

# Pennsylvania Sustainable Energy Board

## 2006 Annual Report

Docket No. M-00031715

December 2007

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### **ForEword**

This Pennsylvania Sustainable Energy Board (PASEB) report summarizes the activities of the regional sustainable energy funds (Regional Funds) during 2006. Collectively, the Regional Funds loaned more than \$5 million and provided over \$1.6 million in grants during this period. Since their inception in 1999, the Regional Funds have led the development of and investment in

clean energy technologies such as wind, anaerobic digesters, fuel cells, and solar. However, it is expected that the future focus of the Regional Funds will be on energy efficiency and demand resources.

The Regional Funds are primarily public finance entities, which make loans, investments and grants for sustainable projects in the Commonwealth. Three of the Regional Funds - Metropolitan Edison Company Sustainable Energy Fund, Pennsylvania Electric Company Sustainable Energy Fund and Sustainable Energy Fund of Central Eastern Pennsylvania (PPL Electric Utilities) have ceased receiving ratepayer funding. A new challenge for these funds is fulfilling their mission while remaining financially sustainable.

The investment strategies of the funds have evolved with developments in the market. In the last two 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 for PECO Energy) has financed (Atlantic Renewable Energy Corporation and Community Energy, Inc.). These actions bring significant 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 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 generation rate caps expire. For example, new funding was provided through a rewards program which allows participating suppliers and marketers to earn rewards based on new clean energy customers within nine different townships in southeastern Pennsylvania. As of the end of year, nine townships have committed to purchase 20% of the electricity from clean sources by 2010. Investments continue in biofuels, venture capital for weatherization building materials and financing of clean energy technologies. PASEB anticipates more activity in investments as the Regional Funds continue to mature and are aided by the Alternative Energy Portfolio Standards Act (AEPS). There has also been a great deal of development of high standards in new building technology by the five funds. 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)[\[1\]](#), 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 received approval for an additional \$5 million (\$2.5 million each) in funding. During PPL's most recent distribution base 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 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 of Central Eastern PA - 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.

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 (Met-Ed)
  - Management fees represent 1.5 percent of assessed value of Fund.
  - Fees for 2006 were \$123,609.
  
- § Community Foundation of the Alleghenies (Penelec)
  - Management fees represent 1.5 percent of assessed value of Fund.
  - Fees for 2006 were \$149,872.
  
- § The Sustainable Energy Fund of Central Eastern Pennsylvania (PPL)
  - Flat Management fee.
  - Fees for 2006 were \$179,792.
  
- § The Sustainable Development Fund (PECO)
  - Administrative costs included in each annual budget, approved by Board.
  - Fees for 2006 were \$791,050.
  
- § The Energy Institute of Penn State University (West Penn)
  - Management fee by contract.
  - Fees for 2006 were \$246,213.

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 Aug. 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.

### **2006 Approvals of Regional Funds**

The table on the following page summarizes the Regional Funds’ approvals of loans and grants for 2006. As shown, the Regional Funds approved slightly less than \$6.8 million in support of renewable energy activities. Approximately \$5.2 million was distributed in the form of loans and \$1.6 million was provided in grants.

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	<b>2006 Approvals</b>		
<b><u>FUND</u></b>	<b><u>LOANS</u></b>	<b><u>GRANTS</u></b>	<b><u>TOTAL</u></b>
Met-Ed	\$1,000,000	\$ 15,000	

			\$1,015,000
Penelec	\$1,000,000	\$ 65,000	\$1,065,000
PECO	\$ 500,000	\$1,023,793	\$1,523,793
PPL	\$1,222,612	\$ 150,548	\$1,373,160
West Penn	\$1,531,500	\$ 381,378	\$1,912,878
<b>Total</b>	<b>\$5,254,112</b>	<b>\$1,635,719</b>	<b>\$6,889,831</b>

### **End of Year Regional Fund Balances**

The following table presents the Regional Fund balances as of the end of 2006. 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.

