Philadelphia C-PACE Program

Overview
Agenda

• C-PACE Overview
• Sample Projects
• Program Details
• Discussion
Philadelphia Energy Authority

• Municipal authority created in 2010 to support and promote Philadelphia’s green energy economy

• Focuses on energy as a tool for impact to create jobs, strengthen communities, cut bills and reduce the City’s carbon footprint

• 10-year Philadelphia Energy Campaign launched in 2016 to spur $1 billion of investment in energy efficiency and clean energy projects and create 10,000 jobs

• PEA administers many programs including C-PACE, Solarize, Water & Sewer Protection and more

Philadelphia C-PACE Program Webinar | March 4, 2020

Stoking the Green Economy

<table>
<thead>
<tr>
<th>Direct, indirect, and induced jobs across the 10-year Energy Campaign</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Project Investments</td>
</tr>
<tr>
<td>Year One: 2017</td>
</tr>
<tr>
<td>Year Two: 2018</td>
</tr>
<tr>
<td>TOTAL TO DATE</td>
</tr>
</tbody>
</table>
Philadelphia C-PACE

C-PACE Overview
What is C-PACE?

**Financing tool:** Provides long-term funding for energy efficiency, renewable energy, and water conservation projects

**Creates measurable savings:** Projects must result in energy savings or reductions in water usage for commercial properties

**Through a special assessment:** Repayment is through a special assessment similar to a property tax assessment
C-PACE Growth Nationwide

C-PACE Impact Through Q3 2019:

$1,108
Investment (MM)

2,020
Commercial projects

16,600
Jobs created

To Meet Demand for Green Buildings, Developers Get a Leg Up
As demand grows and climate-change restrictions raise costs, developers are flocking to PACE financing for relief.

The New York Times (August 2019)

Rapid Growth in Recent Years:

Source: PACE Nation
C-PACE in Philadelphia

Summer 2018: Pennsylvania authorized the creation of C-PACE finance programs with the passage of Act 30

Summer 2019: Philadelphia City Council and Mayor Kenney authorized C-PACE for the City of Philadelphia and assigned PEA as Program Administrator

October 2019: PEA launches C-PACE program

Early 2020: Anticipated funding of first projects
C-PACE Benefits to City of Philadelphia

~80% of Philadelphia’s carbon footprint comes from buildings and industry

The EPA estimates commercial buildings waste 30% of the energy they use

Philadelphia has committed to an 80% carbon reduction by 2050

By some measures, every $1MM of C-PACE deployed equates to removing ~1,000 cars from the road
Sample Projects

Energy Efficiency
- HVAC upgrades
- Building controls
- LED lighting
- Green roofs

Renewable Energy
- Solar
- Fuel cells
- Other renewable generation facilities

Water Conservation
- High-efficiency equipment
- Condensate water reuse
- Low-flow fixtures
- Some stormwater management projects

Full list of eligible projects is in the Program Guidelines available at PhiladelphiaCPACE.org
Eligibility

PROGRAM REQUIREMENTS

- Located in Philadelphia
- Commercial and industrial properties only
  - Residential and multi-family properties not allowed
- Building upgrades, gut rehabs, new construction permitted
  - New construction projects must exceed code requirements

FINANCING REQUIREMENTS

- $100,000 minimum
- 95% lien-to-value limit
- Up to 30-year term
- Capital Provider registration with statewide C-PACE database
- Retroactive financing available
## What Makes C-PACE Special?

<table>
<thead>
<tr>
<th>C-PACE Element</th>
<th>Why It Matters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covers 100% of eligible hard &amp; soft costs</td>
<td>Limited upfront cash needed for new project</td>
</tr>
<tr>
<td>Term of up to 30 years</td>
<td>Long-term repayment can match project payback</td>
</tr>
<tr>
<td>Rates are generally low</td>
<td>Displaces expensive mezzanine debt and equity</td>
</tr>
<tr>
<td>Energy and water savings often exceed annual repayment amount</td>
<td>Positive net operating income for borrower</td>
</tr>
<tr>
<td>Under certain leases, building owner can pass through repayments to tenant</td>
<td>Addresses energy usage split incentive issue</td>
</tr>
<tr>
<td>If sale of property occurs, C-PACE obligation transfers with the sale</td>
<td>Allows for longer payback periods</td>
</tr>
</tbody>
</table>
Philadelphia C-PACE

