COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY FINANCING

Philadelphia C-PACE

PHILADELPHIA ENERGY AUTHORITY

Philadelphia C-PACE presents:

Philly's "Building Tune-up" Mandate - Using C-PACE to Achieve Compliance

November 5, 2020 | **PhiladelphiaCPACE.org**

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PHILADELPHIA ENERGY AUTHORITY

CLEAN, EFFICIENT, AFFORDABLE

energy as a tool for impact

ECONOMIC
development

Projects that move the needle on carbon reduction are bringing established companies, investors and entrepreneurs to the city.

CREATING
jobs

Statewide, the number of clean energy jobs already outpaces the number of fossil fuel jobs.

ALLEVIATING
poverty

Reducing the energy burden for Philadelphians means homes that are safe, warm, healthy and affordable for the long term.

IMPROVING
public health

In public buildings, schools, homes and businesses, clean and efficient energy is a vehicle for improving the health of our communities.

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

“Building Tune-ups” Compliance

Zach Greene

THE CITY OF PHILADELPHIA
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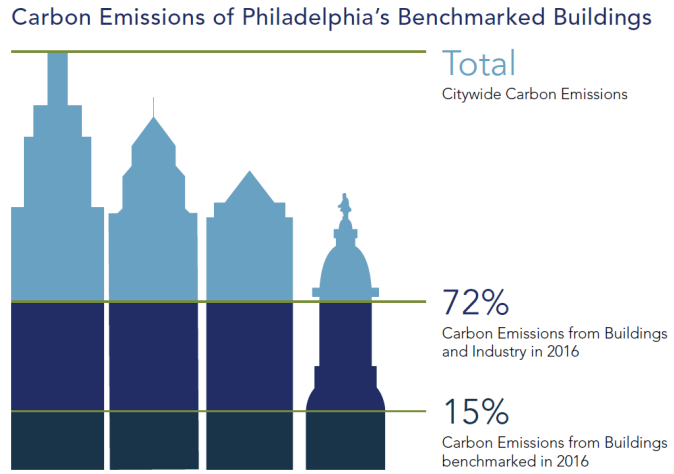
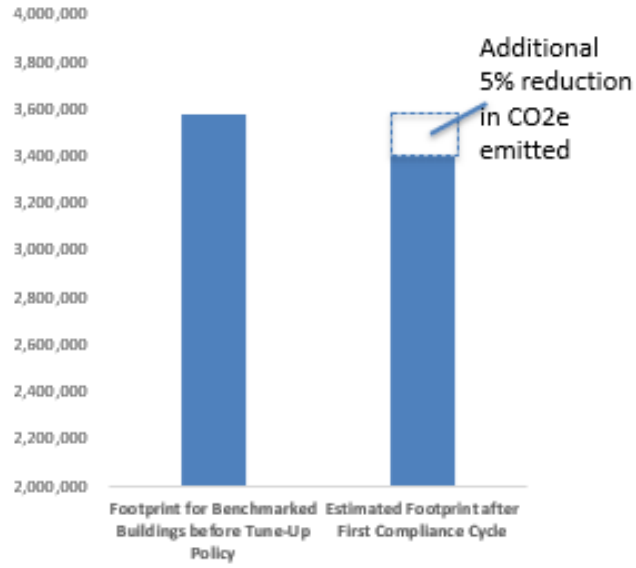
SUSTAINABILITY

Building Tune-ups Background

- Established as the next step beyond benchmarking in *Powering Our Future: A Clean Energy Vision for Philadelphia*
- Legislation Timeline:
  - **Late 2019:** City Council passes tune-up bill; Mayor Kenny signs it into law
  - **February – October 2020:** Regulation development process
  - **October 23, 2020** : Regulations finalized
  - **September 30, 2021**: First compliance deadline

Final legislation available at: http://bit.ly/PhillyBEPP
Final regulations available at: http://bit.ly/BEPPreg





Forecasted emissions reductions

Who must comply and by when?

