

ANNUAL REPORT 2018

Creating a **LASTING** Impact



Live it **TODAY** for **TOMORROW.**



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OUR MISSION

is to promote, research and invest in clean and renewable energy technologies, energy conservation, energy efficiency and sustainable energy enterprises that provide opportunities and benefits for PPL Electric ratepayers.



OUR VISION

is to lead Pennsylvania in a direction so that today's needs for environmentally sound, safe, affordable, abundant and reliable energy do not affect the ability of future generations to meet their needs.



OUR VALUES



- ⚡ We recognize that we have a responsibility to invest in and finance businesses and projects that others would not, all while being cognizant of and balancing the project's or business' mission fit and financial risk to the organization
- ⚡ We value courtesy, honesty, integrity, fairness, respect and trust and strive individually and as a team to "Do The Right Thing" at all times.
- ⚡ We are committed to personal and professional growth through continuous learning and development of the organization's staff
- ⚡ We strive to achieve the mission and goals of the organization in a financially sustainable manner.
- ⚡ We recognize a responsibility to provide community access to sustainable energy education and to educate the leaders of today and tomorrow in sustainable energy

PRESIDENT'S LETTER

Dear **STAKEHOLDERS,**

Real change is what needs to happen to move society towards a sustainable energy future. This is a cultural change; it cannot be mandated by government but must stem from each individual and community for the benefit of future generations and the ecosystem at large. Moving society towards a sustainable energy future is an

audacious promise beyond ableness, but that is exactly what SEF is in the process of doing. This promise requires the development of the capacity and capability of SEF's Staff and stakeholders. In a nutshell, Sustainable Energy Fund's mission is to move society towards this sustainable energy reality.

"We can change the culture and send ripples through society"



In 2018, Sustainable Energy Fund made significant strides in moving the needle on sustainable energy. SEF committed more than \$11 million to energy efficiency and renewable energy. The Fund also sought to leverage its efforts by taking an equity stake in a new energy efficiency lending company and working to turn

enabling legislation into C-PACE programs. To further push sustainable energy in buildings, SEF and its Board of Directors decided to 'walk the talk' by approving construction of a 15,000 square foot net-zero office building.

At this time, a sustainable energy future is beyond SEF's reach, but through the ability to increase the capacity and capability of each individual and community SEF interacts with we can change the culture and send ripples throughout society.

John Costlow,
 **PRESIDENT/CEO**

At SEF, we have consistently asked questions such as 'How do we save people money and lower their utility bills?'. While those things are important, we realize the importance of asking how the work we do can impact people, businesses, communities and the world in a more meaningful way.





“Energypath helped me get into solar and now I'm the director of residential engineering for a solar EPC in the DC area”

Humza Arshad
IPSUM POWER, INC.

C-PACE

Sustainable Energy Fund staff hosted three stakeholder meetings for Commercial Property Assessed Clean Energy (C-PACE), a national program currently being adopted in Pennsylvania. SEF invited over 130 stakeholders to these meetings. Additionally, staff presented C-PACE to a group of counties, Pennsylvania Municipal League, KEEA, and PA Solar Futures conferences among others.

Holly Edinger



**DIRECTOR, SPECIAL
PROJECTS**



Education **REPORT**

SOLARIZE LEHIGH VALLEY

To promote Solarize Lehigh Valley, SEF attended and exhibited at over 50 community and professional events. Staff also hosted events promoting the Solarize program. Staff generated over 120 leads for Solarize at these events, which added to the more than 170 leads generated from other marketing initiatives.

Education is a primary component to the mission of Sustainable Energy Fund. In 2018, we provided education at events including the Pennsylvania Farm Show, the 2018 PANO Conference, and the 2018 AASHE Conference and Expo among others. Overall, 6,600 hours of education were provided by SEF staff and volunteers in 2018 at a variety of events.

ENERGYPATH 2018

Energypath 2018 was attended by more than 300 industry professionals, academics, policy makers, and students. The conference was well received by our attendees, who learned about Grid Integration. Conference attendees had the opportunity to participate in 19 break-out sessions and 3 plenary presentations. Each of the attendees participated in an average of 9 hours of education programming, which accounted for approximately 2,826 educational hours.