Sample Projects
Sample Project: Building Upgrades

- A 550,000 square foot office building installs LED lighting, new windows and updated building controls; they also seal the building envelope to reduce air leaks
- Total project cost is $4.2MM (including hard and soft costs), 100% of which is financed with C-PACE
- The financing is for 20 years at a 5.58% interest rate
- The building upgrades result in a ~25% reduction in energy consumption and lower annual O&M expenses
- After taking into account the annual C-PACE repayment, the building owner saves ~$86K per year

<table>
<thead>
<tr>
<th></th>
<th>Before Project Cost</th>
<th>After Project Cost</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>kWh Consumption</td>
<td>10,000,000 kWh</td>
<td>7,342,690 kWh</td>
<td>2,657,310 kWh</td>
</tr>
<tr>
<td>Consumption Costs</td>
<td>$1,612,222</td>
<td>$1,183,805</td>
<td>$428,417</td>
</tr>
<tr>
<td>Ops &amp; Maint. Costs</td>
<td>$20,000</td>
<td>$8,960</td>
<td>$11,040</td>
</tr>
<tr>
<td>C-PACE Special Assessment Payments</td>
<td>$0</td>
<td>$353,830</td>
<td>($353,830)</td>
</tr>
<tr>
<td><strong>Total Annual Cost</strong></td>
<td><strong>$1,632,222</strong></td>
<td><strong>$1,546,595</strong></td>
<td><strong>$85,627</strong></td>
</tr>
</tbody>
</table>
Sample Project: Solar Installation

**Situation:**
Commercial property owner wishes to install solar on existing self-occupied office building with no out-of-pocket expense

**Assumptions:**
- Existing Mortgage: 65% loan-to-current-value
- Solar Cost: $900,000
- Interest Rate: 5.5%

**C-PACE Solution:**
- C-PACE offers a 100% financing solution, including qualifying expenses
- 25-year, fully-amortizing financing to match the useful life of the asset

**Results:**
- Property Owner benefits from tax incentives, solar rebates and reduced utility bills due to on-site generation
- C-PACE Assessment payment obligations stay with the property in the event of a sale
Sample Project: New Construction

Lower the average cost of capital or increase total capital available for your project using C-PACE.

Source: Connecticut Green Bank
Philadelphia C-PACE
Program Details
Application Process

1. **Complete Pre-Application**
2. **Develop C-PACE Project, Establish Financing, and Secure Lienholder Consent**
3. **Submit Final Application**
4. **Sign Statement of Levy & Lien and Close C-PACE Financing**
5. **Project Implementation**
6. **Ongoing C-PACE Program Administration Incl. Financing Repayment**
Key Parties

OWNER

Financing Agreement

Pre-Application & Final Application
(Incl. engineering survey, D&I plan, and proof of mortgage consent (among other items))

PHILADELPHIA ENERGY AUTHORITY

Intergovernmental Agreement

City of Philadelphia

CAPITAL PROVIDER

Statement of Levy & Lien Agreement

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Process Details: Step-by-Step List

1. Property Owner submits Pre-Application to PEA
2. PEA confirms eligibility via Pre-Application Approval to Property Owner
3. Capital Provider underwrites funding
4. Property Owner gets consent from Mortgage/Lien Holder
5. Property Owner contracts with Developer/Contractor for capital improvements
6. Capital Provider finalizes Financing Agreement with Property Owner
7. Property Owner submits Final Application to PEA for review and approval
8. PEA, City, Property Owner and Capital Provider sign C-PACE Statement of Levy & Lien Agreement; PEA submits signed document to Department of Records for recordation
9. Property Owner and Capital Provider execute Financing Agreement
10. Capital Provider pays Developer/Contractor for installed improvements
11. PEA provides amortization schedule and payee info to Paying Agent at close of each financing
12. PEA bills Property Owner annual repayment due on schedule with property taxes
13. Property Owner makes payment to Paying Agent, who then confirms payments receipt to PEA
14. PEA provides Paying Agent instructions for distribution of assessment payment to Capital Provider and administrative payment to PEA
Key Application Requirements