- **All non-residential buildings with indoor floor space of at least 50,000 sq. ft.**
  - Included (not a complete list):
    - Office buildings
    - Municipal buildings
    - Retail stores
    - Hospitals
    - Schools/universities
    - Mixed-used buildings
    - Temporary lodging (hotels, motels, etc.)
    - Industrial and manufacturing facilities
  - NOT included:
    - Non-transient large lodging places (Residence halls, dormitories, etc.)
    - Parking lots and garages, or portions of covered buildings used for parking

Compliance Date	Building Size
9/30/21	200,000 sq. ft. and greater
9/30/22	Between 100,000 and 200,000 sq. ft.
9/30/23	Between 70,000 and 100,000 sq. ft.
9/30/24	Between 50,000 and 70,000 sq. ft
Buildings must comply every five years from their compliance date	

All buildings with a 9/30/21 compliance deadline are eligible to apply for a six-month extension due to COVID-19

Compliance Pathways

1) Conduct a tune-up

or

2) Get an exemption from conducting a tune-up:

- Demonstrating that your building meets a **high-performance option**
- **Initial certificate of occupancy** received within 3 years of the scheduled tune-up date
- Building is **scheduled to be demolished** within one year of the date of the scheduled tune-up

Conducting a tune-up

A **building tune-up** requires an *assessment* of existing systems and controls and *corrective actions* to bring them up to a good state of repair

Required actions are broken out into 5 sections:

1. Building System Maintenance & Repairs
2. HVAC Operations and Controls
3. Lighting System Assessment
4. Domestic Hot Water and Water Usage
5. Building Envelope

Buildings also must provide information about their systems and allow tune-up specialists to conduct a bill analysis.

Who can perform a tune-up assessment:

A "Qualified tune-up specialist" - defined as a **licensed Professional Engineer or Certified Energy Manager with at least 7 years experience** – must supervise the tune-up assessment. This specialist must be a third-party to the building, unless you're a large portfolio.

Who can complete corrective actions:

In-house staff or contracted service providers can complete the corrective actions. The final building tune-up report must be verified and signed by the "qualified tune-up specialist".

Building owners are only required to "tune-up" **base building systems**; tune-ups do not cover "industrial processes" or certain specialized equipment

Conducting a tune-up

Assessment element	Inspection Overview	Corrective Action	Required / Voluntary	Inspection Finding	Deficiency?	Sampling Approach	Corrective Action Description	End Condition/ Current Condition
Occupancy Scheduling, Temperature Setbacks and Supply Fan Cycling	Review HVAC equipment schedules (Including daily, weekly, seasonal, day/night, occupied/unoccupied hours). Review HVAC set points (including space temperatures, supply air temperatures, CO2, economizer changeover temperatures, supply fan cycling and static pressure).	Set schedules and setpoints as appropriate to support building use, occupancy patterns, and occupant needs.	Required	**To be completed by "tune-up specialist"**				

Sampling of elements is permitted, and tune-up specialists will have to assess at least 15% of an element

High-performance Compliance Options

		Timing
Green Certifications	• Gold rating under USGBC's LEED for Building Operations & Maintenance v.4	**Within the three years prior to the Compliance Deadline**
	• Net-Zero Energy Certification	
	• Participation in and completion of a utility retro-commissioning program	
	• Completed a full retro- or recommissioning procedure, with documentation that building performance was optimized	
CPACE as a documentation option	• Demonstrated energy savings of at least 15%*	
	• Conducted an energy audit (ASHRAE Level II or stricter) and implemented all the no/low-cost EE measures, defined as providing a simple payback of 3 years or less*	
	• Low Site EUI (less than 20 kBTU/sq ft)	**For at least two of the three preceding calendar years to the Compliance Deadline**
	• ENERGY STAR certification (75 or greater)	**The year immediately preceding the Compliance Deadline (accepting 2019 certification in '21 and '22)**
	• Demonstrated continuous commissioning/active optimization*	**One year of reports**

* Denotes deadline extension opportunities

Unique Options for “Large Portfolios”

Large Portfolio: A building owner that owns 20 or more covered buildings or cumulative floor area in covered buildings of five million (5,000,000) square feet or more

1) Option to submit to OOS a compliance plan that details when buildings will comply across the four-year compliance cycle
   - Plans are due 270 days before the compliance deadline
2) Option to use in-house staff as “tune-up specialists”
   - Required to hire a third-party specialist to conduct a quality assurance check if using in-house staff for more than 85% of covered floor space

Building Tune-up Timeline: Year One

October 23, 2020

-Regulations finalized

-Tune-up Specialists can begin submitting credentials

April 5, 2021 (180 days prior to 9/30)

-Deadline for exemption and extension requests for buildings >200k sq. ft.

-Deadline for alternative compliance plans for large portfolios

January 4, 2021 (270 days prior to 9/30)

-Tune-up deadline for buildings >200k sq. ft.