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Energypath 2018 RESULTS

314

attendees at the conference. The conference featured speakers, exhibitors, a keynote dinner and a middle and high school science fair.

42



science fair participants. Winning projects included RMPC: A Novel Cost-Effective Approach to Raising Photovoltaic Efficiency Through Tunable Plasmonic Nanostructures and Stepping into the Future: Piezoelectricity in Action.

21

Speakers



34

Exhibitors
& Sponsors



25

Sessions



124

Energypath camper participants. These participants took part in hands-on pre-conference energy camps such as Solar PV, Introduction to Sustainable Energy, and Wind Power, which allowed participants to engage in activities and gain experience in sustainable energy technologies.





“As a first-time attendee, I was truly impressed with Energypath 2018. The panels featured a wide range of speakers, all whose substantive expertise resulted in informative, engaging presentations. Notably, the conference managed to provide information accessible to a clean energy novices and experts alike.”

Jennifer Bernstein
**UNIVERSITY OF
SOUTHERN CALIFORNIA**



PROJECTS

Special Projects **REPORT**

In addition to our traditional education initiatives, Sustainable Energy Fund ran several special programs in 2018. These programs were implemented to bring additional awareness to the impact of sustainable energy and to directly help businesses, nonprofits, and residents save money and energy. The Nonprofit Energy Makeover contest, which began in 2017, concluded in 2018 with the Lehigh County Humane Society makeover in January. Additionally, Solarize Lehigh Valley, was launched to make solar more affordable for commercial and residential customers in the Lehigh Valley. This project began in May 2018 and concluded in October 2018.

"These programs were implemented to bring awareness to the impact of sustainable energy."



To further promote financing clean energy projects, Sustainable Energy Fund worked with the Keystone Energy Efficiency Alliance, Philadelphia Energy Authority, and the City of Pittsburgh Sustainability and Resilience Division to make Commercial Property Assessed Clean Energy, or C-PACE, possible in Pennsylvania. Sustainable Energy Fund has offered to act as the C-PACE program administrator for 66 of the 67 counties in PA. The C-PACE program will continue to develop as we move into 2019.

Holly Edinger

**DIRECTOR, SPECIAL
PROJECTS**

LEHIGH COUNTY HUMANE SOCIETY MAKEOVER

On Saturday, January 20, 2018, SEF held a Nonprofit Energy Makeover Event at the Lehigh County Humane Society (LCHS) in Allentown, PA as part of the Nonprofit Energy Makeover Contest. LCHS was chosen for inefficiencies identified in their building as well as their mission.

The goal of this program was to upgrade nonprofit buildings to be more energy efficient at no cost to the organization. These upgrades will lower LCHS's utility bills and allow them to reallocate funds towards their mission.

Upgrades included installation of a 10kW solar array, an LED lighting retrofit, replacement of two inefficient water heaters, removal of a high temperature, high pressure washer, and implementation of several weatherization measures.



The logo for Solarize Lehigh Valley features the word "SOLARIZE" in large, white, sans-serif capital letters, with a glowing yellow sun icon replacing the letter "O". Below it, "LEHIGH VALLEY" is written in smaller, white, sans-serif capital letters. The tagline "GET SOLAR FOR *Less*" is displayed in white, with "Less" in a cursive font. In the bottom right corner, there is a small logo for the Sustainable Energy Fund with the text "POWERED BY: Sustainable Energy Fund". The background is a dark blue gradient with abstract yellow and white brushstroke-like patterns.

SOLARIZE LEHIGH VALLEY

Solarize Lehigh Valley was a regional program to assist local residents and small businesses go solar. The aim of the program was to remove obstacles associated with buying and installing solar. By working with one contractor for installations, SEF was able to negotiate a bulk rate. We also offered educational workshops to explain the process and the benefits of going solar. The goal of Solarize Lehigh Valley was to educate the community, reduce the cost of installations, raise awareness and increase adoption of solar energy in the Lehigh Valley.

Solarize Lehigh Valley was launched in May 2018. The program was promoted at various community and professional events as well as through multiple marketing initiatives. Evoke Solar, the installer associated with the program, assisted SEF in promoting the program by attending events.

