Regional Funds in identifying opportunities, prioritizing objectives and developing an outreach plan to garner further support for the initiatives.

On August 7, 2003, the Commission adopted an Order further defining the role of the PASEB. The Commission directed the PASEB to hold annual meetings, establish bylaws and develop a "best practices" business model for each of the Regional Funds. The Order also modified the reporting obligations of the Regional Funds.

In addition to the Commission designee, PASEB members include a board member of each of the four Regional Funds, as well as designees for the Department of Environmental Protection (DEP), Department of Community and Economic Development (DCED), Office of Consumer Advocate (OCA), and Pennsylvania Environmental Council.

The PASEB held its annual meeting in Harrisburg on December 11, 2006. The purpose of the meeting was to address the PASEB's obligation to complete the Fund's best practices. Additionally, PASEB has addressed issues stemming from AEPS.

In addition to the PASEB meetings, the Regional Funds met as a group on January 10, 2006, in State College. The meeting is an essential means of discussing projects of mutual interest and better coordinating future activities.

### **2007 Approvals of Regional Funds**

The table on the following page summarizes the Regional Funds' approvals of loans and grants for 2007. As shown, the Regional Funds approved slightly less than \$7.2 million in support of renewable energy activities. Approximately \$6.5 million was distributed in the form of loans and \$700,000 was provided in grants.

## 2007 Approvals

<u>FUND</u>	<u>LOANS</u>	<u>GRANTS</u>	<u>TOTAL</u>
Met-Ed/ Penelec	\$2,539,774	\$ 269,060	\$2,808,834
PECO	\$2,180,000	\$ 194,840	\$2,374,840
PPL	\$1,282,730	\$ 54,588	\$1,337,318
West Penn	\$ 525,000	\$1,449,716	\$1,974,716
<b>Total</b>	<b>\$6,527,504</b>	<b>\$1,968,204</b>	<b>\$8,495,708</b>

## End of Year Regional Fund Balances

The following table presents the Regional Fund balances as of the end of 2007. These balances were calculated based upon the Regional Fund's annual audits and the commitments that are tracked. Certain balances do not include long-term staffing expenses and leases. Finally, some of the balances do not include tentative grant commitments that have been made but not disbursed.

<u>FUND</u>	<u>BALANCE</u>
Met-Ed	\$ 8,212,673
Penelec	\$ 8,635,161
PECO	\$10,807,437
PPL	\$23,787,974
West Penn	\$10,688,524



## **Metropolitan Edison Company/Pennsylvania Electric Company Sustainable Energy Fund**

[www.bccf.org/pages/gr.energy.html](http://www.bccf.org/pages/gr.energy.html)

[www.cfalleghenies.org](http://www.cfalleghenies.org)

### **Introduction and Highlights**

From January 1, 2007, to December 31, 2007, the Metropolitan Edison Company/Pennsylvania Electric Company Sustainable Energy Fund (Met-Ed/Penelec SEF) approved financing totaling \$2,539,774. The Met-Ed SEF's marketing/networking activities included the fund's Web site, through the Berks County Community Foundation's Web site ([www.bccf.org](http://www.bccf.org)).

The Penelec SEF Web site can be accessed through the Community Foundation for the Alleghenies Web site ([www.cfalleghenies.org](http://www.cfalleghenies.org)).

These Web sites are an essential means of distributing information regarding the Met-Ed and Penelec SEF. The Web site contains information about financial products, program offerings, application request forms, background information, reports and links to related Web sites.

During 2007, Met-Ed/Penelec staff participated in numerous conferences and meetings as speakers and active participants to raise awareness of Met-Ed and Penelec SEF activities, including:

- A teleconference organized by the American Bar Association's Renewable Resources Committee;
- Renew PA;
- Sponsorship/participation in PennFuture events;
- The regional advisory board of Ben Franklin Technology Partners;
- Meetings with other Regional Funds in Pennsylvania. These meetings are an essential means of discussing projects of mutual interest and better coordinating future activities;
- A Pennsylvania Treasury Department meeting regarding the creation of the Keystone Green Investment Fund;
- Participation in the Green Building Association of Central Pennsylvania's seminars and meetings;
- Participation in CESA (Clean Energy State's Alliance) meetings;
- Programs and activities of Funders Network For Smart Growth;
- Southern Alleghenies Planning and Development Commission wind energy economic impact meeting;
- Program Investment Activities of the Council on Foundations;
- Meeting on economics and investment opportunities for low impact hydro;
- Attended Pennsylvania Environmental Council presentation on Pennsylvania Climate Change;
- Presentation on coal bed methane extraction impacts in western Pennsylvania;

- Committee participation in Sustainable Pittsburgh's Green Business Network;
- Attended Community Wind Summit at St. Francis University Renewable Energy Center;
- Johnstown Industrial Development Corporation Board;
- Organized meetings with AmeriServ Financial, FNB Bank Corp, Northwest Bank on green financing;
- Tour of switchgrass facility; and
- Forming of Pittsburgh Green Building Alliance affiliates in the Northwest and Laurel Highlands areas of Penelec service territory.

## **Financial Approvals**

### **Grants**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Leg Up Farm	\$35,000	Energy modeling and LEED Commissioning.
St. Francis University	\$61,360	Anemometer Lending Program
Green Building Association of Central Pa.	\$50,000	Membership
RiverPlace Development Corporation	\$25,000	Solar Trail Lighting Project
Concurrent Technologies Corporation	\$25,000	Green Building Certification and public education
Equinunk Historical Society	\$700	Energy efficient tankless water heaters
Green Building Alliance	\$5,000	Development of the Laurel Highlands Affiliate Group
Human Services Center	\$7,000	Green Roofing Material
Pa. Association for Sustainable Agriculture	\$10,000	Agriculture Photo Voltaic Array
Pennsylvania Environmental Council	\$50,000	Commonwealth Community Energy Project
<b>Total:</b>	<b>\$269,060</b>	

### **Loans**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Commonwealth Community Energy Project	\$39,774	Home Energy Loan Program
Plextonics	\$500,000	Development of thin film solar materials
Johnstown Regional Energy LLC	\$750,000	Landfill methane to gas for manufacturing park
Berks County Community Foundation	\$500,000	Platinum Green Building Project
G.A.S.-Access Pioneer Crossing Energy	\$750,000	Landfill methane to electricity
<b>Total:</b>	<b>\$2,539,774</b>	

## **Equity Investment**

Berks County Community Foundation	\$500,000	Platinum Green Building Project
<b>Total:</b>	<b>\$500,000</b>	

Since inception, Met-Ed/Penelec SEF has approved 73 grants totaling \$1,483,327.32; 34 loans totaling \$16,210,552; and two equity investments totaling \$1,500,000. The fund denied 36 grant requests, 20 loan requests and 5 investment opportunities. Denials occurred because the proposed projects did not meet the Regional Fund's mission, or had technological, financing and/or market difficulties.