-All Tune-up Specialists certified (if conducting tune-up during 2020/2021)

September 30, 2021

Individuals can apply to be Tune-up Specialists at any time prior to the tune-up compliance deadline. The application process is objective and anyone with the credentials listed in the law **and** regulations will be permitted to lead a tune-up.

Key Takeaways

1. This policy is focused on the **operations and maintenance** of a building and its **existing systems**
2. This policy does **not** require capital improvements (unless *the building chooses* certain compliance options)
3. This policy **does not require** a building to meet a specific level of efficiency/energy use in its operations (unless *the building chooses* certain compliance options)
4. OOS is here to assist buildings with compliance – we'd rather see buildings perform better than issue fines
5. This policy aims to increase tenant comfort and decrease energy costs and carbon emissions – everyone wins!

Email TuneUps@phila.gov to get on our mailing list and stay informed!

Dave Ferro

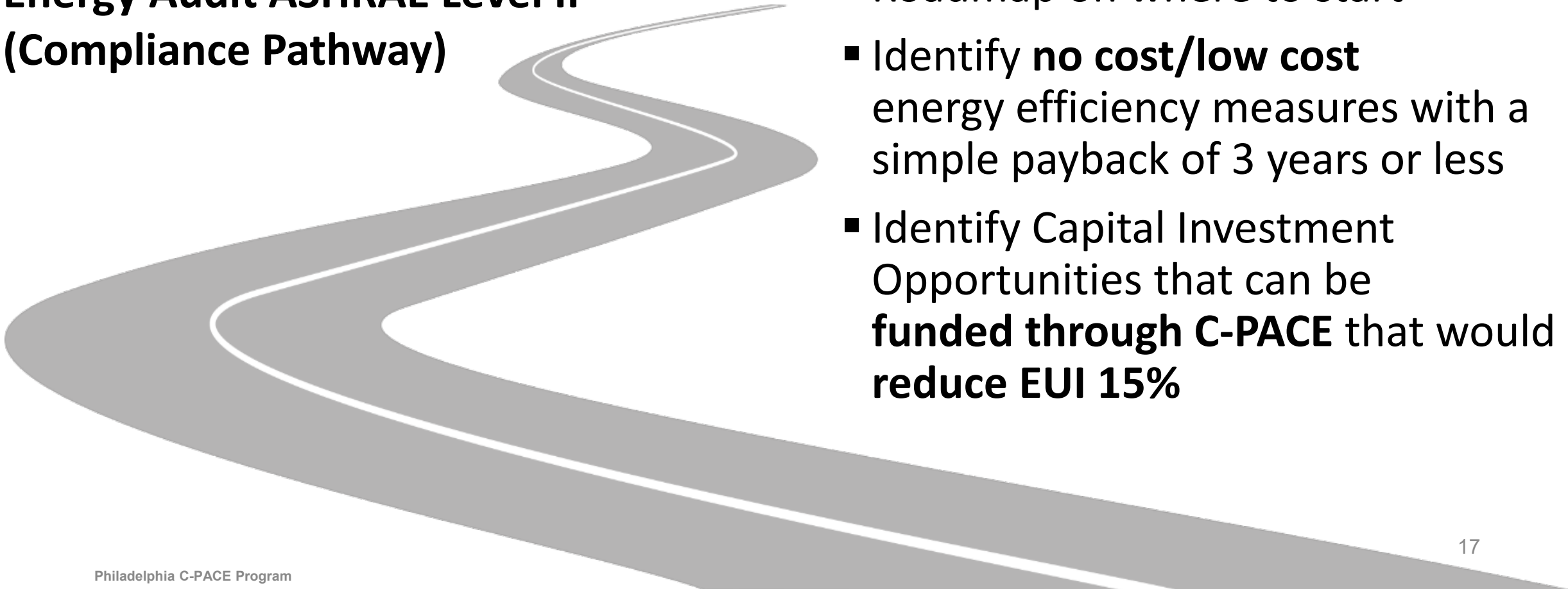
Achieving Energy Savings through Building Operations (Tune-Up)/Improving Efficiency through Capital Investments

First Steps:

- **Understand customer situation** with respect to data, needs, systems, controls and qualifying certifications.
  - A Buildings, B Buildings, and C Buildings
- What are the **best options for compliance**
- Validate **best options related to ROI**

Capital Investments – Key Strategies to Improve Building Energy Efficiency

Energy Audit ASHRAE Level II (Compliance Pathway)