<b><u>FUND</u></b>	<b><u>BALANCE</u></b>
Met-Ed	\$ 8,241,450

Penelec	\$ 9,838,807
PECO	\$10,506,522
PPL	\$21,826,006
West Penn	\$12,216,669

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

<http://www.bccf.org/pages/gr.energy.html>

**Introduction and Highlights**

From Jan. 1 2006, to Dec 31, 2006, the Metropolitan Edison Company/ Pennsylvania Electric Company Sustainable Energy Fund (Met-Ed/Penelec SEF) approved financing totaling \$2,000,000. 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)) and its annual report. The Penelec SEF Web site can be accessed through the Community Foundation for the Alleghenies Web site ([www.cfalleghenies.org](http://www.cfalleghenies.org)) and its annual report.

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

During 2006, 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:

- § Teleconference organized by Clean Energy States Alliance and the American Bar Association's Renewable Resources Committee;
- § Renew PA;
- § Sponsorship/participation in PennFuture events;



- § Clean Energy States Alliance (CESA) programs and activities;
- § Funders Network For Smart Growth programs and activities;
- § Central Pennsylvania Green Building Alliance programs and activities;
- § Laurel Highlands Green Building Affiliate of the Pittsburgh Green Building Alliance programs and activities;
- § Regional Advisory Board of Ben Franklin Technology Partners;
- § Meetings with other Regional Funds in Pennsylvania;
- § The annual meeting of PASEB;
- § Southern Alleghenies Planning and Development Commission wind energy economic impact meeting;
- § Partnership with the Pennsylvania Treasury Department to set up a Keystone Green Investment Fund; and
- § Program Investment Activities of the Council on Foundations.

## **Financial Approvals**

### **Grants:**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
West Penn Power SEF	\$10,000	Sponsor the Clean Energy Expo in April 2006.
Mid Atlantic Renewable Energy Coalition (MARC)	\$ 5,000	Support the promotion of clean energy in Pennsylvania.
PA Association of Sustainable Agriculture	\$10,000	Purchase and install a 379 Kwh photovoltaic system for apple cider pasteurization.
Commonwealth Community Energy Project	\$50,000	Provide home energy ratings, finance projects and provide energy loans to non-profits.
Green Building Alliance	\$ 5,000	Start a new green building affiliate in the Laurel Highlands and NW PA regions.
<b>Total Grants</b>	<b>\$80,000</b>	

### **Loans:**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Access Energy (G.A.S.)	\$ 750,000	Landfill to electric energy project.
Johnstown Regional Energy	\$ 750,000	Landfill to electric energy project.



- § Brian Hill, President of the Pennsylvania Environmental Council (Chairman);
- § Charles Mowbray, First Energy (Vice Chairman);
- § 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;
- § Brian Vayada, Manage American PowerNet; and
- § Edward Miller.

During 2006, advisory committee meetings were held on: February 8, March 30, May 22, June 23, August 10, and October 6.

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

## **Conclusion**

2006 proved to be a very productive period for the Met-Ed/Penelec SEF. The SEF continued to provide opportunities for businesses and organizations to save energy and provide new clean energy sources.

## **Sustainable Development Fund (PECO service territory)**

<http://www.trfund.com/sdf/>

## **Introduction and Highlights**

Since its inception seven years ago, the Sustainable Development Fund (SDF) has played a leading role in accelerating the region's investment in a clean energy economy. SDF has been one of the nation's most creative and effective champions of sustainable energy. Financing projects ranging from wind farms to high energy performance buildings, SDF's efforts have been critical in Pennsylvania's emergence as a leading center for clean and renewable energy.

During 2006, SDF approved \$1,523,793 in new project funding, which funding leveraged an additional \$11,057,745 from private and public capital sources.