To review the annual audit of the Berks County Community Foundation and/or the Community Foundation for the Alleghenies, please visit the respective web sites. If you would like a written copy of the audit, contact Richard Mappin at Berks County Community Foundation, 610-685-2223 or Michael Kane at Community Foundation for the Alleghenies, 814-536-7741.

## **Board Activities**

The Met-Ed/Penelec SEF Advisory Committee consists of seven members, whose two-year terms are staggered so the terms of approximately half of the members end each year. Current members can run for re-election. During the course of the year, one member resigned from the Advisory Committee. Public notice regarding the seeking of nominations to the Advisory Committee was given by a variety of means, including:

- A written notice to the Commission and the joint petitioners, and
- A notice posted on the Berks County Community Foundation and the Community Foundation for the Alleghenies Web sites .

The following individual responded to the request:

- Edward Miller, Division Vice President of Commercial Lending, Northwest Savings Bank

The board approved Mr. Miller and sent a letter to the Commission for final approval. The Advisory Committee consists of:

- Charles Mowbray, FirstEnergy (Vice Chairman);
- Brian Hill, Interim President of the Pennsylvania Environmental Council
- Edward Miller, Division Vice President of Commercial Lending, Northwest Savings Bank;
- Sandra K. Dill, Indiana County Community Action Program Inc;
- Peter J. Tarapchak, Staff Specialist Energy & Electrical Engineering Carpenter Technology Corporation, Reading;

- Derek James, University of Pennsylvania, Project Manager, Environmental Management Assistance Program; and
- Brian Vayda, Manager American PowerNet.

During 2007, board meetings were held on: January 9; June 20; July 12.; and September 28.

Met-Ed/Penelec staff and board members continued to play an active role in PASEB activities, including meetings and conference calls.

## **Conclusion**

The Year 2007 proved to be a very busy period for the Met-Ed/Penelec SEF. The SEF increased its visibility, and made new investments that resulted in energy savings and new clean energy sources.

**Sustainable Development Fund**  
 (PECO Service Territory)  
<http://www.trfund.com/sdf/>

**Introduction and Highlights**

This 2007 Annual Report was prepared by the Sustainable Development Fund (SDF) and is submitted to the Pennsylvania Public Utility Commission and to the Joint Petitioners in the PECO Energy restructuring proceeding. Since its inception eight years ago, SDF has played a leading role in accelerating the region's investment in a clean energy economy. This report discusses the initiatives and accomplishments of SDF in 2007.

**Financial Approvals**

**Loans and Investments**

During 2007, SDF approved \$2,180,000 in four new loans and equity investments in new energy projects and companies. The project budgets of these four deals total \$16,107,000. These projects are shown on the table below:

Borrower	Purpose	Loan Amount	Total Project Budget
Antonia Pantoja Community Charter School	A construction/term loan to finance high-performance energy measures (lighting, air conditioning, windows, roofing and insulation) to a charter school in North Philadelphia.	\$1,000,000	\$9,900,000
Mastery Charter School	A term loan to finance a highly efficient HVAC upgrade to a charter school in Old City Philadelphia.	\$290,000	\$290,000
Clean Power Markets	A near-equity investment in a Kennett Square (Chester County) company that tracks and verifies wholesale clean power transactions.	\$390,000	\$500,000
Boyer's Food Markets	A loan to a 17-store regional supermarket chain with more than 950 employees to finance highly energy efficient refrigeration equipment and store fixtures.	\$500,000	\$5,417,000
<b>Totals:</b>		<b>\$2,180,000</b>	<b>\$16,107,000</b>

As of December 31, 2007, SDF had approved a cumulative total of 31 loans and investments, totaling \$17,263,868. The total budget of these 31 projects supported by SDF is approximately \$86,368,142.

### **Core Grants**

In 2007, the SDF board approved 16 new core grants. The total of the grants approved was \$194,840 and the total value of the projects supported by these grants was approximately \$2,083,739. The core grants approved in 2007 are shown on the following table:

Grantee	Purpose	Grant Amount	Total Project Budget
Bat and Wind Energy Cooperative	Support for a project to develop and field test a device to deter bats away from wind turbines.	\$10,000	\$174,854
Clean Energy States Alliance	Funding to hold the spring 2007 meeting of clean energy fund managers across the U.S. in Philadelphia.	\$5,000	\$25,000
Food Trust	Funding to identify best energy practices for food stores and to develop four design prototypes and one demonstration store.	\$20,000	\$208,852
Pennsylvania Biomass Working Group	Support to continue this organization and to reshape it by expanding membership to private companies.	\$2,000	\$30,000
TRF Energy	Funding to give SDF the means to retain consultants to provide expanded technical services to SDF clients.	\$25,000	\$35,000
Center for Resource Solutions	Financial support for the 12th National Clean Energy Marketing Conference which will be in Philadelphia in October 2007.	\$5,000	\$300,000
Independence Media	Funding to produce four, 5-minute video programs on sustainable energy for WYBE public television.	\$20,000	\$55,000
Mercurrant	Demonstration of wireless technology for monitoring building energy usage in four facilities	\$20,000	\$50,000
Citizens for Pennsylvania's Future - CEEE	Annual membership in and support of the work of PennFuture's Center for Energy, Enterprise and the Environment.	\$7,500	\$100,000

Grantee	Purpose	Grant Amount	Total Project Budget
Pennypack Farm Education Center	Grant support for a 3.15 kW solar photovoltaic systems and related educational work.	\$5,000	\$31,353
Affordable Comfort Inc.	Sponsorship of the 2008 National Affordable Comfort Home Performance Conference in Pittsburgh, April 7-11, 2008.	\$5,000	\$500,000
Chester County Community Development Council	Support for a Smart Energy Initiative to encourage expansion of clean/renewable energy businesses in southeastern PA.	\$5,000	\$35,100
Ross Mechanical	Business planning grant for an established HVAC company to expand into solar businesses.	\$20,000	\$30,460
Solardelphia	Business planning grant for a solar installation company.	\$6,840	\$9,120
Pennsylvania Foundry Association	To conduct 6 to 8 electricity Demand Response workshops for industrial, institutional, municipal and large commercial end-users.	\$13,500	\$26,500
City of Philadelphia Solar City Initiative	Match for the City's application for a DOE Solar America Initiative grant to support the solar infrastructure in Philadelphia.	\$25,000	\$472,500
<b>Totals:</b>		<b>\$194,840</b>	<b>\$2,083,739</b>

As of December 31, 2007, SDF had executed a cumulative total of 78 core grants, totaling \$1,344,212 in SDF support.<sup>2</sup> The 78 projects supported by SDF's core grant program have a combined total budget of approximately \$75,316,900.