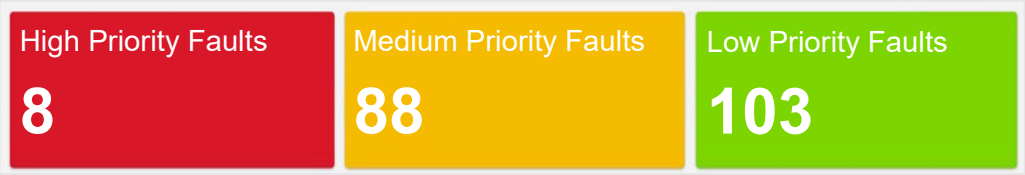
- Roadmap on where to start
- Identify **no cost/low cost** energy efficiency measures with a simple payback of 3 years or less
- Identify Capital Investment Opportunities that can be **funded through C-PACE** that would **reduce EUI 15%**

High-performance Compliance Option - Achieving Energy Savings Through Automated Active Optimization (CCx)

Requires:

1 year of quarterly reports generated by the automated system to include:

- Issues detected
- Date of each issue detected
- Date of correction
- Notes on how addressed



Solution:

Utilities Watch – Analytics-As-A-Service

- Continually optimizes building systems efficiencies
- Avoids energy efficiency project drift
- Data-driven identification of Capital Projects with detailed ROI with specific customer tariff
- M&V of Capital Project savings
- Energy Star Scoring
- Earn additional LEED points

Achieving Energy Savings Through Building Operations (Tune-Up)

Building Tune-up Specialist conducts Assessment on 5 Key Elements:

- Building System Maintenance & Repairs
- **HVAC Operations & Controls »**
- Lighting Systems
- Domestic Water & Hot Water Use
- Building Envelope

Continuous Commissioning (CCx) since January 2016

- 1,000,000 sq. ft. Class A office & retail

- Ongoing collaboration w/ facilities team
  - Identify new opportunities & improve efficiency
- Substantial savings between 4am and 8am realized by **implementing later start up time.**

  2,000-3,000 kWh savings/day

  = $52,000-$78,000 per year

Case Study – Lighting or Building Systems Maintenance and Repairs

Understanding level of Buildings

- Building A
- Building B
- Building C

- **Reduce** Operating Costs
- **Assist** with vulnerable neighbors
- **Expand** finance tools
- **Understand** & harvest key performance data points
- **Monitor** and control water usage

Case Study – Lighting

Health Care Facility

Project Cost: $100,315
Project Savings: $39,492/year
ROI: 2.54 years

Project Description

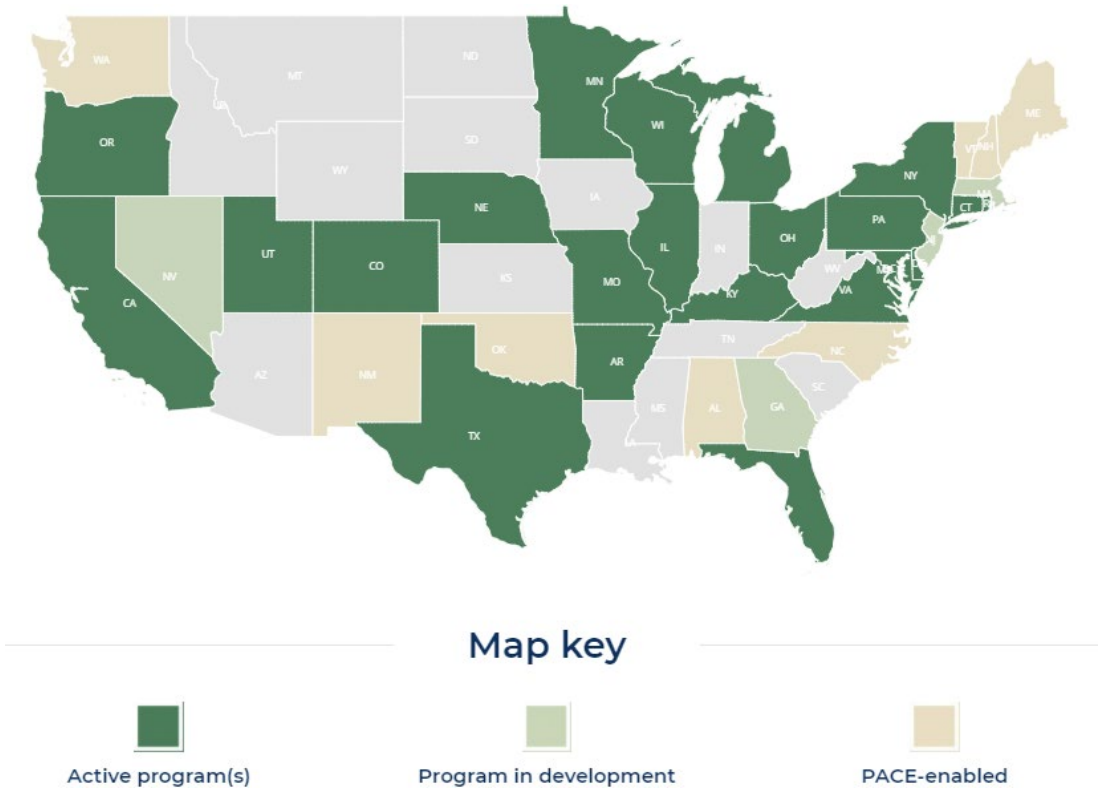
- Installation:
  - Dimmable & color-tunable and LED flat panel fixtures
  - Select tube replacement
  - Parking lot LED lighting
- Smart Lighting Control System
  - Programmed schedule for light level & color
  - Provides energy consumption at 1-hour intervals
- Samjin selected due to the benefits they provide in helping manage the overall well-being of Alzheimer's and dementia patients