In 2006, SDF's portfolio of projects generated 348,991MWh of wind power and 581 MWh of solar photovoltaic power, and conserved 4,487 MWh of electricity. SDF's cumulative figures since inception are 1,105,688 MWh of wind power and 1,197 MWh of solar photovoltaic power generated, and 12,784 MWh of electricity conserved.

## **The Paradigm Shift**

In the last two years, the wind industry in Pennsylvania has changed from modest-sized local companies to major international players. Gamesa Corp., the second largest wind energy company in the world, has invested \$84 million to create 300 manufacturing jobs at the abandoned Fairless Hills U.S. Steel plant outside of Philadelphia, over 200 manufacturing jobs at a new facility in Ebensburg, PA near Johnstown, PA and 30 more jobs at Gamesa's North American corporate and development 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 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 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 owner by Conergy, the world's largest renewable energy system integrator.

These wind and solar business stories are examples of how SDF addresses the early market risks of high transaction costs and uncertain market demand when other potential market participants are unwilling to. It does so by conducting thorough due diligence, developing technical expertise and establishing relationships with key market participants. This information investment is reinforced with mission-oriented capital that is structured with performance milestones, including monetary penalties for non-performance. These investments of capital and information provide the bridge that conventional investors and creditworthy power purchasers needed before committing their resources. The return on these investments has been not only the interest earned on the SDF project debt, but also the economic and environmental benefits associated with rapidly expanding, self-organizing wind and solar industries in Pennsylvania. These private investments represent some of the most dramatic increases in our domestic capacity to build fuel-less and emission-free electricity generating facilities.

## **Financial Approvals**

### **Core Grants:**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
PJM - Mid Atlantic Demand Response Initiative	\$ 20,000	Multi-state study of value of demand response and localized marginal costs.
St. Mary Medical Center Foundation	\$ 25,000	Support for the installation of a green roof and garden at a hospital.

Green Building Alliance of Central PA	\$ 30,000	Post-occupancy analysis of energy consumption and air quality at LEED buildings in PECO service territory.
National Renewable Energy Lab	\$ 2,500	Support for the NREL energy fair in Philadelphia.
Pennsylvania Environmental Council	\$ 7,000	Support for the Philadelphia Sustainability Awards program.
Maple Point Developers	\$ 75,000	Support for solar PV measures in 38 new solar town homes in Juniata Park section of Philadelphia.
Penn State College of Engineering	\$ 10,000	Support for the Penn State entry in 2007 Solar Decathlon.
<b>Total Grants</b>	<b>\$169,500</b>	

## **Merger Program Grants:**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Citizens for Pennsylvania's Future	\$ 193,441	Wind production incentive grant for a 600 Kw community wind project at the wastewater treatment facility.
SmartPower	\$ 300,000	Support for the PA Clean Energy Communities Program, a major clean energy marketing initiative involving 20 local townships and their residents.
Citizens for Pennsylvania's Future	\$ 15,000	Support for public conferences and web work of the Center for Energy Enterprise and Environment.
Penn State Energy Center - Clean Energy Expo	\$ 10,000	Support for the statewide Clean Energy Expo in State College organized by the West Penn Sustainable Energy Fund.
Philadelphia Solar Energy Association	\$ 2,000	Support for the 2006 Junior Solar Sprint.
Consumer Rewards Program III	\$ 50,000	New funding for the Rewards Program, which allows participating suppliers and marketers to earn rewards based on new clean energy customers.
Business Consumer Rewards Program	\$ 100,000	Funding for the non-residential version of the Rewards Program, which allows participating suppliers and marketers to earn rewards based on new clean energy sales to business customers.
Business Consumer Rewards Seed Grants	\$ 20,000	Seed grants for nonprofit organizations to participate in the Business Rewards Program.
Home in Lower Providence	\$ 23,773	4.80 Kw home solar photovoltaic systems.
Home in Warwick	\$ 25,250	5.16 Kw home solar photovoltaic systems.
Home in Lower Providence	\$ 25,000	5.00 Kw home solar photovoltaic systems.
Home in Lower Providence	\$ 16,177	3.00 Kw home solar photovoltaic systems.
Home in Cheyney	\$ 25,250	9.12 Kw home solar photovoltaic systems.
PNC Bank - Mars, PA	\$ 11,629	2.31 Kw commercial solar photovoltaic systems.
PNC Bank - West Chester, PA	\$ 11,773	2.31 Kw commercial solar photovoltaic systems.