- Engineering survey explaining the baseline energy and water usages and the expected savings
- Consent from existing mortgage/lienholder(s)
- Diversity & Inclusion Plan discussing commitment to local and diverse businesses

Why do mortgage holders consent?
- C-PACE projects generally:
  - Increase property’s collateral value
  - Reduce building operating cost
  - Payments do not accelerate
  - Only the current year’s C-PACE payment is senior to mortgage

Over 200 financial institutions have already consented to C-PACE financing in other markets

Full list of requirements is in the Program Guidelines available at PhiladelphiaCPACE.org
Invoicing & Payment Timing

November 1

Deadline for new or updated C-PACE project to be included in December invoices

December

PEA sends C-PACE invoices to Property Owners

March 31

C-PACE payments due to Paying Agent

April 1 – December 31

Unpaid invoices are considered delinquent and subject to 1.5% penalty per month; PEA pursues collection

January 1

PEA places lien on property for prior year’s unpaid delinquent payments
Enforcement

- Unpaid C-PACE Special Assessment payments are considered delinquent on April 1
- A lien is recorded on property the following January 1 if C-PACE Assessment payment is still outstanding
- At the Capital Provider’s request, PEA will pursue enforcement of the lien through a sheriff’s sale process
- Capital Provider must make PEA whole for any costs of enforcement
- Per the Philadelphia C-PACE Statute, in the event of a proceeding to force payment on a lien on the property, the C-PACE lienholder shall be required to make the City whole for any shortfall on payment on any City liens based on any type of City claim, up to the full amount of repayment of the lien
## Comparison to Statewide Guidelines

<table>
<thead>
<tr>
<th>Key Categories</th>
<th>Philadelphia C-PACE</th>
<th>Statewide Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Administrator</strong></td>
<td>Philadelphia Energy Authority</td>
<td>Sustainable Energy Fund</td>
</tr>
<tr>
<td><strong>Minimum Project Size</strong></td>
<td>$100,000</td>
<td>$10,000</td>
</tr>
<tr>
<td><strong>Lien-to-Value Ratio</strong></td>
<td>95% maximum</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Diversity and Inclusion plan</strong></td>
<td>Required with Final Application</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Measurement and Verification</strong></td>
<td>Annual data submission per the City's benchmarking law</td>
<td>2-3 years of data submission required depending on reporting mechanism</td>
</tr>
<tr>
<td><strong>New Construction</strong></td>
<td>2018 IECC Code applies in Philadelphia; new construction must surpass code</td>
<td>Must meet certain standards listed in SEF Program Guidelines</td>
</tr>
<tr>
<td><strong>Program Fees</strong></td>
<td>Hybrid percentage/flat fee structure for origination; $750 annual fee per project</td>
<td>0.75-1.25% origination fee; annual fee capped at $250</td>
</tr>
<tr>
<td><strong>Statement of Levy and Lien</strong></td>
<td>Four-party agreement signed by Property Owner, Capital Provider, PEA and City</td>
<td>Three-party agreement signed by Property Owner, Capital Provider and relevant county</td>
</tr>
<tr>
<td><strong>Obligation to repay municipal liens</strong></td>
<td>In event payment is forced for the lien, Capital Provider must make City whole for any payment shortfall for any City lien</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="https://www.PhiladelphiaCPACE.org">PhiladelphiaCPACE.org</a></td>
<td><a href="https://www.PennsylvaniaCPACE.org">PennsylvaniaCPACE.org</a></td>
</tr>
</tbody>
</table>
Capital Provider Qualification Process

• Philadelphia C-PACE operates an “open market” program
• Capital Providers must register with the statewide C-PACE Capital Provider Database managed by the Sustainable Energy Fund
• Registration form is available on the Pennsylvania C-PACE website
• Upon approval of registration, the Capital Provider will be added to public database on the Pennsylvania C-PACE website
• All Pennsylvania Financial Institutions are automatically C-PACE Capital Providers per the Pennsylvania C-PACE Statute
• Pennsylvania Financial Institutions are still encouraged to register so they appear on the list of C-PACE Capital Providers
## Registered Capital Providers

| Abacus Property Solutions, LLC          | Inland Green Capital, LLC               |
| CCG PACE Funding, LLC                  | Lever Energy Capital, LLC              |
| Clean Fund                             | LordCap Pace, LLC                      |
| Commercial PACE Finance                | PACE Equity                             |
| Counterpointe SRE                      | Petros PACE Finance                    |
| C-PACE Capital Group                   | Reinvestment Fund                      |
| CREA Group IC-PACE Capital             | Twain Financial Partners                |
| Dividend Finance, LLC                  | VGG Consulting                          |
| ENHANCED PACE Finance, LLC             | White Oak Global Advisors, LLC         |
| Greenworks Lending, LLC                |                                        |