## **The PECO-UNICOM Merger Programs**

### **The Pennsylvania Wind Development Program**

#### **Introduction**

In the 2000 settlement of the PECO-Unicom merger proceeding, SDF received \$12 million for the purpose of developing new Pennsylvania wind projects. SDF has committed its wind funding in three categories of wind energy projects as shown on the

<sup>2</sup> This budget figure includes the budget adjustments for the executed core grants and does not include the funding approved for four grants that were approved by the SDF board but cancelled by the grantees before any work was done.. The unadjusted total of the 82 grants approved by the SDF board is \$1,710,440.



following table. Except for \$211,966 that SDF has available for a second community wind project, all of the wind funding has been committed and the vast majority has been paid to operating wind projects.

	Total \$ Committed	Total \$ Paid	Balance
Utility-scale wind farms	\$11,500,000	\$10,027,009	\$1,472,991
Community wind	\$193,441	\$0	\$193,441
Small-scale wind	\$75,000	\$75,000	\$0
Project review	\$18,093	\$18,093	\$0
<b>Totals:</b>	<b>\$11,786,534</b>	<b>\$10,120,102</b>	<b>\$1,666,432</b>

### Utility-Scale Wind Farms

As of December 31, 2007, there were seven utility-scale wind farms operating in Pennsylvania that had received financial support from SDF:

	Size (MW)	Annual Output (MWH)	SDF Grant Amount
Mill Run	15.0	38,938	\$1,000,000
Somerset	9.0	20,404	\$1,000,000
Waymart	64.5	150,445	\$3,250,000
Meyersdale	30.0	81,243	\$2,500,000
Bear Creek	24.0	71,173	\$2,000,000
Casselman	34.5	93,819	\$1,000,000
Allegheny Ridge	80.0	217,248	\$750,000
<b>Totals:</b>	<b>257.0</b>	<b>673,270</b>	<b>\$11,500,000</b>

Two of these wind farms – Allegheny Ridge and Casselman – came on line and began commercial operation in 2007. Of these seven wind farms, all but two have fully earned their wind energy production incentive grants. As of December 31, 2007, Wind Park Bear Creek had a balance in its production incentive agreement of \$477,813 and Casselman Windpower had a balance of \$995,158. Both projects are expected to fully earn their incentives by the end of 2008.

SDF believes that utility-scale wind farms can now be constructed in Pennsylvania without public support beyond the federal Production Tax Credit. This is due to several factors, including (1) market demand from voluntary sales and from utilities and electric generation suppliers seeking to comply with the Alternative Energy Portfolio Standards Act in Pennsylvania and similar renewable portfolio standards in

neighboring states; (2) higher wholesale electricity prices; (3) improved and expanded products and tools to finance wind projects; and (4) the reduction of risk through the wind industry's improved ability to site, design and construct projects that deliver the predicted output.

### **Community Wind**

SDF defines community wind projects as locally-owned wind projects that use utility-scale turbines with a nameplate generating capacity between 500 kW and 10 MW. SDF sees an important market niche for these projects and is committed to help at least two community wind projects come online in Pennsylvania. In 2007, SDF executed a wind energy production incentive agreement with PennFuture Enterprises on behalf of the City of Hazelton in the amount of \$193,441 to support the construction of a 600 kW community wind project at Hazelton's wastewater treatment facility. That project, which will provide 75% of the facility's electric consumption, is scheduled to come online in 2008.

	Size (kW)	Annual Output (MWH)	SDF Grant Amount
Hazelton	600	1,290	\$193,441

SDF plans to issue a second community wind solicitation in 2008 to identify a second community wind project and has reserved up to \$211,966 for this solicitation and \$1,500 for the technical consultants to assist with the application reviews.

### **Small Wind**

With SDF's financial support in 2007, the Pennsylvania Department of Conservation and Natural Resources (DCNR) completed the installation of six 10 kW wind turbines at six state parks as part of DCNR's Sustainable Energy Demonstration and Exhibit at State Parks program. The six turbines are located at Presque Isle State Park, Prince Gallitzin State Park, Promised Land State Park, Pymatuning State Park, Tuscarora State Park and Yellow Creek State Park. The SDF grant for these installations was \$75,000.

### **The Solar Photovoltaic Grant Program**

#### **The Solar PV Grant Program**

In the 2000 settlement of the PECO-Unicom merger proceeding, SDF received \$4 million for the purpose of supporting solar photovoltaic installations in Pennsylvania. In 2007, SDF received a grant from the Pennsylvania Energy Development Authority in the amount of \$701,366 to extend the PV program budget to \$4,701,366.

	Total \$ Committed	Total \$ Paid	Balance
Solar PV grants	\$3,929,149	\$2,918,297	\$1,010,852
Program administration, installer training, education and coordination	\$603,337	\$535,164	\$68,173
<b>Totals:</b>	<b>\$4,532,486</b>	<b>\$3,453,461</b>	<b>\$1,079,025</b>

Between the merger settlement payment and the PEDA grant, SDF has approximately \$168,870 in uncommitted funding for the PV program. These funds will be committed in early 2008 between new PV systems and the necessary extension of the program administrator's contract.

The Solar PV Grant Program statistics as of December 31, 2007 are shown on the following table:

	Approved Systems	Installed Systems
Number of Systems	236 <sup>3</sup>	163
Total Capacity	881 kW	739 kW
Estimated Annual Production	955 MWH	802 MWH
Total Cost of SDF Incentives	\$3,929,149	\$3,169,266
Total System Cost	\$7,844,200	\$6,579,800

### **Registering and Selling Solar Renewable Energy Certificates**

SDF has continued its work registering and trading Solar Renewable Energy Certificates (SRECs) on the PJM Generation Attributes Tracking System ("GATS"). As of December 31, 2007, SDF had registered at total of 599 SRECs on GATS. SDF has also entered in five sale agreements for a total of 112 SRECs, earning \$16,784 after commissions. The SREC proceeds are shared 50/50 with many of the system owners and SDF's share is dedicated to the Solar PV Grant Program. <sup>4</sup>

### **The Renewable Energy Public Education Program**

In the 2000 settlement of the PECO-Unicom merger proceeding, SDF received \$2.5 million for public education about renewable energy. Since 2001, SDF has operated a public education program that has involved separate grant agreements for a wide variety of activities. As of December 31, 2007, there were only two grants with an open balance: the Pennsylvania Clean Energy Communities Campaign and the Solar Display Project.