DEP Southeastern Regional Office Building - Norristown, PA	\$ 25,000	4.80 Kw commercial solar photovoltaic systems.
<b>Total Grants</b>	<b>\$854,293</b>	

### **Loans:**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Fresh Grocer - Progress Plaza, Philadelphia	\$500,000	Approval for highly energy efficient supermarket refrigeration equipment package subject to final equipment specs.

Note: Subsequent to 12/31/06, SDF has approved 3 loans totaling \$1,680,000.

### **GATS**

To ensure that small distributed generation could easily participate in the PJM Generation Attributes Tracking System (“GATS”), SDF decided in early 2006 to become the agent of its solar PV grant recipients for purposes of registering their solar production with GATS. First, SDF had to register as an alternative energy generator with the PA Department of Environmental Protection and the Commission.

Next, SDF had to obtain an executed agreement from the SDF Solar PV Grant Program grantees to be their agent in registering their PV systems and their output with GATS. If and when SDF sells any Solar Renewable Energy Certificates (“Solar RECs”), SDF would share half of the proceeds with the system owners and half of the proceeds would be put into the budget of the solar PV work at SDF. We had agreements from 25 system owners in 2005 and with 53 owners in 2006.

In March 2006, SDF registered 85 Solar RECs for solar generation in 2005. Each Solar REC represents 1 MWH of solar generation. For 2006, SDF registered an additional 200 Solar RECs for solar generation in 2006.

### **Financial Position**

As of December 31, 2006, 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, 2006 show total income of \$625,741 for the period. Operating expenses for the 12-month period totaled \$791,050, a \$43,508 favorable variance over board approved budget expenses in CY2006. The excess of expenses over revenue in 2006 totaled \$165,309, a \$29,956 improvement over the operating deficit in 2005 and a \$6,751 unfavorable variance from the approved budgeted deficit of (\$158,558). This \$6,751 unfavorable variance is a result of lower than expected net financial income from loan closings in 2006. The planned and approved 2006 deficit is the third in a row, following years of consistent surpluses. The deficit recognizes the predicted cumulative impact of SDF's performance-based grant making for its wind, solar PV and public education programs on its net financial income. SDF has responded to this situation by reducing its staff expense, reducing or holding its other operating expenses flat, and increasing its efforts to source and close loans that generate current income. However, absent any new capitalization, SDF's deficits are expected to continue as the remaining PECO Energy/Unicom merger grant program commitments are paid out and SDF's capital decreases.

## **Going Forward**

Under the terms of the settlement agreement of the proposed merger of Exelon and PSEG that was executed by the parties and approved by the Commission in 2005, TRF was to receive \$7.2 million to continue the clean energy work of the Sustainable Development Fund. However, Exelon and PSEG withdrew their application for the merger before the New Jersey Board of Public Utilities on September 14, 2006, rendering the Pennsylvania settlement void.[\[2\]](#)

In 2006, SDF worked closely with the Pennsylvania Treasury Department, as well as the other Pennsylvania sustainable energy funds and other financial intermediaries, to create a new fund to lend and invest in clean tech companies and projects. In September, 2006, the Treasurer announced its new \$90 million Keystone Green Investment Strategy, which includes the \$40 million Keystone Green Fund, a fund established to attract and leverage private sector investments in clean technology products, companies and projects that will benefit Pennsylvania's economy. SDF provided a concept paper on how the Keystone Green Investment Fund might be structured and late in 2006, issued a \$3 million term sheet to the Pennsylvania Treasury Department to leverage Treasury funds for clean energy and energy efficiency project financing. This proposal remains under consideration as of this report's writing.

