

2018 ANNUAL REPORT | YEAR 2 UPDATE

THE PHILADELPHIA  
**ENERGY**  
CAMPAIGN



PHILADELPHIA  
ENERGY AUTHORITY





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The Philadelphia Energy Authority is a city government entity formed in 2010 to support the city on energy affordability and sustainability, including developing long-term energy projects, policies and programs.

In 2016, we launched the ten-year Philadelphia Energy Campaign with the goal of transforming Philadelphia into a national model for implementing energy strategies that improve the health and well-being of the community and local economy, including the City's most vulnerable residents. I am happy to present the results of the second year of this important campaign in this report.

A handwritten signature in white ink that reads "Christopher A. Lewis". The signature is fluid and cursive.

Christopher A. Lewis  
*Chair, PEA Board*



## MESSAGE FROM THE EXECUTIVE DIRECTOR

At the Philadelphia Energy Authority, we see how energy affects the lives and well-being of all Philadelphians on a daily basis.

Our ten-year campaign was developed to leverage energy as a tool for impact on some of the most challenging issues facing our city, including poverty, joblessness and climate change. Our aging housing stock often needs more than weatherization to lower utility costs for our most vulnerable residents. There is a need to address the high cost of entry to access the benefits of solar power, and school infrastructure that needs to be updated to support the kinds of healthy, comfortable learning environments that help our students achieve.

The Philadelphia Energy Campaign will invest \$1 billion and create 10,000 jobs by 2026. We are proud to share the progress we've achieved in only two years' time. Our work has matured from a set of goals to **feet-on-the-ground action**. We have established programs and made real changes in every sector (municipal, schools, affordable housing and small businesses). **In 2018, over \$48 million of new projects were completed, leading to nearly 1,000 jobs created total over the course of the campaign from construction and energy savings.**

In 2018, we also laid the groundwork for over \$150 million in other projects that will have contracts completed in 2019. We are building a clean energy economy in Philadelphia, and both large multi-national firms and entrepreneurs are seeing Philadelphia as a good place to do business, opening up Philadelphia offices and making community investments in job training and education. Philadelphia is one of the fastest growing solar markets in the country, and the State has designated solar installer a High Priority Occupation for Philadelphia County, unlocking workforce training dollars.

This work would not be possible without the support, commitment and leadership of Council President Darrell Clarke, Mayor Jim Kenney, members of City Council, Christine Knapp, and the dozens of partners and supporters in and outside of City government. We have set a national precedent for what cities can do to fight climate change and drive growth with equity, and we are proud to continue to serve Philadelphia.

Emily Schapira  
Executive Director, Philadelphia Energy Authority

## HIGHLIGHTS FROM 2018

### \$11.3M

Began construction on \$11.3M energy efficiency project at the Philadelphia Museum of Art.

### \$5.8M

Grew Solarize Philly to the largest solarize program in the nation, investing nearly \$6 million in local solar.

### \$23M

Began construction on \$23M energy efficiency project at the School District of Philadelphia, using savings to help pay for new boilers and windows. RFP released for next round of up to 20 more schools.

### 78

Free energy audits completed for 78 additional small businesses in neighborhoods across the city.

### \$1.25M

Won a \$1.25M award from the U.S. Department of Energy to create the nation's first three-year CTE program for high schoolers in Clean Energy.

THE PHILADELPHIA  
ENERGY CAMPAIGN:

## 2016–2026 OBJECTIVES

### Invest

\$1 billion  
over 10 years

### Create

10,000 high-  
quality jobs

### Reach

25,000  
households

### Support

2,500 small  
businesses

THE CAMPAIGN PURSUES FOUR GOALS:



CREATE  
JOBS



STRENGTHEN  
COMMUNITIES



CUT ENERGY  
BILLS



REDUCE AIR &  
WATER POLLUTION

COVERING FOUR SECTORS:



Municipal



Schools

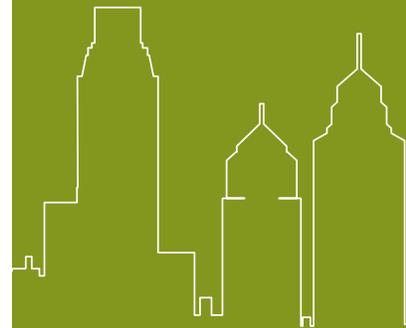


Affordable  
Housing



Small Businesses

JOB CREATION



# Stoking the Green Economy

Direct, indirect, and induced jobs across the 10-year Energy Campaign

When we launched the Energy Campaign, we promised 10,000 jobs would be created as a result of this work. We are proud to share that we are on track to meet our job creation and investment goals. We are excited to see this work moving forward as predicted and having the positive impact we projected it would.