<sup>3</sup> The number of Approved Systems does not include the 48 applications that were approved by the program but were voluntarily withdrawn by the applicants who had decided not to install a PV system.

<sup>4</sup> In early 2008, SDF made two additional SREC sales for 250 additional SRECs and net proceeds of \$60,750.

	Total \$ Committed	Total \$ Paid	Balance
Education Grants and Contracts	\$2,230,086	\$2,099,130	\$130,956
Coordination and Evaluation	\$170,279	\$165,518	\$4,761
<b>Totals:</b>	<b>\$2,400,365</b>	<b>\$2,264,648</b>	<b>\$135,717</b>

The major education initiative still underway is the Pennsylvania Clean Energy Communities Campaign, which is being managed by SmartPower. The campaign's website is <http://communities.trfund.com/>. Of the twenty-three local communities who have committed to the program, ten have completed all of the requirements<sup>5</sup> and have earned a free 1 kW solar PV system. The ten Pennsylvania Clean Energy Communities are Abington Township, Cheltenham Township, East Bradford Township, Jenkintown Borough, Lower Makefield Township, Nether Providence Township, Swarthmore Borough, Tredyffrin Township, West Vincent Township and Upper Dublin Township. SDF is working with two solar installers to install 1 kW solar PV systems in these communities. SmartPower is working with the remaining communities to help them get the needed number of new customers so they qualify for the free 1 kW PV system.

Because of the cancellation of the nonresidential customer rewards program, SDF also has \$99,635 in uncommitted educational funds available that will be committed by the SDF board in early 2008.

## **Board Activities**

### **Board Membership**

The SDF board is comprised of seven members, whose two-year terms are staggered so that the terms of an approximately equal number of directors end each year. Current board members may serve two consecutive full terms.

Board members whose terms expired as of December 31, 2007 are Sharon Barr, Ellen Lutz and Peter Shaw. The SDF Board appointed a Nominations Committee comprised of Board member, Sharon Barr, and SDF staff, Roger Clark and Rob Sanders. The SDF Board also approved selection criteria for new candidates to be recommended to the Board. Public notice regarding the seeking of nominations to the SDF Board was given by a variety of means including:

- A written notice to the PUC and the original parties to the PUC settlement order creating SDF (October 9, 2007);
- An e-mail notice to SDF's e-mailing list (October 11, 2007); and
- A notice posted on SDF's website (October 9, 2007).

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<sup>5</sup> The three requirements are (1) the township will purchase clean energy equal to at least 20% of all local government electricity consumption by 2010; (2) the township encourages the necessary number of residents and small businesses to become new customers of clean power; and (3) the township actually starts purchasing clean power towards their 20% goal.

SDF submitted to the Commission these three individuals for Commission review and approval. The SDF board members for 2007, together with the expiration dates of their terms, are as follows:

- Charlotte Arnold, Meridian Venture Funds (12/31/08)
- C. Baird Brown, Attorney (12/31/08)
- Mark Deitcher, Fairmount Ventures, Inc. (12/31/09)
- Randy Haines, Thomas Jefferson University (12/31/08)
- Albert Koenig, Ph.D., A-KON Consulting Engineers (12/31/09)
- Muscoe Martin, M<sup>2</sup> architecture (12/31/09)
- Richard Webster, PECO Energy (12/31/08)

### **Board Meetings**

During this reporting period, meetings of the board were held on March 20, July 5, September 18 and December 18, 2007.

### **Coordination with the Other Pennsylvania Sustainable Energy Funds**

The regional sustainable energy funds met as a group on February 6 in Mechanicsburg, PA and on October 5 in Fogelsville, PA to discuss projects of mutual interest and to better coordinate future activities.

### **Financial Report**

As of December 31, 2007, SDF had received a total of \$31,815,216 from PECO Energy. This figure consisted of eight quarterly payments in 1999 and 2000 from distribution charges that total \$3,335,216, three installments of \$4,000,000 for the Pennsylvania Wind Development Program under the PECO Energy/Unicom merger agreement (total of \$12,000,000 received), the lump sum accelerated payment of PECO quarterly payments through December 31, 2006 totaling \$9,980,000, four annual installments of \$1,000,000 for SDF's photovoltaic program (total of \$4,000,000 received), and five annual installments of \$500,000 for public education about renewable energy (total of \$2,500,000).

SDF's unaudited financial statements for the twelve-month period ending December 31, 2007 show total income of \$665,290 for the period. Operating expenses for the 12-month period totaled \$642,345. The resulting operating surplus of \$22,945 represented a dramatic improvement over the operating deficit of (\$165,321) in 2006 and a \$161,902 favorable variance from the 2007 approved budgeted deficit of (\$138,957). This strong result occurred in large part through the reduction of staff in 2007 from 3.0 full-time equivalents (FTE's) to 2.0 FTE's, with the corresponding reductions in administrative and allocated expenses.

On December 31, 2007, SDF held funds in two accounts pending disbursement for its loans, investments, grants and operations: \$1,889,166 was held in SDF's sweep/liquidity investment account, and \$7,839,246 was held in SDF's Limited Maturity investment account. The Limited Maturity investment account is invested in government agencies, U.S. Treasuries, and investment grade corporate bonds and commercial paper. The average maturity of the underlying securities is approximately 15 months. Of these combined fund accounts, \$1,666,432 represented approved but not disbursed conditional wind production incentives for Pennsylvania wind projects; \$500,000 in approved but not closed loans and investments; \$180,613 in unexpended balances of Core program grants that are under executed agreements; \$135,717 in unexpended balances in Renewable Energy Public Education grants that are under executed agreements (including the contract for the education coordinator); and \$1,079,025 in unexpended balances in the Solar PV Grant Program (both the initial installation payments and the one year anniversary payments and the PV program administrator). Outstanding loans, energy performance contract leases receivable and outstanding investments in portfolio companies at December 31, 2007 totaled \$4,251,850. SDF's liabilities at December 31, 2007 totaled \$472,554 and were comprised of general accounts payable and accrued expenses of \$69,295, an account payable of \$16,477 to The Reinvestment Fund for operating expenses approved under the 2007 operating budget, grants payable of \$317,597 and a wind project escrow account of \$69,185.

Audited financial statements for the year ending June 30, 2007 are available upon request by contacting Robert Sanders, Fund Manager, Sustainable Development Fund, The Reinvestment Fund, 718 Arch Street, Suite 300 North, Philadelphia, PA 19106-1591.