On February 22, 2006, TRF filed a petition to intervene in the merger proceeding of Constellation Energy and the FPL Group before the Maryland Public Service Commission. TRF sponsored the direct testimony of Lewis Milford, the president of the Clean Energy States Alliance. However, following the utility legislation passed by the Maryland General Assembly in special session in July 2006, Constellation and FPL Group withdrew their merger application.[\[3\]](#)



## **Conclusion**

It is one of SDF's chief priorities to deploy SDF's remaining funds in projects and companies in a way that makes the strongest possible case that the public interest is served through the continued funding of clean energy activities. To this end, SDF's focus in 2007 will be on the following:

For SDF to continue supporting clean energy at the rate it has for the last few years, it must identify new sources of capital. In 2007, SDF will be using the following strategies to secure new capital:

§ We will ask the Commission to resolve whether PECO has a continuing obligation to support SDF under the existing settlement orders in the restructuring case and the merger case;

§ We will continue our discussions with the Pennsylvania Department of Treasury with the intention of successfully negotiating an initial Treasury investment to deploy in the form of project loans for clean energy projects throughout Pennsylvania;

§ We will work with the Pennsylvania Department of Environmental Protection to identify a collaborative SDF lending role as part of the Pennsylvania Energy Independence Initiative;

§ We will take advantage of any opportunities to recapitalize SDF's energy work through regulatory initiatives as we did in the Exelon/PSEG merger proceeding and the Constellation/FPL merger proceeding; and

§ We will look to apply the precedent we established in the PEDDA grant for our solar PV projects and explore additional opportunities to originate SDF financing transactions for purchase by PEDDA, DCED and PA Treasury Department.

In 2007, SDF needs to increase the number of loans and investments that it closes. One strategy we will push is to expand joint financing initiatives with The Reinvestment Fund by financing eligible energy measures as part of a larger transaction under TRF's Fresh Foods Financing Initiative, Community Facilities loans (charter schools, daycare centers, etc.) and Affordable Housing projects.

We will also expand the co-marketing and financing work we do with PIDC at the Philadelphia Navy Yard, the University of Pennsylvania and elsewhere.

2006 has marked a turning point for SDF. Much of the capital placed with SDF in conjunction with the 2000 settlement of the PECO Unicom merger proceeding has now been committed to projects. The last of these dollars will be largely disbursed in 2007 as the funded

projects' performance milestones are achieved. Recapitalization of TRF/SDF's energy work is essential in 2007 if TRF is to extend its strong energy financing track record.

## **Sustainable Energy Fund of Central Eastern Pennsylvania (PPL Service Territory)**

<http://www.theseef.org>

### **Introduction and Highlights**

The Sustainable Energy Fund of Central Eastern Pennsylvania (SEF) is a nonprofit, private organization dedicated to the use of renewable energy, clean energy technologies, energy conservation, and education. It was founded in 1999 by the Commission with a mission to promote research and invest in clean and renewable energy initiatives and enterprises to benefit residential, commercial, institutional and industrial customers within the PPL electric service territory and throughout the Commonwealth of Pennsylvania.

The SEF seeks out, focuses on, and invests in economically viable, energy-related businesses, projects and/or educational initiatives that create innovative, market-based technologies and solutions to enable environmentally sound and sustainable energy usage. The SEF operates in an entrepreneurial manner as a financially independent and self-sustaining non-profit enterprise, fully incorporated as a 501(c) (3) organization for charitable, educational and scientific purposes.