List with full contact information is available at [PhiladelphiaCPACE.org](http://PhiladelphiaCPACE.org)
Qualified Engineering Professionals

- Property Owners must obtain surveys performed by Qualified Engineering Professionals stating the energy and water usage baseline and projected savings from C-PACE Project.
- A Qualified Engineering Professional is someone who holds one of the following certifications:
  - Certified Building Energy Assessment Professional (BEAP) (offered by ASHRAE)
  - Certified Energy Auditor (CEA) (offered by Association of Energy Engineers [AEE])
  - Certified Energy Manager (CEM) (offered by AEE)
  - Certified High-Performance Building Design Professional (HBDP) (offered by ASHRAE)
  - Certified Measurement and Verification Professional (CMVP) (offered by AEE and Efficiency Valuation Organization)
  - Licensed Professional Engineer (P.E.)
  - Investor Confidence Project (ICP) Quality Assurance Assessor
  - Investor Confidence Project (ICP) Project Developer
- As a resource for Property Owners, PEA has provided a list of self-certified Qualified Engineering Professionals on the Philadelphia C-PACE website.
- Qualified Engineering firms are invited to self-certify their credentials to be added to the website.
- PEA does not verify, vet, endorse, or rank Qualified Engineering Professionals.
<table>
<thead>
<tr>
<th>Burns Mechanical, Inc.</th>
<th>Maxwell Lighting &amp; Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concord Engineering Group</td>
<td>PEER Environmental</td>
</tr>
<tr>
<td>Curtin Engineering LLC</td>
<td>Pennoni</td>
</tr>
<tr>
<td>Ecosave, Inc.</td>
<td>ProtoGen, Inc.</td>
</tr>
<tr>
<td>Edison Energy</td>
<td>Practical Energy Solutions</td>
</tr>
<tr>
<td>Effectiv Energy Solutions</td>
<td>PWI Engineering</td>
</tr>
<tr>
<td>EG2 Engineering, P.C.</td>
<td>Remington &amp; Vernick Engineers</td>
</tr>
<tr>
<td>Grin Sustainability, Inc.</td>
<td>Square K Energy Solutions</td>
</tr>
<tr>
<td>Jacobs Engineering Group</td>
<td>TEN (The Efficiency Network)</td>
</tr>
<tr>
<td>Kitchen &amp; Associates</td>
<td>Van Lore Group</td>
</tr>
</tbody>
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List with full contact information is available at PhiladelphiaCPACE.org
Program Fees

**Application Fee:** Currently Waived

**Origination / Closing Fee:**
Percentage or flat fee per project based on the schedule to the right

**Annual Admin Fee:**
Annual fee of $750 per project

**Other Fees:**
Fees related to recordation, lien placement and PEA’s collection costs in event of delinquency will also apply

<table>
<thead>
<tr>
<th>Origination / Closing Fee Schedule</th>
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<tbody>
<tr>
<td>For C-PACE Financing Amounts</td>
</tr>
<tr>
<td>from</td>
</tr>
<tr>
<td>$100,000</td>
</tr>
<tr>
<td>$2,000,001</td>
</tr>
<tr>
<td>$2,222,223</td>
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<tr>
<td>$4,000,001</td>
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<tr>
<td>$4,500,001</td>
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<tr>
<td>$6,000,001</td>
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<tr>
<td>$8,000,001</td>
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<tr>
<td>$10,000,001</td>
</tr>
<tr>
<td>$15,000,001</td>
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<tr>
<td>$20,000,001 and greater</td>
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Philadelphia C-PACE
Discussion
Contact Information

Philadelphia Energy Authority
Maryrose Myrtetus
CPACE@philaenergy.org
215-686-4483

PhiladelphiaCPACE.org