Steve Bevilaqua

REVL
CAPITAL GROUP

C-PACE Financing

- Program Highlights
  - C-PACE - enabling legislation is active in 37 states plus D.C.
  - PACE programs are now active (launched and operating) in 22 states plus D.C.
  - $1.5 billion of C-PACE has been funded so far on over 2,400 commercial projects
  - It is estimated that this program has created over 18,000 jobs



Source: PACE Nation

C-PACE Financing

Key Benefits:

- Environmental Impact
- Increase Developer LTC up to 80-85% on a project
- The first payment is delayed up to two years
- Long-term assessment (up to 25 years), longer payback projects and deeper funding since PACE assessments are secured by property and can transfer to the next owner
- Assessment costs and savings can be shared with tenants
- PACE requires no upfront cash and can be treated as an off-balance sheet item

PACE Eligible Investments in Renewables and Efficiency projects

HVAC	Insulation	Ventilation	Refrigeration	Irrigation System
Rainwater Harvesting	Elevator Modernization	Green or Cool Roofs	Low-Flow Showers	Windows
Commercial Washers and Dryers	Cogen Furniture	Lighting Controls	Waterless Urinals	Insulation
Solar Panels	High Efficiency A/C	High Efficiency Lighting	Dishwashers	Hot Water Heaters
Wind Turbine Power	Air Filtration	Electric Car Charging	Thermostats	Soil Moisture Sensors
Duct Sealing	Geothermal Heat Pump	Solar Storage	[Seismic Retrofits]	Showerheads