The SEF provides financial assistance and attractive funding options, including equity investments, commercial loans and grants, for projects that offer a strong fit with its mission. Ideal projects emphasize:

- § Renewable Energy Sources - Wind, Solar, Anaerobic Digestion/BioMass;
- § Clean Energy Technologies - Fuel Cells, Low-Impact HydroPower, and BioFuels/Ethanol;
- § Energy Conservation & Efficiency - light emitting diode (LED) and PV Lighting Technology; and
- § Energy Education - Feasibility studies or broad educational initiatives of significant impact.

### **Financial Approvals**

For Fiscal Year 2006-07, the SEF disbursed the following loans and grants:

#### **LOANS**

<b>Project</b>	<b>Amount</b>	<b>Comments</b>
Plextronics	\$ 750,000	Finance further development of Plexcore PV technology for organic solar cells.
		Supplement Energy Harvest Grant to build anaerobic digester to improve the manure management system on their dairy farm.
Wanner Farms	\$ 300,000	The digester will produce approx. 2500 Kwh of electricity daily, which is up to 4 times the amount the Wannars need for the farm. They plan to sell the surplus electricity to PPL.
Bloomsburg	\$ 8,900	Municipal LED traffic signal retrofit.
Northampton	\$ 15,250	Municipal LED traffic signal retrofit.
Hamburg	\$ 11,135	Municipal LED traffic signal retrofit.
Muhlenberg	\$ 37,600	Municipal LED traffic signal retrofit.
Pottsville	\$ 51,900	Municipal LED traffic signal retrofit.
Minersville	\$ 20,012	Municipal LED traffic signal retrofit.
Shenandoah	\$ 20,715	Municipal LED traffic signal retrofit.
Mount Carmel	\$ 7,100	Municipal LED traffic signal retrofit.
<b>Total Loans</b>	<b>\$1,222,612</b>	

## GRANTS

Miscellaneous	\$ 36,802	Solar Scholars program.
Clarion University	\$ 15,000	Solar Scholars program.
Villanova University	\$ 15,000	Solar Scholars program.
Messiah college	\$ 15,000	Solar Scholars program.
		Develop & deliver an experimental education project in sustainable energy for students and homeowners. This included hands-on demonstration projects for renewable energy on campus at the Fulton Center for Sustainable Living (wind energy demonstration; remote PV security & pathway lighting; mobile solar demonstration kit, etc) and development of an undergraduate sustainable energy curriculum.
Wilson College	\$ 11,588	\$3,000 per unit grant for demonstration project that transformed a former brownfield site to an innovative, energy efficient residential community consisting of single-family homes available to eligible buyers.
Pine Street Housing	\$ 33,000	

Twin Valley School District	\$ 12,250	To fund a portion of the costs associated with obtaining LEED certification for construction of a 70,000 sq. foot two-story elementary school building in Elverson, PA.
Tides Center	\$ 1,908	To encourage and assist 10 PCIEP (PA Consortium for Interdisciplinary Environmental Policy) member colleges & universities in completing a greenhouse gases inventory of their campuses.
Econ Opportunities	\$ 5,000	LED street lighting demonstration project - City of Allentown and Lehigh University.
AFC First Financial	\$ 5,000	Sponsor seminars for home contractors to develop interest & promote Keystone Help loan program.
<b>Total Grants</b>	<b>\$150,548</b>	

## **Board Activities**

By way of background, the SEF was formed pursuant to a joint settlement agreement arising from the Commission's electric utility deregulation proceedings in 1998. The agreement provides, in part, a rate surcharge on electric power ratepayers through 2004. In 2005, the rate surcharge was renewed for an additional two years through Dec. 31, 2006. The 2005 surcharge was 0.01 cents per Kwh and reduced to 0.005 per Kwh in 2006. The surcharge is collected from the ratepayers by the electric distribution company, PPL Electric Utilities for this local area, and remitted to the SEF for investment. The SEF is managed by a President who reports to a seven member Board of Directors.