## How does energy efficiency create jobs?

When energy efficiency and clean energy projects move forward, jobs are created in three ways:



### Direct Jobs

Direct jobs tend to be, for example, skilled trades, sales and project management, engineers and designers.



### Indirect Jobs

Indirect jobs are created down the supply chain with suppliers and distributors of products, like furnaces or solar panels, that they have to purchase. These purchases create jobs for companies that supply the energy industry.



### Induced Jobs

Newly employed workers in these direct and indirect industries spend their earnings on goods and services in the broader economy, creating induced jobs.

	New Project Investments	Jobs Created
Year One: 2017	<b>\$53 million</b>	<b>225</b>
Year Two: 2018	<b>\$48 million</b>	<b>759</b>
<b>TOTAL TO DATE</b>	<b>\$101 million</b>	<b>984</b>

## JOB TRACKING

PEA asked the American Council for an Energy Efficient Economy (ACEEE) to have their Chief Economist develop an economic model using 2016 Philadelphia-specific labor data to help us track job creation. We track net jobs that occur in both the implementation and savings phases of projects, with each category having direct, indirect and induced jobs.

# MUNICIPAL BUILDINGS

The City of Philadelphia government is leading by example in the Energy Campaign, and all work in this sector helps drive towards meeting Mayor Kenney's recent Climate Commitments. The primary actor for City buildings is the Office of Sustainability's Energy Office (OOS). The City scopes and prioritizes projects, and the Energy Authority provides the procurement and contracting support needed to move the projects forward.

Mayor Kenney recently committed Philadelphia to substantial action on climate change. Those commitments provide the context for PEA's partnership on City buildings.

- Philadelphia will remain a member of the Paris Climate Agreement and pledged to reduce citywide carbon emissions 28% from 2006 levels by 2025
- Philadelphia will cut governmental energy use 20% and carbon emissions 50% by 2030
- Philadelphia will source 100% clean electricity for municipal operations by 2030
- Philadelphia will reduce citywide carbon emissions 80% by 2050

OOS recently released a Municipal Energy Master Plan focused on City-owned buildings (excluding the Airport and Water Department) and including streetlights. They also released the citywide Clean Energy Vision, which sets a framework for our 2050 goal.

In 2018, PEA and OOS launched two major projects:

- PA's largest solar array to provide 22% of municipal electricity
- Energy Efficiency at the Philadelphia Museum of Art



CREATE  
JOBS

**191 JOBS**

net over term of Museum project



CUT ENERGY  
BILLS

**\$757,000**

projected annual Museum  
energy savings



REDUCE AIR  
& WATER  
POLLUTION

**1.2 MILLION**

gallons of water saved  
by Museum

# Building a Greener City

## CITY SOLAR POWER PURCHASE AGREEMENT (PPA)



On December 19, 2018, Mayor Jim Kenney signed a bill to enable the city to enter into a Power Purchase Agreement with a renewable energy developer to buy solar power. The 70-Megawatt solar facility, **seven times bigger than any other in the state**, will be built in Adams County and will provide **22% of the City government's electricity**. This is one of the largest municipal solar procurements in the country, and both sets the standard for other progressive cities' engagement on climate change and sends a major signal to the marketplace that Pennsylvania solar has arrived.

Through the 20-year contract PEA will hold with Adams Solar LLC, a project company of Community Energy, Inc., the City will purchase all electricity produced at the site for 20 years at a fixed rate competitive with conventional electricity prices, protecting the city from market price spikes in the future. The project is key to meeting the commitment to have 100% of the City's electricity come from renewable sources by 2030, as set in the Municipal Energy Master Plan.

### JOB CREATION

The project also offers a job training benefit to the community, as solar trainees from PEA's "Opportunity Youth" cohort will get on-the-job training working on the array. High school students from the School District of Philadelphia's Career and Technical Education (CTE) program will visit the site for hands-on learning.

**22%**  
**ELECTRICITY  
FROM SOLAR**

## KEY CONCEPTS FOR ENERGY FINANCING:

### EPCs AND ESCOs

Energy Performance Contracting (EPC) is a project financing and procurement model that uses cost savings from reduced energy consumption to repay the cost of installing energy conservation and related capital measures.