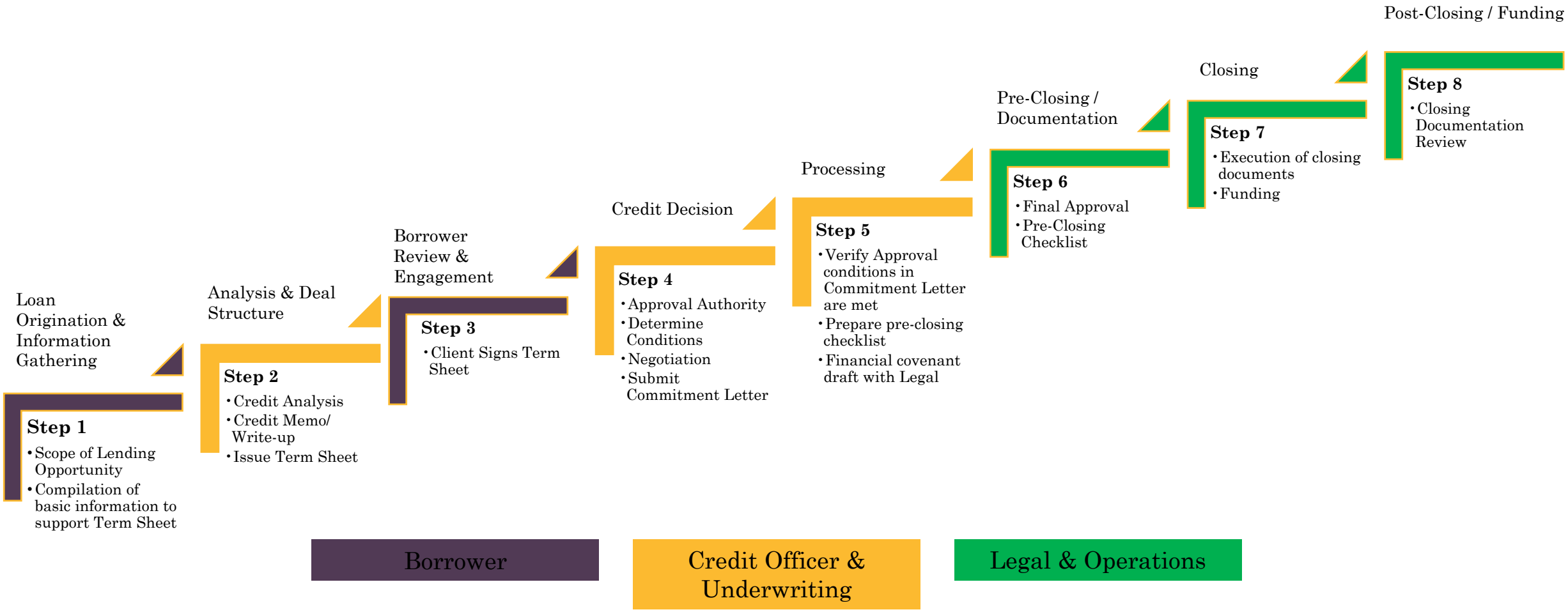
C-PACE Origination & Funding Process

Steps to Obtain a C-PACE assessment:

- Reach out to a C-PACE capital provider (such as Commercial PACE Finance)
  - The Capital Provider “sizes” the project and provides an approx. assessment amount
  - C-PACE will typically cover 30% of a project's hard costs
- Agree to terms with Capital Provider, sign term sheet, and move towards funding
- Receive Lender Consent from bank lender to place the C-PACE assessment on the project
- Capital Provider will hire a third-party energy audit firm to confirm that energy efficient appliances are being used in the project. This cost will be incurred by the Capital Provider
- Funds will be dispersed pari passu with bank loan funds

Capital Providers can close a C-PACE loan in 40-60 days.

C-PACE Closing Process



Selected Transactions – Case Studies

Westin - Milwaukee Ground Up Development

February 2016

PACE Financing Terms:

- PACE Amount: $6,828,330
- 20-Year Fully Amortizing PACE Loan
- 6.75% Coupon
- Prepayment Lock-out – 5 Years
- 10.84% Loan to Value upon completion

CASE STUDY

Property Details:

- Property Type: Flagged Hotel
- Location: Downtown Milwaukee
- Number of Units: 220
- Appraised Value: $63 million
- Total Construction Cost: $57 million

Covington Kentucky - Ground Up Development

June 2018

PACE Financing Terms:

- PACE Amount: $4,400,000
- 20-Year Fully Amortizing PACE Loan
- 6.84% Coupon
- Prepayment Lock-out – 3 Years, 3% penalty year 4; 1% penalty year 5
- 8.50% Loan to Value upon completion

CASE STUDY

Property Details:

- Property Type: Multifamily
- Location: Covington, KY
- Number of Units: 189
- Number of Parking Spaces: 359
- Additional Commercial Space: 4,000 sq ft
- Appraised Value: $51.8 million
- Total Construction Cost: $44 million

Lisa Shulock

PHILADELPHIA
ENERGY AUTHORITY

Philadelphia C-PACE 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

Recently Closed Deal: J-Centrel

Project Overview

Property Type: Mixed-Use

Financing Amount: $1,500,000

Building Measures: LED lighting, insulation, window replacements, energy recovery units, low-flow plumbing, and more

Environmental Impact: Reduction of the building's total carbon footprint by 2,700 metric tons of CO2 equivalent

Property Owner:
SHIFT Capital

Capital Provider:
Twain Financial Partners

- ✓ $1.5MM C-PACE financing filled **final piece of capital stack**
- ✓ Use for energy and water efficiency measures that exceed code requirements and achieved **immediate operating cost savings**
- ✓ Used for **commercial space** which includes retail storefronts, spaces for entrepreneurs and an accelerator for local businesses

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Q&A

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