The SEF, as a result of the PPL rate case was notified by the Commission that, beyond 2006, the Fund would receive no further surcharge fees from PPL. Since this ruling was made, the Board of Directors of the SEF sought out ideas and strategies to assist in the continued and sustainable execution of its primary mission described above, without ratepayer dollars. One strategy, which was developed, vetted, and approved by the SEF Board, was the establishment of a wholly owned subsidiary of SEF, funded with debt and equity instruments to allow for the development of "for profit" activities in the renewable energy arena which were parallel and congruent with the interests and mission of the SEF. It was and is anticipated that this investment, similar to SEF's investments in other for profit entities would be developed to provide funds back to the SEF for use in executing its original mission and objectives on a sustainable basis. Accordingly, the SEF incorporated Green Connexions, Inc. ("GC") in late 2005. The SEF's Board authorized the investment of \$1,000,000 in GC.

## **Conclusion**

Looking forward, the PPL SEF will be challenged to provide funding for future activities. Sustainable funding sources of revenue have been proposed but await action.

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

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

### **Introduction and Highlights**

In 2006, the West Penn Power Sustainable Energy Fund (WPPSEF) entered its fifth 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. Key accomplishments in 2006 include:

***Investing in clean energy.*** During 2006, the WPPSEF committed \$1,912,878 to co-fund 21 funding initiatives. Of the 21 investments, approximately 60% was committed to expand the capacity of three manufacturing/ processing facilities (Agricultural Commodities to produce clarified soy oil from PA grown soybeans for biodiesel feedstocks, SureTight Panels Corporation to expand their production of ultra-efficient housing construction materials, and LMF Manufacturing to expand the production of biomass furnaces).

***Investing in energy efficiency.*** The activity of the Keystone Home Energy Loan Program (Keystone HELP) increased dramatically as the program grew to over 500 participating contractors, provided over \$7 million in loans, supporting over 1,200 funding requests. The WPPSEF is extremely proud of this program, which was launched in 2005. This program would not have been possible without the generous base funding from the Pennsylvania Treasury Department, which worked with the WPPSEF to expand WPPSEF's regional pilot program into a broader statewide program.

***Investing in education and public outreach.*** The 2006 PA Clean Energy Expo drew over 15,000 attendees from across Pennsylvania and beyond for the 2-day event. The WPPSEF worked to fill

over 270 exhibit spaces, conduct 9 workshops, and worked with 29 Expo sponsors to enable this event to be free to the general public.

## **Financial Approvals**

### **Investments**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
Agriculture Commodities	\$ 500,000	Expansion of soybean oil extrusion facilities, oils used to produce biodiesel. Biodiesel made from PA soybeans and sold locally. Plant is located in New Oxford, PA.
LMF Manufacturing	\$ 150,000	Purchase, renovation, and expansion of facility to manufacture biomass furnaces (100,000 and 170,000 Btu). Primary fuel is shelled corn but also can utilize fruit stones and a variety of grains.
SureTight Panels Corporation	\$ 481,500	Purchase new equipment to manufacture structural insulation panels (SIPs) that is used in home construction. Equipment will increase plant capacity approximately 5X.
GreenForge Building	\$ 400,000	Financing of LEED designed and built commercial office building. This building is part of the Donahoe campus, which showcases numerous clean energy technologies such as residential-scale wind and solar PV, geothermal heating and cooling, and green roof technologies.
<b>Total Investments</b>	<b>\$1,531,500</b>	

### **Strategic Initiatives Developed by WPPSEF**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
PA Native Grasses	\$ 64,500	WPPSEF launched this program to pull together the state's expertise into the use of native grasses (e.g. switchgrass, Big Bluestem) to produce feedstocks for residential, commercial, and light industrial heating applications.