Under Pennsylvania's Guaranteed Energy Savings Act (GESAs), all Commonwealth governmental units, including schools, may enter into contracts with Energy Services Companies (ESCOs) to develop energy efficiency projects through energy performance contracting. This is the approach that the Office of Sustainability selected to execute the energy efficiency project for the Philadelphia Museum of Art.

"Our engineers and project managers were excited to get a deep dive into this historic and iconic site."

— Nicholas Sracic, Account Executive, Johnson Controls

WATER USE

8%

ENERGY USE

23%

## THE PHILADELPHIA MUSEUM OF ART EPC

The Philadelphia Museum of Art was selected to undergo renovations because it is the largest single municipal user of energy. Through this \$11.3 million project to make the museum more energy efficient, **energy use is expected to be reduced by 23% and water use by 8%.**

Working in collaboration with the museum's Frank Gehry-designed Core renovation project, energy work is happening at the same time as other construction, with minimal disruption to museum operations. This is a complex project, requiring sensitivity to security, humidity and art handling. It sets an example for cultural institutions globally, demonstrating that substantive energy reductions can be made in the most sensitive environments.

Museum upgrades included:



LED lighting retrofits, which greatly reduced energy consumption and heat generated from lighting.



Upgrades to help HVAC run more efficiently and capture condensation for reuse as cooling tower makeup water.



Water conservation efforts included a retrofit of existing fixtures that reduced water consumption and prevented more than 1.2 million gallons of water from being put into our sewer system.



Air handler, cooling, transformer and automation system upgrades.

## WHAT'S TO COME

### **LED Streetlight and Smart Cities Conversion**

Over the past five years, the Streets Department has conducted test pilots for converting the city's 110,000 streetlights to LEDs. Successful completion of this conversion will improve public safety, reduce energy costs, and cut government carbon emissions by as much as 9%. Anecdotally, the pilots indicated a decrease in petty crime and littering and neighborhood businesses have seen revenue increases.

### **Feasibility Study for Hydropower at Flat Rock Dam**

PEA is currently working with City stakeholders, PWD and consultants to examine the engineering and economic feasibility of generating hydropower electricity from the dam. This evaluation will be completed after PWD's dam safety improvements are implemented.

### **Small Municipal Projects**

Each year, the Office of Sustainability aggregates smaller facilities with common energy conservation measures for bulk upgrade implementation. Projects include police and fire stations, maintenance and sanitation yards, parks and recreation facilities and other City buildings.

# SCHOOLS

The School District of Philadelphia (SDP) is one of the oldest and largest school districts in the country, spends over \$40 million a year on utilities and has over \$4.5 billion in deferred maintenance and capital work due to a long history of budget constraints. This has resulted in less-than-ideal learning environments, expensive energy waste, and buildings that can be uncomfortable, or even unhealthy. These projects pay for improvements to schools through energy savings instead of budget dollars.



CREATE  
JOBS

34

students trained  
for in-demand  
solar jobs

52

students  
trained  
to date

10

returning  
trainees  
placed in  
internships

218

local jobs created  
to support  
retrofit and  
construction  
work



STRENGTHEN  
COMMUNITIES

\$1,250,000

awarded to expand educational program



CUT  
ENERGY  
BILLS

3

high schools in pilot program  
improved with lighting, boilers,  
and windows

20%

projected energy reduction  
in pilot schools



REDUCE AIR  
& WATER  
POLLUTION

4.6 MILLION

pounds of CO2 emissions reduced

IMPROVED  
INDOOR  
AIR QUALITY



# Making Schools Smarter

## IMPROVING SCHOOL FACILITIES

PEA began working with the School District of Philadelphia (SDP) in 2017 to help use energy savings to provide new funding for major building systems work. In our pilot program, the savings from lighting and air sealing helped pay for more expensive, high priority, long-payback projects like new, modern boilers and windows.

The three high schools for the pilot — Saul, Northeast and Strawberry Mansion — all had high utility costs and systems that were past the end of their useful life. In 2018, having selected NORESKO as the pilot partner, the District began construction on upgrades to all three schools, starting with lighting. The installation of LED lighting and simple lighting controls reduced energy costs significantly.

Smart technology allowed for different lighting zones in classrooms, motion sensors in every fixture to turn off lights in unoccupied spaces, and sensors for “daylight harvesting,” which reduces output in the presence of bright sunlight.

Staff and student reactions have been overwhelmingly positive, as formerly dimly-lit spaces are now bright and inviting, with a lighting interface that is responsive to the needs of educators. The pilot received such immediate, positive feedback that SDP approved the expansion of the program for up to 20 additional schools beginning in 2019, and will include work on major heating systems, air sealing and windows.



