

Local Partnerships for a Brighter Future:

The Role of Local Government in Solar Workforce Development & A Case Study from the City of Philadelphia

Recognizing the multitude of benefits and opportunities that solar energy affords, cities across the country are increasingly pursuing policies and implementing programs to help homes and businesses go solar. Along with long-term energy savings and improved environmental health, municipal investments in solar energy attract business, and sustain a range of high-quality local jobs. By pairing solar energy programs with workforce development initiatives, cities can find innovative synergies to simultaneously advance clean energy targets and job creation goals.

This resource supplements the Solar Training Network's 2018 toolkit, [Strategies for Workforce Development](#), and focuses on the role that local governments and utilities can assume to strengthen solar workforce development efforts within their jurisdictions. A case study from the City of Philadelphia illustrates how local government agencies and utilities can champion innovative and locally adaptive initiatives and leverage the growing renewable energy sector to advance diverse environmental and economic development objectives.

Particularly at the local level, nonprofit and community-based organizations play a significant role in workforce development through innovative public-private partnerships. Many local governments have sustainability offices to oversee environmental and energy projects, but these efforts tend to operate independently from workforce and economic development. Whether a local government agency leads an effort, or acts as a neutral intermediary to convene diverse stakeholders, government is just one entity of many whose networks and institutional knowledge are necessary to develop and sustain impactful workforce development programs alongside the solar industry. To be most effective, these programs should be informed by local dynamics and responsive to both the needs of the community and the industry.

The challenges faced by solar employers in hiring and retaining qualified workers are [well documented](#). Workforce Development broadly refers to the process of leveraging regional networks and resources through public and private partnerships to help an industry manage hiring needs and skills gaps, and help individuals prepare for employment or career advancement. Strong communication and collaboration among all relevant stakeholders is key to better align education with regional talent needs, improving job placement, and increasing public awareness of career opportunities.

Partners to engage might include:

- ✓ Social Services Organizations
- ✓ Workforce, Economic Development Boards
- ✓ Sustainable Development Agencies
- ✓ Community-Based Environmental Organizations
- ✓ Local Electric Utility
- ✓ Industry & Trade Associations
- ✓ School District Career & Technical Education
- ✓ Local Community Colleges



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Philadelphia Goes Solar

A Case Study on the Philadelphia Energy Authority

In 2010, the Philadelphia City Council established the Philadelphia Energy Authority (PEA) to provide targeted expertise and focus to help reduce energy consumption and expenses. In 2016, with leadership from the City Council, PEA launched the Philadelphia Energy Campaign, a ten-year initiative leveraging public and private funds for energy efficiency and clean energy projects across four key sectors: municipal buildings, public schools, low- and moderate-income housing and small businesses. Through this program, PEA is creating jobs while lowering energy costs for consumers and businesses, reducing carbon emissions, and stabilizing neighborhoods.

Despite having limited state policies for solar, Philadelphia has experienced a groundswell of interest in residential and commercial solar. In 2017, Philadelphia was among the fastest growing solar markets in the US, and according to The Solar Foundation's *National Solar Jobs Census*, employment increased by a quarter in the Philadelphia metro area over that year.

Local government efforts contributed to this rapid growth in the city's solar market. The City of Philadelphia streamlined processes to make it easier to do solar business in the city, and received a SolSmart Gold designation, signaling that the city is 'open for solar business.' To get the word out about these improvements and the declining cost of solar, the Philadelphia Energy Authority launched Solarize Philly, a citywide program to help all Philadelphians go solar at home.

As solar demand expands in Philadelphia, regional solar businesses have experienced common solar workforce challenges, particularly difficulty hiring and retaining qualified employees. Reflecting substantial recent growth and projected expansion of solar jobs in coming years, the Pennsylvania Department of Labor and Industry listed solar installation as a "high priority occupation" through 2018, underscoring the need for industry-driven solar workforce development.

SolSmart is a national program administered by The Solar Foundation and the International City/County Management Association, and funded by the U.S. Department of Energy Solar Energy Technologies Office. It provides recognition and no cost technical assistance to communities for evaluating and improving programs and practices to reduce obstacles and cost related to solar energy development.

Seed funding for the Philadelphia Energy Campaign came from the U.S. Department of Energy Solar in Your Community Challenge, a program that supports innovative and replicable community-based programs that bring solar to underserved communities.

Solarize campaigns are group-buying programs designed to make the process of installing solar easier, more affordable, and more accessible. Participants in the campaigns benefit from discounted prices and consumer protections.

Solarize Philly Outcomes (2017-2018)

- \$5.8 million investment in solar
- 4,237 Philadelphians signed up to receive a free solar assessment
- 363 signed contracts for solar
- 52 new solar jobs created
- Over \$400,000 in program fees



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Building on the success of Solarize Philly, in 2017 PEA launched Find Your Power, a clean energy career training program to prepare young Philadelphians to join the solar energy workforce. Since 2017, PEA has reached 52 high school students with this training, with funding from GreenFutures, PECO, Siemens, and the U.S. Department of Energy’s Solar In Your Community Challenge.