Interet/ Gemstone Group	\$ 5,000	WPPSEF launched this program with the Gemstone Group. The program is centered on developing financial models on how to optimize the financing of commercial-scale PV.
Westmoreland Human Opportunities/ Envinity	\$ 7,500	Supports the South Sixth Street neighborhood revitalization program by facilitating the construction of new homes to Energy Star standards.
Powdermill Nature Reserve	\$ 25,000	Supports the installation of Carnegie Mellon University's 2008 solar decathlon home to be permanently located at the Powdermill Nature Reserve.
Apollo Design Group	\$ 20,000	Program showcase for the WPPSEF.
GreenForge Building	\$ 75,000	Installation of solar PV, geothermal heating/cooling, green roof technologies.
<b>Total Strategic Initiatives</b>	<b>\$197,000</b>	

#### **WPPSEF Grants/ Memberships/ Sponsorships**

<b>Business</b>	<b>Amount</b>	<b>Comments</b>
Solar Decathlon (Penn State University)	\$ 25,000	Supports Penn State's Department of Energy's solar decathlon entry.
Solar Decathlon (Carnegie Mellon)	\$ 25,000	Supports Carnegie Mellon Department of Energy's solar decathlon entry.
PA Foundry Association	\$ 25,132	Funds 6 demand side response workshops for Pennsylvania's industrial sector.
Affordable Comfort, Inc.	\$ 10,000	Supported Energy Star home program in Uniontown, PA.
Air Liquide	\$ 35,000	St. Mary's plant energy efficiency improvements (advanced process control for air separation).
Solar Strategies	\$ 50,000	Supports the installation of solar PV at a planned rural town center, which will be comprised of residential housing and commercial properties. The site is planned to have 1.2 MW of solar PV installed.
American Wind Energy Association (AWEA)	\$ 250	2006 calendar membership.
Alternative Fuels Renewable Energy Council	\$ 750	2006 calendar membership.
Citizen for Pennsylvania Future (Penn Future)	\$ 7,500	2006 calendar membership.
Clean Energy States Alliance (CESA)	\$ 5,246	Membership dues (June 2006 to May 2007).

Regional Economic Development District Initiatives (REDDI)	\$ 500	Sponsorship for biofuels conference.
<b>Total Grants/ Memberships/ Sponsorships</b>	<b>\$184,378</b>	

### **WPPSEF Administration**

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, 2006, are:

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

The WPPSEF Board of Directors selected The Pennsylvania State University 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 Energetics and the Gemstone Group on an as-needed basis.

The WPPSEF staff, as of December 31, 2006, is:

- § Joel Morrison, Fund Administrator
  - The Pennsylvania State University (The Energy Institute)
- § John Skiavo and James Smith
  - Economic Growth Connection of Westmoreland County

Additional support to the WPPSEF is provided by:

- § Joe Badin
  - Energetics
- § Gary Kleiman and Adam Stern
  - Gemstone Group

## **WPSEF 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 2007 Activities**

The WPPSEF Board held a strategic planning meeting on November 17, 2006 to develop a two-year program development plan. The WPPSEF will focus on two broad categories in the 2007-2008 timeframe. They are:

**Bioenergy.** The WPPSEF continues to be enthusiastically support the use of Pennsylvania indigenous biomass resources for the production of clean power generation and clean transportation fuels (primarily biodiesel). The WPPSEF will expand its efforts to seek out investment opportunities in residential, commercial, and light industrial applications for bioenergy.

**Energy Efficiency.** The WPPSEFs seeks to develop a robust residential home energy efficiency program by mid-2007. Efforts are now underway to build infrastructure and to develop a marketing strategy. The WPPSEF will also work with the Keystone HELP to support the program. In addition to the home energy efficiency efforts, the WPPSEF will also seek out innovative programs to support industrial programs. One possible scenario is to explore the use

of small-scale biomass combined heat and power technologies to reduce plant-operating costs. This effort is only in the preliminary planning stage.

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[1] 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.

[2] No SDF dollars were used in this intervention, only TRF funding from non-SDF sources.

[3] No SDF dollars were used in this intervention, only TRF funding from non-SDF sources.