**“There are comfort level and aesthetic values that are incalculable. The community will see new windows and doors on the property that improve the appearance of the school. We won’t have single-pane, sweating glass in the wintertime, and the spaces will be more comfortable year around. These are things that you can’t really put a numerical value on, but they do have impact on our students and staff.”**

— Craig Harnitchek, Mechanical Engineer, School District of Philadelphia

“The ‘Find Your Power’ program showed me that solar is a growing field. I’m glad to be hopping on the wave now.”

— Auntor Ferguson, student trainee





*Solar Day graduation for Find Your Power students, with Christopher Lewis, PEA Board Chair and Mike Innocenzo, CEO of PECO*

## Bright Solar Futures:

### PROVIDING JOB TRAINING AND CAREER DEVELOPMENT FOR STUDENTS

PEA trained 52 high school Career and Technical Education (CTE) students in three cohorts, in an intro to solar program called “Find Your Power”, adapted from a successful Solar States/Clean Air Council model at Youthbuild Philly Charter School. This training, in 2017 and 2018, was made possible by contributions from PECO, the School District’s GreenFutures initiative, Solarize Philly, and Siemens.

In October 2018, PEA was selected for a three-year \$1.25 million U.S. Department of Energy award for “Bright Solar Futures,” an initiative to establish the nation’s first Solar Program of Study for Career and Technical Education (CTE) high school students.

Once approved by the PA Department of Education, funding for this program will become available for districts across the Commonwealth. PEA is also building out an intensive training for Opportunity Youth (young people age 16-26 who are out of school or out of work) in partnership with PowercorpsPHL.

PEA will train over 100 students in solar installation over the term of the award. PEA received the award in partnership with Youthbuild Philly, the Philadelphia Education Fund, Solar States and the Energy Coordinating Agency and with support from Superintendent William Hite of the School District of Philadelphia and Secretary Patrick McDonnell of the Pennsylvania Department of Environmental Protection.



*Left to right: Steve Luxton (CEO of the Energy Coordinating Agency), Danielle Floyd (COO of the School District of Philadelphia), Christine Knapp (Sustainability Director for the City), Councilwoman Blondell Reynolds Brown, Councilman Derek Green, Council President Darrell Clarke, Emily Schapira (ED at PEA), Laura Rigell (Solar Manager at PEA), Scott Emerick (Executive Director at Youthbuild Philly Charter School), Tony Gay (VP, Government Affairs at PECO) and Farah Jimenez (Executive Director, Philadelphia Education Fund).*

## PARTNER SPOTLIGHT: SPENCER WRIGHT

One of the highlights of our training program is the dedication shown by our instructors. Spencer Wright is an educator, workforce training professional in the Bright Solar Futures and Find Your Power programs, and owner of Harness the Sun, a solar installation, maintenance and quality assurance firm. Spencer was raised in North Philadelphia and chose to “pay it forward” through his passion for youth training programs. According to Spencer, the program “provides not only a job, but a career opportunity... not just a living wage, but an opportunity to help make a difference.” Spencer has seen the growth of opportunities in the solar industry, and adds, “If we don’t make sure individuals with different backgrounds are getting trained, the program won’t be as successful as it could be.”



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## WHAT'S TO COME

### **Completion of construction**

on 3-school pilot, including new boilers, replacing unit ventilators to improve indoor air quality, and replacing drafty windows.

### **Next round of energy performance contracts for up to 20 schools.**

In 2019, the school selection will be finalized, contracts signed and construction will begin for energy and capital retrofits on up to 20 additional schools across the District.

### **Bright Solar Futures welcomes first CTE class.**

In 2019, the partners will complete curriculum development, will run a final round of the 6-week summer intro program and the first class of CTE 12th grade high schoolers will start a condensed year-long program in the Fall.

PEA will release an updated **Solar Schools Report** in 2019, and work with the School District to establish a solar pilot program.

# AFFORDABLE HOUSING



In Philadelphia, households under 30% of Area Median Income (AMI) pay 23% of their incomes to utilities. Affordable housing includes affordable utilities, and PEA works to use energy projects and programs to stabilize costs, improve health and comfort and ensure all Philadelphians can access clean, affordable energy.