Through the October 1st deadline, the Solarize program generated 293 leads for solar installations across the Lehigh Valley. Evoke Solar conducted 70 free solar site assessments from these leads, most of which were for residential projects. The cost for residential systems was \$2.55 per watt.

HOW C-PACE WORKS

Created by PACE Wisconsin



C-PACE PROGRAM

In June 2018, Governor Tom Wolf signed SB 234 granting authority to local governments to establish a Commercial Property Assessed Clean Energy (C-PACE) Program. To facilitate the adoption of C-PACE in Pennsylvania, Program Guidelines were developed by Sustainable Energy Fund and the Keystone Energy Efficiency Alliance with the assistance of the City of Pittsburgh Sustainability and Resilience Division and Philadelphia Energy Authority. Additionally, the group convened a statewide group of stakeholders and national consultants at the end of 2018. There were more than 130 stakeholders represented during the guideline development process. SEF's goal is to achieve consistent guidelines statewide and maximize the C-PACE investment in the commonwealth.

Sustainable Energy Fund has openly offered to act as the Program Administrator for any local unit of government in the Commonwealth of Pennsylvania. In 2019, we aim to have C-PACE implemented in several counties.



FINANCE

Finance **REPORT**

Sustainable Energy Fund provides financing designed to advance energy efficiency and renewable energy projects throughout Pennsylvania. SEF has been a leading funder of sustainable energy projects and has been involved with the financing of projects worth over \$100 million combined. Sustainable Energy Fund provides financing to commercial and nonprofit entities for energy-related projects that either:

- ⚡ **Reduce energy consumption,**
- ⚡ **Generate energy from a renewable resource, or**
- ⚡ **Replace a "dirty" fossil fuel with a clean energy source**

OUR FINANCING

In 2018, commitments exceeded \$11 million. SEF will provide financing for 100% of an energy project ranging in size from \$5,000 to \$1 million. Unlike a traditional commercial lender, SEF will consider the energy savings of a project and strive to structure our loans to be cash flow positive. We'll provide a few loan options to customers to help them make an informed

decision based on the energy savings and financial goals. Another feature that sets us apart from a traditional lender is the fact we do not penalize our customers for paying a loan off early. Our Energy Savings Agreements capture the future energy savings of a project to help fund that project, allowing organizations to focus on their mission, what they do best.



INVEST IN

Utilizing Sustainable Energy Fund's financing is an investment in a clean energy future in Pennsylvania. SEF only finances projects that promote and further sustainable energy that ultimately protect the health of our communities by reducing the amount of greenhouse emissions released into the atmosphere. Furthermore, studies have shown that the benefits associated with a high-performing building extends well beyond energy

CLEAN ENERGY

savings. Increased employee comfort, health, and productivity have all been associated with energy conservation and green building measures. Energy projects help organizations meet their triple bottom line and environmental social governance (ESG) goals.

Additionally, financing energy projects enables our organization to continue educating future leaders in sustainability through our education programs.



Shannon Crooker

**DIRECTOR, PROGRAM
RELATED INVESTMENTS**

"Studies have shown that benefits associated with a high-performing building extends well beyond energy savings. Increased employee comfort, health, and productivity have all been associated with energy conservation and green building measures"



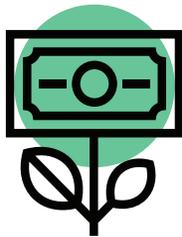
COMMITTED PROJECTS



RADIO ROAD ASSOCIATES	\$84,126
SUNVESTMENT ENERGY GROUP	\$2,545,100
RER ALBRIGHT PPA	\$364,320
RER SMA PPA	\$127,619
ST. TITUS ROMAN CATHOLIC CHURCH	\$30,000
CAN DO, INC.	\$150,000
GARDNER'S MATTRESS	\$9,710
NATIONAL ENERGY IMPROVEMENT FUND	\$500,000
MUTZABAUGH'S MARKET	\$44,755
PIKE COUNTY LIBRARY	\$27,660
COMMUNITY ENERGY SOLAR	\$4,586,400
KRAYBILL MENNONITE SCHOOL	\$36,650
CIMA NETWORK	\$35,875
BEDFORD 58 SOLAR, LLC	\$2,000,000
BEDFORD 57 SOLAR, LLC	\$1,345,481
HOLY GUARDIAN ANGELS	\$1,635