**Sustainable Energy Fund  
(PPL Service Territory)**  
<http://www.theseef.org>

**Introduction and Highlights**

In 2007, Sustainable Energy Fund (SEF) continued its eighth year of supporting programs that benefit commercial, institutional, and industrial customers in the PPL service territory and beyond. Our non-profit organization is dedicated to the use of renewable energy, clean energy technologies, and energy conservation and education. Founded in 1999 by the Pennsylvania Public Utility Commission (PUC), SEF promotes clean and renewable energy initiatives and enterprises to benefit customers within the PPL service territory and throughout Pennsylvania.

Our mission remains to develop and invest in economically viable, energy-related businesses, projects and educational initiatives to create innovative, market-based technologies and solutions for environmentally sound and sustainable energy usage. For projects that fit our mission, SEF continues to provide financial assistance and attractive funding options.

SEF intends to continue to seek out entrepreneurs, businesses, agencies, organizations, as well as other non-profit funds, to generate projects which meet the SEF mission. Our intent is to diversify our portfolio of projects to include energy efficiency, LEED construction, solar technology, biomass projects, and ground source heat pump technology as well as continue to support educational activities which enhance the understanding and acceptance of renewable energy technologies and culture.

Ideal projects emphasize:

- Energy Efficiency/Energy Conservation Projects that save electricity or other energy. These may include green building technologies, efficient lighting, energy load management controls, etc.
- Renewable Energy projects which draw power from naturally replenished sources. These may include solar power, wind power, geothermal power, or power generated from biomass sources.
- Clean Energy Projects that produce energy using technology and processes that have minimal impacts on the environment, such as distributed generation projects.

## **Program-Related Investments**

Over the past year, efforts were made to align SEF infrastructure, resources, and goals to the fulfillment of our mission. Program Related Investment (PRI) projects are reviewed for financial sustainability, replicability, and feasibility.

The PRIs are divided into Financial Investments, the Light Emitting Diode (LED) Program, the Anaerobic Digester Program, and Grants. Each one of these projects, described below, had an “energy value” or complimentary “energy savings” component pre-determined prior to developing the “financial relationship” with the appropriate entity.

### **Financial Investments**

SEF’s financial investments in 2007 have resulted in annual energy savings of at least 832,000 kwh per annum, annual renewable energy production of 1,318 kwh, and an annual reduction of 1,444 tons of greenhouse gas emissions

- **Wanner Pride n’ Joy Farm, Lancaster, Lancaster County: \$300,000**

In April 2007, Wanner Pride n’ Joy Farm, a 600-head dairy farm located in the Lancaster County community of Narvon, received funding from SEF for the installation of an anaerobic digester for electrical production and reduction of greenhouse gases. The anaerobic digester processes dairy manure and generates electricity for dairy operations and possible resale to the power grid. The digester can convert animal waste to electricity at a rate of 1 million kilowatt hours per year. At that rate, it is enough to provide green electricity to approximately 100 houses in the PPL power grid for one year. In addition to providing “green” or renewable energy, the project results in the creation of renewable energy credits and carbon credits. Other benefits include improved manure handling, reduced odor generation, and bedding material for the dairy herd. At a time when locating and creating alternative energy sources has gained national and state focus, manure digesters make financial sense for livestock producers. Aside from turning manure from a waste product into a renewable energy source, digesters are one way for large concentrated animal feeding operations (CAFO) to meet the environmental and public pressures of managing manure.

<b>Project</b>	<b>Funding</b>	<b>Kilowatt-hours generated per year</b>	<b>Kilowatt-hours saved per year</b>	<b>Greenhouse Gases saved (metric tons/year)</b>
<b>Wanner Pride n’ Joy Farm</b>	\$300,000	876,000	N/A	1,176



- **Shazaam Realty, Kingston, Luzerne County: \$125,000**

SEF committed to fund a portion of an energy-efficient building on Market Street in Kingston, PA. Shazaam Realty LLC demolished an old building and erected a 4,700 square foot modern energy efficient building on a 1.2 acre site. The energy efficient technology includes a ‘state-of-the-art’ heating and air conditioning system which is projected to decrease energy use by 15%, specialized lighting, skylights for interior lighting, and the use of recyclable materials. Renewable energy is also included in the building with a solar roof which consists of 18 photovoltaic cells.

<b>Project</b>	<b>Funding</b>	<b>Kilowatt-hours generated per year</b>	<b>Kilowatt-hours saved per year</b>	<b>Greenhouse Gases saved (metric tons/year)</b>
<b>Shazaam Realty</b>	\$125,000	42,120	200,000	180

- **Environmental Management Group, Media, Delaware County: \$166,012**

Environmental Management Group International, Inc. (EMG), SEF, and Mains Dairy Farm (Mains or Farm) collaborated to construct an anaerobic digester for manure conversion and on-farm electricity generation. Mains Dairy Farm is located in Cumberland County, PA.

SEF’s infusion of additional funding will allow for expansion of the digester system to handle the growth of the Farm from 500 to 750 cows. Expanding this anaerobic digester system to handle the new herd size at Mains will improve manure management and reduce public concerns regarding odor generation at the Farm. In addition, this project will reduce the Farm’s energy costs (approximately \$40,000 per year) through use of the biogas generated by the digester to generate electricity (over 670,000 kw-hr/yr) for on-farm use and sale to the electric grid. Farms that use anaerobic digestion for manure management have attained up to 97.5% odor reduction and up to 90% reduction in energy costs. Under the proposed project, an attached-growth anaerobic digester will be designed, fabricated, installed, and operated at the Farm. The digester system will reduce or eliminate odor emissions from the Farm, reduce energy costs at the Farm, and facilitate further farm growth over the next few years. The mitigation of odors through anaerobic digestion is of primary importance to the Farm as it has residential neighbors. The separation of biosolids from liquids allows the Farm to better control farmland manure application to meet nutrient management practices and watershed quality requirements.

<b>Project</b>	<b>Funding</b>	<b>Kilowatt-hours generated per year</b>	<b>Kilowatt-hours saved per year</b>	<b>Greenhouse Gases saved (metric tons/year)</b>
<b>EMG International</b>	\$160,012	400,000	N/A	537

- **Sinewave Energy Technologies, Conshohocken, Montgomery County: \$500,000**

SEF committed to fund Sinewave Energy Technologies, LLC an energy management technology company that has developed breakthrough energy efficient technology. This technology is a revolutionary method to control high intensity discharge (“HID”), fluorescent and incandescent lamps. Sinewave Technology has almost universal application for control of HID, fluorescent and incandescent lamps that have defied existing dimming control for decades.

Further, Sinewave’s technology is not dependent on lamp type or wattage. It is compatible with most modern lamp and ballast combinations. This benefit provides for reduced installation costs. The Sinewave Technology controls the lamp source output by way of varying the amplitude of the sinewave, not “chopping” it. It continuously monitors the input voltage and “checks” it against the control requirement then adjusts accordingly. The use of Sinewave Technology to monitor and quantify both the input source and the affected load, benefits the customer by reducing energy use, reducing equipment failures, and improving maintenance.