CREATE  
JOBS

**52**  
jobs created  
through Solarize  
Philly



STRENGTHEN  
COMMUNITIES

**197**  
affordable housing  
units retrofitted



CUT  
ENERGY  
BILLS

**15-30% SAVINGS**  
through Multi-Family Affordable Housing Pilot



REDUCE AIR &  
WATER POLLUTION

**1.6MW**  
contracted  
solar capacity

**\$5.8M**  
invested in residential  
roof-top solar



## Solarize PHILLY

### SOLARIZE PHILLY

Despite cost-saving and environmental advantages of switching to solar, the high up-front expense of installing solar panels kept many families from making the change. In response, PEA launched Solarize Philly, a group-buying program that greatly reduces the cost. PEA negotiated below-market prices by obtaining group discounts from 3 pre-approved installers, discounted equipment from CED Greentech and streamlined approval processes and follow-up with PECO and L&I.

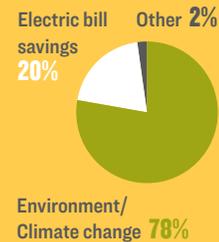
Program fees collected from market rate installations support low- and moderate-income household participation in the program and solar training for youth.

In 2017, Philadelphia was the fourth fastest growing solar market in the U.S., driven by residential solar installations. Solarize Philly is the largest solarize initiative in the country, and homeowners expressed interest by the thousands. The Solarize Philly team participated in 64 community events this year.

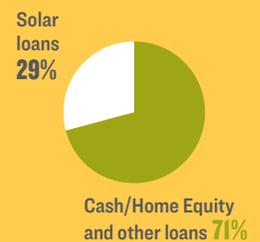
“We’ve wanted to go solar for years. Solarize Philly made the process simple and put it within our price range.”

— Joanne D., Solarize Philly participant

### WHY PARTICIPANTS WENT SOLAR



### HOW PARTICIPANTS FINANCED SOLAR



### Did you know?

- For many households, solar is now cheaper than buying electricity from the grid.
- Solar panels are warrantied to produce for 25 years and have an average payback period of 10 years.
- The 30% Solar Investment Tax Credit is scheduled to start stepping down after 2019.

## SOLAR JOB TRAINING

Find Your Power trained a new class of eighteen students for careers in the growing solar industry. Read more on page 13.



## SOLAR HOME TOUR

This open house event encouraged interested residents to visit any of 11 solarized homes and ask homeowners about their experience powering their home with clean energy.

## SOLARIZE PHILLY IS THE NATION'S LARGEST SINGLE SOLARIZE INITIATIVE



## 150TH INSTALLATION

Government representatives and students in the Find Your Power training program gathered to flip the switch that activated the 150th house converted to solar power under the Solarize Philly program.

**4,237**  
households  
SIGNED-UP

**363**  
contracts  
SIGNED

**96%**  
APPROVED  
BY PECO,  
93% APPROVED  
AS PROPOSED

**92%**  
OF SOLARIZE  
CUSTOMERS SAID  
THEY WOULD NOT  
HAVE GONE SOLAR  
WITHOUT THE  
PROGRAM

# Fueling Energy Equity

According to a federal Energy Information Administration study from 2015, in urban areas in the mid-Atlantic region, over 30% of renters and over 50% of African-American households faced energy insecurity. "Energy insecurity" means that the household received a utility shut-off notice, has foregone a basic necessity like food or medicine to pay for utilities, or kept their home's temperature at an unsafe or unhealthy level.

## MULTI-FAMILY AFFORDABLE HOUSING ENERGY EFFICIENCY PILOT

This program aims to deliver deep energy savings to multi-family properties serving low-income tenants. Philadelphians at the lowest income levels pay 23% of their income in utilities, with renters paying more than owners. This population segment is historically underserved by energy companies. Also, tenants typically pay for their own utility usage, so landlords do not reap the benefits of cost-savings upgrades, but must bear the cost.

In 2018, PEA completed the first phase of a multi-family pilot program with two non-profit partners, Friends Rehabilitation Program and Mission First Housing Group. In partnership with BlocPower, CMC Energy Services, PECO, PGW and StratIS, PEA retrofitted 197 units of affordable housing with up-to-date energy and water conservation measures. PEA also repaired and returned to service many nonfunctioning heating, cooling and ventilation systems. These energy interventions were a key way to address deferred capital or maintenance work in support of housing preservation. The cost of upgrades was paid 86% through utility programs and 14% by the building owners.