FINANCIALS

\$20.4 MM
TOTAL LIABILITIES
AND ASSETS



ASSETS	2018
Cash and Cash Equivalents	\$168,242
Accounts Receivable	\$80,940
Inventory	\$3,390
Investments	\$8,633,097
Program Related Investments	\$8,955,114
Investment in National Energy Improvement Fund, LLC	\$414,327
Equipment, Net	\$2,155,305
Prepaid Expenses and Deposits	\$34,125
TOTAL ASSETS	\$20,444,540

LIABILITIES	2018
Accounts Payable	\$71,607
Accrued Expense/Deferred Revenue	\$97,565
Accrued Salary/Benefits	\$63,214
Deferred ESA Income	\$323,750
TOTAL LIABILITIES	\$556,136

NET ASSETS	2018
Unrestricted Net Assets	\$19,888,404
TOTAL LIABILITIES & NET ASSETS	\$20,444,540



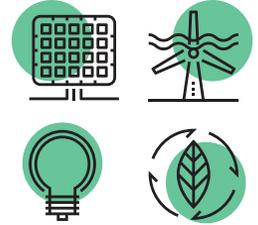
Why We **DO IT**

SEF's primary goal is to move society towards a more sustainable energy future. Over time, the impacts of the energy projects we financed and the education we provided have created a large impact on the people and organizations we work with, our community, and the world at large.

These numbers showcase how we are living our mission and meeting our goals through our financing initiatives.

ENERGY FINANCED

\$6 MILLION

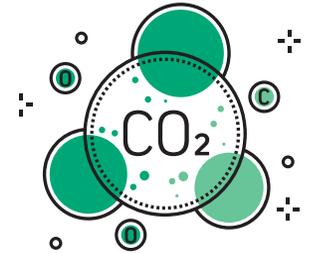


Amount of projects financed in 2019. Sustainable Energy Fund dispersed over \$6 million in sustainable energy financing, including over \$4.5 million for renewable energy projects. With the renewable energy industry quickly growing, more projects means more jobs

ENERGY GENERATED

Since inception, SEF financing has helped generate over 168 million kilowatt-hours of renewable electricity

168 MILLION



125,830

Since inception, projects funded by SEF have prevented 125,830 tons of CO2 from entering the atmosphere

ENERGY SAVED

46 MILLION

Since inception, SEF Energy efficiency projects have allowed customers to reduce their energy consumption by almost 46 million kW hours



OUR **BOARD OF DIRECTORS**



Robert S. Thomson
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Linda R. Evers
VICE CHAIR



William DeFalco
SECRETARY/TREASURER



Jocelyn Cramer
DIRECTOR



Larry Eighmy
DIRECTOR



Brandi Snyder
DIRECTOR

OUR STAFF



John Costlow
PRESIDENT/CEO



Shannon Crooker
**DIRECTOR, PROGRAM
RELATED INVESTMENTS**



Scott DeStefon
PRI ANALYST



Holly Edinger
**DIRECTOR, SPECIAL
PROJECTS**



Brian Hillard
TECHNICAL SPECIALIST



Sally Kratz
ACCOUNTANT



Morgan Remaly
**ADMINISTRATIVE
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Kristen Sehn
**MARKETING
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SUSTAINABLE
ENERGY FUND



**COMMUNITY
ENERGY SOLAR**

THE STONE HOUSE GROUP
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BERKSHIRE
ASSET MANAGEMENT



Energy to do more®



LEHIGH
UNIVERSITY
P.C. ROSSIN COLLEGE
OF ENGINEERING AND
APPLIED SCIENCE
Energy Systems Engineering Institute

chatham
UNIVERSITY



PPL Electric Utilities

Thank you!



“Through the ability to increase the capacity and capability of each individual and community Sustainable Energy Fund interacts with, we can change the culture and send ripples throughout society.”

John Costlow,
SUSTAINABLE ENERGY FUND