<b>Project</b>	<b>Funding</b>	<b>Kilowatt-hours generated per year</b>	<b>Kilowatt-hours saved per year</b>	<b>Greenhouse Gases saved (metric tons/year)</b>
<b>Sinewave</b>	\$500,000	N/A	118,272	88

**LED Program - \$197,719**

SEF continues to provide a turnkey energy savings partnership product to municipalities throughout Pennsylvania. Beginning with an energy audit, which quantifies the savings associated with retrofitting incandescent traffic signals to LEDs, ordering product and managing the installation, to financing 100% of the cost associated with the installation, SEF provides an innovative way for municipalities to promote energy efficiency with no additional cost to the taxpayer. SEF provides funding for installation through a loan which the municipalities pay back with the money saved in electrical bills. After five years, the city will keep all of the savings. Installation of LEDs can provide: 1) up to 90% savings on lighting electricity bills; 2) 10 times signal life over incandescent bulbs; and 3) reduce harmful greenhouse gas emissions. The LED project continues to be a natural fit with SEF’s mission of promoting renewable, clean energy technologies and energy conservation. Since the inception of the program, 12 municipalities have participated in the program. SEF’s LED investments during the past year are predicted to save over 4.8 million kilowatt hours and contribute toward the reduction of tons of greenhouse gases over a five-year period.

SEF is an approved COSTARS vendor. The COSTARS program is the Commonwealth of Pennsylvania’s cooperative purchasing program designed to assist local governments and other non-profit agencies. As a qualified vendor, SEF’s products

are now available to over 4,550 local public procurement units throughout the state without the bidding requirements.

**2007 - SEF LED PROGRAM METRICS (FIVE-YEAR PERIOD)**

<b>SEF Project Name</b>	<b>County</b>	<b>Project Cost</b>	<b>Lenses Installed</b>	<b>Kilowatt Hours Saved</b>	<b>Tons of Greenhouse Gases Reduced</b>
Borough of Clarion	Clarion	\$25,726.00	211	527,200	691
Borough of Minersville	Schuylkill	\$20,012.00	152	360,000	472
Town of Mount Carmel	Northumberland	\$7,100.00	62	146,576	192
Muhlenberg Township	Berks	\$37,600.00	287	856,000	1123
Town of Pottsville	Schuylkill	\$51,900.00	378	930,400	1221
Borough of St. Clair	Schuylkill	\$16,250.00	117	268,800	352
Shenandoah Borough	Schuylkill	\$20,715.00	156	354,400	466
Fairview Township	York	\$11,063.00	158	374,400	491
Borough of Mifflinburg	Union	\$7,352.75	124	293,800	385
<b>Total</b>		<b>\$197,718.75</b>	<b>1,645</b>	<b>4,111,576</b>	<b>5,393</b>

**Note:**

1. The calculation used to generate the greenhouse gases reduced is based upon the national average of CO2 emissions caused by various power generation facilities. The US EPA provides this number (1.64 lbs/kw-hr).
2. The calculations for kilowatt-hours saved and greenhouse gases reduced are based upon the 8-year life of the LED lens.

**Anaerobic Digester Program**

SEF has been awarded an Energy Harvest Grant from the PA DEP in the amount of \$440,854 for the construction of an anaerobic digester which will convert livestock manure into methane gas which will feed either a modified internal combustion engine or solid oxide fuel cell and generate electricity to the grid and to the farm. For this grant SEF and EMG partnered for the construction of an AD which will produce “green” electricity. This “green” electricity will have multiple financial components: the intrinsic value as determined by fair market conditions and the value of the renewable energy credits (RECs), and the value of carbon credits (biomass).

## **Grant Investments Disbursed**

- **City of Allentown (LED Installations), Lehigh County: \$5,000**

In June 2007, light emitting diode (LED) fixtures, the first such area lights in eastern Pennsylvania, were installed outside Allentown City Hall – at no cost to the City – as a demonstration project facilitated by SEF. The LED lights are expected to have an operating life from 50,000 to 100,000 hours of use, making them virtually maintenance free. The state-of-the-art lighting technologies reduce energy consumption, improve lighting, and minimize light pollution. The LED lights are part of an ongoing implementation program of energy efficiency that Allentown is performing to save costs and energy. LED lights had already been successfully used in traffic lighting. Each of the three new LED lights uses 70 watts. They replaced metal halide lights that used about 170 watts each. In addition, the new lights have improved foot-candle light levels 2 to 4 times previous light levels. The City should save about 25,000 kilowatt hours and \$5,000 in combined electric and maintenance costs over the life of the new LED fixtures. An additional benefit of the new LED lights is their compliance with the “Dark Skies” program designed to prevent light shining upward into the atmosphere – otherwise known as light pollution.

- **Pine Street Housing, Hazleton, Luzerne County: \$33,000**

The purpose of this grant, which totaled \$75,000, was to assist in making the Pine Street Neighborhood project affordable and provide a demonstration project on sustainable residential housing in northeast Pennsylvania. The Pine Street Neighborhood project consists of the transformation of a former brownfield site to an innovative residential community. Twenty-five (25) single-family homes were constructed for sale to eligible buyers. The homes feature renewable energy, energy conservation and efficiency, sustainable energy design, materials and construction methods. The project encompasses a three block area of the City of Hazleton and is adjacent to the downtown business district. This project is about affordability, accessibility, sustainability, energy and resource efficiency, and smart growth. The project is the first of its kind in Northeastern Pennsylvania and will be utilized as a model project to be replicated throughout the region and beyond. The architect for the project received the Governor’s Award for Environmental Excellence.

- **AFC First Financial, Allentown, Lehigh County: \$5,000**

SEF committed \$10,000, of which \$5,000 was paid over the past year. This grant enabled AFC First Financial to sponsor seminars for home contractors to develop interest in the Keystone Help Loan Program. These seminars are now part of a Webinar program which runs several times per week, thereby increasing the number of home contractors attending the training. Over 1,000 loans were made as a result of this training.

- **Wilson College, Chambersburg, Franklin County: \$11,588**

SEF funded \$11,588 of \$24,050 to develop and deliver a hands-on demonstration of renewable energy in wind, PV, and solar. Also included in the grant is the development of a sustainable energy curriculum for an undergraduate course, and community workshops.