### Phase 1 Energy Savings

Building	Annual Savings	Estimated Payback Time
<b>Friends Rehabilitation Program</b>		
Sarah Allen Senior Homes	\$36,600	<3 months
<b>Mission First: Rhawn Street</b>		
	\$9,100 - \$11,500 in building units	4 years
<b>Mission First: Academy Road</b>		
	\$4,800 - \$5,300	1.9 years
<b>Mission First: Larchwood Ave</b>		
	\$4,900 - \$5,900 in tenant units; \$500 - \$700 in common areas	6.2 years

“Serving affordable housing is challenging because you have to put together financial resources from many different partners to make the investments. In 2018, we were proud to facilitate PECO and PGW aligning programs that serve low-income populations for more impact.”

—Alon Abramson, Program Manager, PEA

## SINGLE-FAMILY HOUSING PRESERVATION

PEA supported the Philadelphia Housing Development Corporation (PHDC) to set new energy standards for the City’s low-income home repair programs. These standards will ensure that equipment like windows, plumbing fixtures and heating systems are long-lasting, high-quality products, help save homeowners money and improve occupant health and comfort. It will also help reduce future waitlists for programs like Basic Systems Repair (BSRP).

## PHA ENERGY EFFICIENCY PROJECT

In 2018, the Philadelphia Housing Authority (PHA) executed a \$31 million contract with Johnson Controls for a 5-year energy and water efficiency project beginning construction in 2019. The initiative will touch over 4,000 households and spend over \$8 million in 2019. Measures will include LED lighting and sensors, water efficient plumbing fixtures, roof replacements, efficient water heaters and furnaces, building automation systems and insulation.

## WATER & SEWER LINE PROTECTION PROGRAM

In October of 2018, PEA launched a new public-private partnership with American Water Resources to bring low-cost protection against the high cost of water and sewer line repairs to Philadelphia Water Department (PWD) customers. Most Philadelphians don't know they are responsible for the water and sewer lines that run from their house to the City main, and when those lines fail, the average Philly homeowner pays \$3500 to \$6000. PEA negotiated the lowest fees for a similar program anywhere in the country for comprehensive coverage with no caps.

By the end of 2018, nearly 30,000 households had enrolled in the protection program. With the financial burden of a major repair eliminated, homeowners in the program have been motivated to file claims for issues that may have been ignored in the past. As a result, the program is accelerating the identification and repair of leaks and reducing the amount of lost pre-revenue water that must be pumped and treated by PWD, as well as reducing sewage leaks into surrounding soil and groundwater.

### LOW COST SERVICE AGREEMENT

\$7.98/month for water and sewer line coverage, 35% less than similar programs nationwide.

### INCREASED COVERAGE AND CONSUMER PROTECTIONS

Unlimited coverage for normal wear and tear for the service lines that run from the exterior of the home to the water main in the street.

### PROTECTS HOMEOWNERS

from the expense of repairing water and sewer leaks or breaks, which can be many thousands of dollars and not covered by homeowners' insurance.

### IDENTIFIES WATER WASTE

and prevents soil pollution.



## WHAT'S TO COME

### Special solar financing pilot for low- and moderate-income households.

PEA has a goal of making solar more accessible and has made a commitment to ensure at least 20% of Solarize Philly participants are low- and moderate-income (LMI) households. PEA has partnered with Sunwealth LLC to offer a low-cost solar financing option to a pilot cohort of LMI households, which are scheduled for installation in 2019.

### Multi-Family Affordable Housing Energy Pilot Phase II and Cohort II:

Using the data from the first phase, PEA will work with the buildings we have already touched to support implementation of deeper energy conservation and building health measures like HVAC system replacements, ventilation improvements and building envelope upgrades. We will also recruit our second cohort of buildings to participate in a combination pilot that includes both the shallow and deeper energy conservation measures in self-funding projects.

# SMALL BUSINESSES



According to a 2016 Penn State study, corner stores in Philadelphia typically pay more in utilities than they do in rent. These local businesses are critical neighborhood infrastructure, providing essential services to their communities. Reducing utility costs for neighborhood businesses by 20-30% can be the difference between profitability and going out of business. Businesses in lower-income communities tend to miss out on utility incentive programs.

In 2018, PEA launched its second pilot initiative for small businesses focused on corner stores, restaurants, auto mechanics and laundromats.

It provided no-cost energy assessments, project design, grant administration, utility rebate support and low-cost financing to reduce utility costs by up to 30%.