PEA held the inaugural Find Your Power class over summer 2017 in partnership with the School District of Philadelphia’s Career and Technical Education (CTE) Office and the Philadelphia Youth Network. Following the initial success of the program, the School District of Philadelphia invited PEA to offer an expanded curriculum to two additional cohorts during the school year. PEA then offered the curriculum again as a WorkReady program to a new cohort of students in the summer of 2018 and placed returning students in internships focused on solar installation, energy efficiency, data analysis or community education.



The Find Your Power program laid the groundwork for the Philadelphia Energy Authority’s selection for a new U.S. Department of Energy award of \$1.25 million to significantly expand the curriculum and secure sustainable funding for the program, allowing it to continue training Philadelphia’s young people for clean energy careers for years to come.

The Solarize Philly and Find Your Power programs also helped spur the formation of two new adult solar training programs in Philadelphia, administered by Philadelphia OIC and the Energy Coordinating Agency.

Best practices and key considerations:

✓ Involve industry representatives

PEA had the unique advantage of having a local solar installation company with an educational mission ready to partner on the program. Solar States is the largest solar installation company based in Philadelphia and was one of the pre-approved Solarize Philly installers. Solar States had already designed a curriculum to train young people in solar installation and had prior experience providing instruction to at-risk youth, positioning them as an ideal partner for PEA's training program. Having an industry expert as the classroom instructor ensured that the students were being exposed to material that would best prepare them for a career in clean energy. PEA involved other industry representatives as hosts for Find Your Power interns, guest speakers, and mentors to the students. These opportunities for engagement have increased industry support for the program and the likelihood of students securing employment upon graduation.

✓ Include hands-on training and experience outside the classroom

PEA received input from installers that the training should include a hands-on component where trainees can practice the skills they would use on a solar job site. The Energy Coordinating Agency (ECA) developed a solar lab that was available to the Find Your Power classes, which proved to be very valuable for both student engagement with the classroom material, and also job readiness. ECA outfitted the lab with donated equipment and made the space available to both high school and adult trainees. Field trips to solar installation sites and company headquarters were invaluable in demonstrating what solar careers look like. The Solar States trainers arranged field trips to relevant sites in the city and had their staff on site to connect the trip content with the curriculum.

✓ Partner with educators

PEA engages extensively with the School District of Philadelphia to implement the Philadelphia Energy Campaign. The Find Your Power program was made possible by PEA's relationships with the District's sustainability team and Office of Career and Technical Education (CTE). GreenFutures, the District's first sustainability plan, aims to prepare students for the next generation of green, sustainable career pathways. The Office of CTE works actively to connect their students with 21st - century careers through innovative educational programs. These two teams were ideal partners for the Find Your Power program, and contributed funding, student referrals, and invaluable advice.

Additional workforce development organizations were involved to increase the likelihood of student success. The CTE office designed the initial Find Your Power program so that PEA's trainees were also enrolled in Philadelphia Youth Network's WorkReady program. This allowed them to receive a stipend for participation in the training program, making it more accessible for students of diverse backgrounds. PEA also partnered with the Philadelphia Education Fund to provide coaching to the instructors on how to best communicate their industry knowledge to high school students.

✓ Validate and Right-Size Curriculum

If the training program is over-sized in relation to industry demand, students may face difficulty putting their new skills to work. Managing cohort size to maximize the potential for job placement is a key aspect of program design, and PEA has been careful to train students in line with installer demand for new hires. Controlled class sizes of 10-20 have provided students with the opportunity for individualized support and have allowed for a 100% placement rates of 52 eligible program graduates.

✓ Create opportunities for utility engagement

The Philadelphia Energy Campaign has also created multiple points of partnership with PECO, Philadelphia's electric utility. PEA participated in PECO's solar stakeholder process and established a relationship with their Distributed Energy Group. PEA then connected with PECO's Office of Corporate Relations and shared the outcomes of the initial Find Your Power class, and was invited to bring a funding proposal for PECO to support the program's continuation. PECO contributed \$100,000 to fund the training, which led other sponsors (including Siemens) to make contributions as well. PEA provided monthly reports on the training program to PECO and has engaged them in curriculum development and public communication about the program.

The initial success of the Find Your Power program is in large part due to PEA's extensive partnerships with organizations across the city, and to the leadership from the local industry, the local utility, and school district. In August 2018, The Solar Foundation's Solar Training Network and SolSmart programs joined Philadelphia Energy Authority for a public "Solar Day," to celebrate the city's investments and successes in solar workforce development. Held at City Hall, the event brought together utility representatives, industry members, educators, trainees, elected officials, and members of the public. Attendance by a wide range of government agencies and officials, spanning sustainability to commerce, heightened public visibility and underscored the value of the program across a range of economic and social objectives.

"The Solarize Philly Program is advancing our clean energy and workforce development goals and making Philadelphia a national leader in sustainable energy — just as we envisioned when Council authorized the Philadelphia Energy Authority in 2010," Council President Darrell Clarke said. "Philadelphia is well on track for continued growth in the sustainable energy sector, thanks in great part to these 30 young 'Find Your Power' students. They are the future of our workforce."

To learn more about the business case for solar workforce development, to identify partners for local initiatives, review solar jobs market research, and more, visit the Solar Training Network at AmericanSolarWorkforce.org. To learn more about Philadelphia's solar programs, see the Philadelphia Energy Authority: www.philaenergy.org