### **Ongoing Projects**

#### **Solar Scholars™**

Through SEF's Solar Scholars™ Program, Pennsylvania college students are designing and implementing working solar photovoltaic (PV) technology systems on their campuses to generate electricity. This solar energy education initiative is preparing the next generation of energy conservation leaders with the knowledge they will need to make informed decisions to promote renewable energy sources and conservation.

Students from the following seven Pennsylvania colleges and universities participated in the program:

- Wilson College (Chambersburg, Franklin) [www.wilson.edu](http://www.wilson.edu)
- Bucknell University (Lewisburg, Union County) [www.bucknell.edu](http://www.bucknell.edu)
- Clarion University of Pennsylvania (Clarion, Clarion County) [www.clarion.edu](http://www.clarion.edu)
- Mercyhurst College (Erie, Erie County) [www.mercyhurst.edu](http://www.mercyhurst.edu)
- Messiah College (Grantham, Cumberland County) [www.messiah.edu](http://www.messiah.edu)
- The Pennsylvania State University (University Park, Centre County) [www.psu.edu](http://www.psu.edu)
- Villanova University (Villanova, Delaware County) [www.villanova.edu](http://www.villanova.edu)

Participation is open to colleges and universities throughout Pennsylvania and offers the following benefits:

- Funding, incentives, and academic credit for students to design, build and operate a PV-powered solar installation of significant impact on their campus.
- Financial sponsorship for selected students to attend a weeklong, hands-on, training and certification workshop on applied PV and design. Participants return to campus as “solar champions,” ready to advocate solar power as a viable, efficient and environmentally sound solution.

Currently plans are being made to re-launch the program in the summer of 2008.

## **Green Connexions, Inc.**

Green Connexions, Inc. is a for-profit C corporation owned by the SEF organization. The business of Green Connexions, as seen for the future, is to provide products and services through two or three renewable energy and energy efficiency business ventures within the territory of the existing PPL rate-base and expandable throughout the Commonwealth of Pennsylvania. Profits from Green Connexions will be funneled back to the SEF to help sustain its mission. Green Connexions continues to develop opportunities in the renewable energy and energy conservation business sectors and evaluate their value as a subsidiary of the SEF.

## **Board Activities**

The SEF Board of Directors consists of seven members, whose three-year terms are staggered so the terms of approximately one-third of the members end each year. Current members can run for re-election. During the course of the year, two members resigned from the Board, and two members were appointed.

Subsequent to approval by the SEF Board, the PUC approved the appointment of the following individuals to the Board of Directors of Sustainable Energy Fund:

- Andrew Stein
- Robert Davis

In addition to the above, the SEF Board of Directors consists of:

- Gary Lamont, President, Conyngham Pass Co.
- Eric Epstein, EFMR Monitoring Group
- Dennis Maloskey, Director of Sustainable Eng. & Dev., Governor's Green Government Council
- Alan Roman, President, Roman Consulting Inc.
- G. Scott Paterno, Attorney, Duane Morris

During 2007 Board meeting were held on: January 24; April 26; June 28; October 25; and December 5.

## **Financial Report**

As of December 31, 2006, SEF no longer receives funding from the PPL ratepayers. SEF is funded via the program related investments and the endowment fund.

For the year ending December 31, 2007, SEF's internal financial statements show total income of \$885,368 with expenses of \$1,052,847 resulting in a net loss of (\$167,479). The Balance Sheet reports assets at \$23,844,039 and liabilities at \$57,420. Included in the assets are program related investments of \$5,079,534.

Audited financial statements for the year ending June 30, 2007 are available upon request by contacting Lynne Puzio, Accounting Associate, Sustainable Energy Fund, 968 Postal Suite 315, Allentown, PA 18109.

## **West Penn Power Sustainable Energy Fund**

<http://www.wppsef.org/>

### **Introduction and Highlights**

In 2007, the West Penn Power Sustainable Energy Fund (WPPSEF) entered its sixth year of providing funding to:

- Promote the use of renewable and clean energy;
- Promote energy conservation and energy efficiency; and
- Promote the start-up, attraction, expansion, and retention of sustainable energy businesses.

The WPPSEF activities continued to increase from previous years as its programs and initiatives became more visible within the West Penn Power (WPP) service region and across the Commonwealth.

During 2007, the WPPSEF Board approved \$1,974,716 to co-fund 31 funding commitments. Key accomplishments in 2007 include:

### **Investing in Clean Energy**

The WPPSEF committed \$500,000 to Advanced Recycling Equipment (ARE) located in St. Marys, PA to expand their biomass furnace manufacturing facility. The biomass furnaces produced by ARE are capable of burning a wide variety of solid biomass feedstocks which enables the end user to switch fuel types and sources depending on availability and pricing. These fuel-flexible boilers have been installed in numerous commercial and industrial settings throughout Pennsylvania and the U.S..

### **Investing in Energy Efficiency**

The largest single investment by the WPPSEF in 2007 was to develop and deploy a residential ENERGY STAR building program which uses ENERGY STAR Qualified Homes for new home construction and Home Performance with ENERGY STAR to service existing housing stock. The program is branded as PA Home Energy. The WPPSEF committed approximately 57% (\$1,140,000) of its 2007 funding to this residential program.



In addition to PA Home Energy, the WPPSEF continues to support the Keystone Home Energy Loan Program (Keystone HELP) through loan procurement and consumer awareness marketing. The WPPSEF is exploring other funding commitments to support and expand Keystone HELP.

**Investing in Education and Public Outreach**

In 2007, the Solar Decathlon was held on the National Mall in Washington D.C. The WPPSEF provided a total of \$50,000 (approved in 2006) to support both of the Pennsylvania Solar Decathlon entries – Carnegie Mellon University (CMU) and The Pennsylvania State University (PSU). Supporting and showcasing new innovative solar technologies in large public events such as the Solar Decathlon is important to increase public awareness and acceptance. The CMU solar home will be located at the Powdermill Nature Reserve (Rector, PA) and the PSU entry located at Penn State’s University Park campus.

The WPPSEF also provided \$38,400 in co-funding to support a 2008 Going Green campaign being conducted by WTAJ-TV throughout central Pennsylvania. WTAJ-TV will air 52 weekly segments throughout the 2008 calendar year to educate their viewers on the importance of green technologies (e.g. ENERGY STAR Homes, conducting an energy audit, solar PV and hot water, indoor air quality, etc.). WTAJ-TV will work closely with the WPPSEF to showcase other clean energy technologies and programs, such as PA Home Energy, throughout the year.

**Financial Approvals**

The WPPSEF financial approvals in 2007 can be broken down into the following categories: loans, strategic initiatives developed by the WPPSEF, and grants (includes grants, sponsorships, memberships).