STRENGTHEN  
COMMUNITIES

78

local businesses  
signed up for the  
program

57

energy audits  
performed

30

proposals  
delivered

30+

neighborhoods  
touched



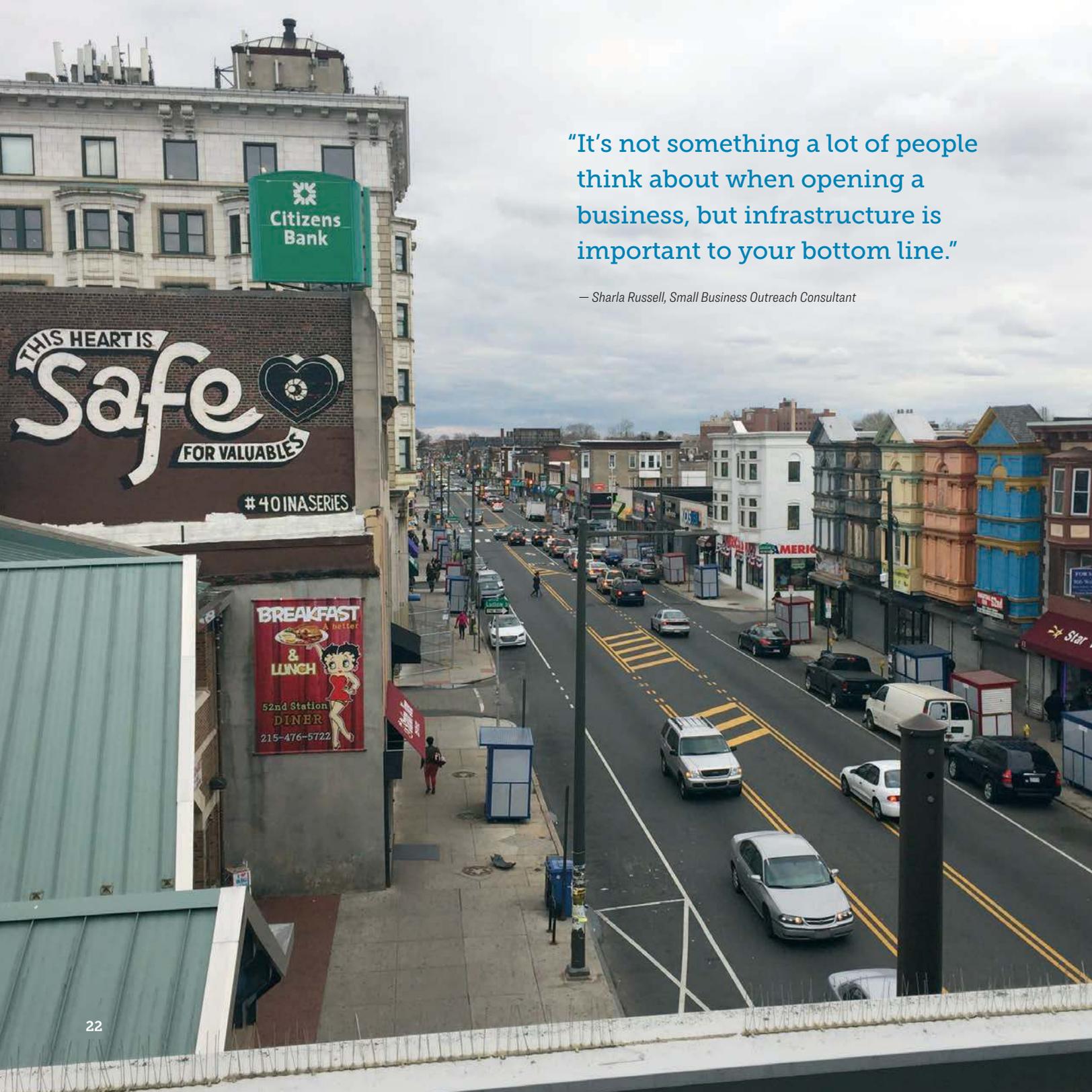
CUT ENERGY  
BILLS

\$50,000

projected utility cost savings

“It’s not something a lot of people think about when opening a business, but infrastructure is important to your bottom line.”

— Sharla Russell, Small Business Outreach Consultant



# Energy and the Bottom Line

## SMALL BUSINESS ENERGY EFFICIENCY PILOT II

In 2018, PEA conducted an evaluation of our first small business pilot in 2017 and found the continued need for ongoing relationship building on commercial corridors, a more focused approach on energy conservation measures and a stronger emphasis on the sales process. PEA partnered with Lime Energy, a regionally-based company experienced in utility program implementation, to create a model that could easily layer onto PECO's existing small business program to target more diverse neighborhoods and smaller businesses.

Lime provided no-cost energy audits for 78 small businesses and pay-from-savings proposals to 30 businesses. PEA partnered with West Philadelphia Financial Services Institution (WPFSI) to provide a special energy loan product for the program, with longer loan terms and lower interest rates, and with free financial coaching and consultation for businesses that needed it.

PEA provided overall administrative support, outreach and education, and helped manage the grant applications for a state grant program to provide subsidy to the projects. A few businesses moved forward in 2018 and we expect a few additional to elect to move forward in 2019.

### THE PROCESS:

- 1** Energy assessors visit businesses to review conditions of lighting, cooking, refrigeration, heating, cooling and ventilation equipment.
- 2** Business owners receive a free energy proposal outlining recommended energy efficient equipment upgrades plus the estimated time to earn back expenses. Proposals are designed to pay for upgrades through energy savings, creating positive cash flow from Day 1.
- 3** When business owners elect to make the upgrades, Lime Energy provides turnkey project management. PEA supports the business to submit a grant application to the Pennsylvania Department of Environmental Protection (DEP) to subsidize up to \$7,000 of the project. WPFSI provides financing and counseling where needed.

**“Our second floor was way too hot in the summer. Now, no one’s complaining. My electric costs are down 30%. I’m expecting a four-year payback at that percentage.”**

—Mike “Scoats” Scotese, Owner and program participant, Grey Lodge Pub

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## WHAT’S TO COME

### Small Business Pilot III

PEA will continue to develop its small business program. Gathering data from previous program participants and holding workshops will help us understand the needs of business owners and service providers in order to develop a program to reach more businesses and further education on energy as a vehicle for savings.

## OTHER PROGRAMS

### C-PACE

Commercial Property-Assessed Clean Energy (C-PACE) financing allows property owners to obtain lower-cost, longer-term financing for energy efficiency, renewable energy and water conservation projects by placing an assessment on the property's tax bill, rather than taking on a traditional loan. C-PACE will help Philadelphia build a commercial solar market and will encourage building owners to make energy investments with longer paybacks. This will help us meet our climate goals while improving the net operating income (NOI) of commercial buildings.

In June 2018, Governor Wolf signed Act 30 into law, enabling C-PACE across the Commonwealth. To move it forward, PEA helped lead a statewide coalition that included the Sustainable Energy Fund (SEF), the Keystone Energy Efficiency Alliance (KEEA), the PA Department of Environmental Protection and the Pittsburgh Office of Sustainability, among others, to hold public stakeholder workshops to solicit input on program guidelines and plan. Over 140 stakeholders attended the workshops in Pittsburgh, Harrisburg and Philadelphia.

The coalition released draft program guidelines in November 2018 for public comment, and received dozens of comments from non-profits, lenders, project developers, vendors, government agencies and county and municipal officials. SEF has volunteered to be the Program Administrator outside of Philadelphia, and PEA will be the administrator for Philadelphia County. Final Program Guidelines will be released in 2019.

To learn more, visit [pennsylvaniacpace.org](http://pennsylvaniacpace.org).

## 2018 OUTREACH EVENTS

64

Solarize Philly  
Community Events

22

Small Business  
Outreach Events

5

Water & Sewer Line  
Outreach Events

18

Speaking  
Engagements

62

Stakeholder  
Meetings

5

Press  
Conferences

PEA is a municipal authority and political subdivision of the Commonwealth of Pennsylvania, formed by the City of Philadelphia under the Pennsylvania Municipality Authorities Act, 53 Pa.C.S. §. The work of the Authority would not be possible without its staff, board of directors, and host of interns.

Additional funding generously provided by PECO, Siemens, and the U.S. Department of Energy's Solar in Your Community Challenge.

### **PEA Board of Directors**

Christopher A. Lewis  
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Adam Agalloco  
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Barbara Moore  
*Board Member*

Michael Kopjstansky  
*Board Member*

### **Consultants in 2018**

Ron Celentano  
Roger Clark  
Jeremy Kalin  
Nancy Mifflin

### **PEA Staff**

Emily Schapira  
*Executive Director*

Alon Abramson  
*Program Manager*

Maxine Dixon  
*Program Coordinator*

Laura Rigell  
*Solar Manager*

Ben Vila  
*Projects Coordinator*

### **Interns 2018**

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Tabeen Hossain  
Mahvish Ilyas  
Heaven Pickett  
Ashley Russell  
Jessica Ullman  
Isaiah Young  
Warren Zhao  
Evan Zhou

For more information visit  
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Find us on social media  
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