**Loans**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
Advanced Recycling Equipment	\$500,000	Expansion of biomass boiler manufacturing facility located in St. Marys, PA.
Envinity	\$25,000	Purchase of diagnostic equipment to perform whole house energy audits.
<b>Investment Total</b>	<b>\$525,000</b>	

**Strategic Initiatives**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
PA Home Energy	\$1,140,000	WPPSEF is developing and deploying an ENERGY STAR construction program that utilizes a comprehensive whole house approach to improve the energy efficiency of new and existing homes while improving homeowner comfort. The WPPSEF will use ENERGY STAR Qualified Homes for new home construction and Home Performance with ENERGY STAR for existing homes. PA Home Energy will train Service Providers to both RESNET and BPI standards and will offer performance based homeowner incentives for a limited time. The program is being developed for statewide expansion.
PA Biomass Working Group	\$30,000	The PA Biomass Working Group is a coalition of professionals that are focused on the use of Pennsylvania biomass for clean power, heat, and transportation fuels. This Group base funding provided by the U.S. Department of Energy was discontinued. The WPPSEF provided interim funds to co-fund meeting expenses.
Greene Team	\$15,625	Full-scale production run (150 tons) of native grass pellets for testing by various U.S. based residential stove manufactures.
Envinity and West Media	\$27,000	WPPSEF is working with Envinity and the West Media Group to raise awareness of ENERGY STAR projects within the WPP service region.
<b>Total Strategic Initiatives</b>	<b><i>\$1,212,625</i></b>	

**Grants/ Memberships/ Sponsorships**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
McKeever Environmental Learning Center	\$25,000	Support the installation of small-scale wind and solar hot water heating (2 separate grants).
Powdermill Nature Reserve	\$25,000	Support for LEED certified building components (graywater recycling/reuse, Solar D home installation)

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
Wilson College	\$66,000	Support for LEED certified building components (Dedicated outdoor air system, solar hot water)
Green Building Alliance	\$2,575	2007 and 2008 calendar membership (2 separate grants)
Penn State Public Broadcasting (WPSU)	\$9,800	Duplication and distribution of ENERGY@home public broadcast
Energy from Biomass & Waste Expo	\$10,000	Support for a biomass conference and expo.
American Wind Energy Association (AWEA)	\$500	2007 and 2008 calendar membership (2 separate grants)
Alternative Fuels Renewable Energy Council	\$1,500	2007 and 2008 calendar membership (2 separate grants)
PA Housing Research Center (Penn State)	\$1,000	2008 calendar membership
Clean Energy States Alliance (CESA)	\$5,246	Membership dues (June 2007 to May 2008)
Home Energy Magazine	\$10,000	Sponsorship for Special Issue Climate Solutions which highlights Home Performance
WTAJ-TV	\$38,400	Sponsorship for 2008 Go Green campaign
AFC First Financial	\$25,000	Grant to develop PA Home Energy energy audit protocol in Keystone HELP/ PHFA loan programs
American Solar Energy Society	\$200	2008 calendar membership
Green Building Association of Central PA	\$1,000	2008 calendar membership
Pellet Fuel Institute	\$770	2007 and 2008 calendar membership (2 separate grants)
Pennsylvania Association of Sustainable Agriculture	\$100	2008 calendar membership
Penn Future Center for Sustainability/ Clean Energy Meeting	\$15,000	Membership/ clean energy meeting (2 separate grants)
<b>Grants/ Memberships/ Sponsorship Total</b>	<b>\$237,091</b>	

## **Board Activities**

### **Board Membership**

The WPPSEF administration consists of a seven-member board of directors that provides oversight to the Fund and an administrative staff that oversees the day-to-day operations. Individual board members are selected by the Fund through a search process and then are nominated for approval by the Pennsylvania Public Utility Commission. All board members serve on a volunteer basis.

The WPPSEF Board of Directors as of December 31, 2007, was:

- Michele Ponchione, *President*
  - World Kitchen
  
- Cassandra Robinson, *Vice President*
  - Allegheny Power
  
- Rob Hosken, *Secretary*
  - Three Rivers Association for Sustainable Energy
  
- Pat O'Brien, *Treasurer*
  - WesBanco Washington
  
- Ed Johnstonbaugh
  - New York Power Authority
  
- Jim Stark
  - Fayette County Community Action Agency

As of December 31, 2007 the WPPSEF has one Board Seat vacancy. This position is currently being filled using the Best Practice Guidelines for the Nomination, Election, and Approval of Directors developed by the Pennsylvania Sustainable Energy Board.

The WPPSEF Board of Directors selected The Pennsylvania State University Energy Institute to serve as the Fund's administrator and the Economic Growth Connection of Westmoreland County to provide financial services to the Fund. In addition, the Fund utilizes the services of external consulting firms on an as-needed basis.

The WPPSEF staff as of December 31, 2007, was:

- Joel Morrison and Barbara Robuck
  - The Pennsylvania State University (The EMS Energy Institute)
  
- John Skiavo and James Smith
  - Economic Growth Connection of Westmoreland County

## **Board Meetings**

The WPPSEF schedules its board meetings at the beginning of each calendar year. Full board meetings are scheduled for every two months. In addition, the WPPSEF Board has developed three working groups (administrative, investment, and grantmaking) that meet on an as-needed basis.

In 2007, the WPPSEF Board of Directors met on:

- February 8 (Greensburg, PA)
- April 12 (Charleroi, PA)
- June 7 (Belle Vernon, PA)
- June 21 (Greensburg, PA)
- August 9 (Greensburg, PA)
- October 4 (Farmington, PA)
- December 13 (Charleroi, PA)

## **Web Site**

The WPPSEF web site is updated throughout the calendar year as new projects are funded and programs developed. The WPPSEF web site is at <http://www.wppsef.org>.

## **Planned 2008 Activities**

The WPPSEF will focus on two broad categories in the 2008 timeframe. They are:

**Bioenergy.** The WPPSEF will continue to seek out projects that use Pennsylvania indigenous biomass resources for the production of clean power/ heat generation. The WPPSEF will expand its efforts to seek out investment opportunities in residential, commercial, and light industrial applications for bioenergy. The WPPSEF will specifically work to explore the use of native grass as biomass feedstocks.

**Energy Efficiency.** The WPPSEFs will continue to work on laying a solid foundation for the PA Home Energy program in 2008, and if appropriate, expand it beyond the 23-county West Penn Power service region. The WPPSEF will work with AFC First Financial and the Pennsylvania Finance Housing Agency to develop and expand their energy efficiency programs.

During the Fall 2008 timeframe, the WPPSEF will have its annual strategic planning meeting. The WPPSEF will develop its strategic plan for a 2-year timeframe (2009-2010). It is anticipated that the WPPSEF efforts on energy efficiency will be expanded.