Using CPACE Financing to Improve Efficiency and Resiliency in Buildings

May 30, 2018
Takeaway:
Understand how you can use CPACE financing to improve resiliency and energy performance in buildings
In the next hour, we’ll cover...

1. Summary of Commercial PACE
2. Why CPACE for Resiliency Projects?
3. Successful Case Studies
## Today’s presenters

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe Indvik</td>
<td>Senior Consultant</td>
<td>RE Tech Advisors</td>
</tr>
<tr>
<td>Andrew Zech</td>
<td>Chief Business Development Officer</td>
<td>Greenworks Lending</td>
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<tr>
<td>Michele Pitale</td>
<td>Managing Director</td>
<td>Counterpointe Sustainable Real Estate</td>
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<tr>
<td>Will Clark</td>
<td>VP, Originations</td>
<td>CleanFund</td>
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Commercial PACE Overview
What is Commercial PACE?

Specialized financing mechanism for energy efficiency, renewable energy, water conservation, and more.

1. 100% upfront financing
2. Customer repays via assessment on property tax bill
3. Long 10-20 year terms
4. Transferable upon sale of building

Source: Better Buildings Financing Navigator
How does it work?

Typical CPACE Financing Structure

- PACE Administrator
  - Marketing & Administrative Services
- Local Government
  - Repayment
  - Tax Assessment
- Investors
  - Capital for Project: May be paid to building owner, who then pays to contractor/ESCO
- Building Owner
  - Project Installation
- Contractor/ESCO

Source: Better Buildings Financing Navigator
33 states + DC have PACE-enabling legislation
20 states + DC have programs in place
$590 million financed with CPACE across 1,445 projects

Source: PACENation (http://pacenation.us/pace-programs/commercial)
CPACE Dollars Funded by Building Type

Source: PACENation (http://pacenation.us/pace-market-data/)
Typical Measures Funded by CPACE

Source: Rachel Davis, Petros PACE Finance
CPACE and Resiliency
$300 billion natural disaster damages in 2017

Source: https://www.ncdc.noaa.gov/billions/
What do we mean by resiliency?

### COMMON RESILIENCY PROJECTS

**Energy Supply**
- Renewable energy
- Combined heat and power (CHP)
- Battery storage
- Backup generation
- Microgrid
- Electric vehicle charging

**Resource Conservation**
- Efficient lighting and HVAC
- Water efficiency measures
- Building envelope improvements

**Structure Hardening**
- Seismic retrofits
- Wind-resistant roofs and windows
- Flood mitigation

Ensure building systems continue operating

Reduce energy and water demand; increase operating time on backups

Mitigate property damage, injury, and system outages

Source: Better Buildings CPACE for Resiliency Toolkit
Advantages of CPACE for Resiliency

1. **100% Financing**: CPACE can finance all hard and soft costs of qualified resiliency measures.

2. **Long Terms**: CPACE can provide long financing terms to smooth out cashflow impact of resiliency.

3. **Transferable**: CPACE is connected to the building, not to the individual borrower.
CPACE for Resiliency Toolkit

- Overview fact sheet
- Introductory webinars
- Case Study: Microgrid in Mixed-Use Building (Greenworks Lending)
- Case Study: Seton Medical Center Seismic Retrofits (CleanFund)
- Case Study: Southern Oaks Rehab and Nursing Center Hurricane-Proofing (CounterpointeSRE)
- Additional resources to be added

https://betterbuildingssolutioncenter.energy.gov/toolkits/commercial-pace-financing-resiliency
Case studies
Project in brief:

- Developed by award-winning socially and environmentally conscious developer Becker and Becker

- Transformed former Hartford National Bank headquarters into a mixed use building with residential (285 units), office, dining, and retail.

- Attained LEED Platinum Certification

- Resiliency project attracted key anchor retail tenant with resiliency requirements

- PACE funding through Greenworks Lending

- Project partners included Eversource, Doosan, Encon, Fairfield County Bank, Ridgefield Bank, Capital Region Development Authority
Selected Project Elements:

- **Resiliency**: microgrid consisting of Doosan fuel cell, solar array, and “island capable” control system
- **Efficiency**: LED lighting, low flow fixtures, energy and heat recovery systems, smart thermostats (Nest)
- **EV Charging Stations**

C-PACE Financial Impact:

- Reduced cost of capital  
  (half the cost of mezz or equity)
- Reduced annual payment (20 year term)
- Increased leverage
- Increased return on equity
- Energy-related operating savings

**Take-Away**: Historic bank building renovated into LEED platinum mixed-use facility. Developer used C-PACE to lower average cost of capital in stack.
Operating Savings from Onsite Clean Energy Generation:
(owner reporting)

<table>
<thead>
<tr>
<th>Annual Energy Cost Savings</th>
<th>Fuel Cell</th>
<th>Solar</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power produced (kwh)</td>
<td>3,404,123</td>
<td>142,387</td>
<td>3,546,510</td>
</tr>
<tr>
<td>Avoided Electric Cost</td>
<td>$578,701</td>
<td>$24,206</td>
<td>$602,907</td>
</tr>
<tr>
<td>Submetering Income</td>
<td>$172,210</td>
<td>$7,175</td>
<td>$179,385</td>
</tr>
<tr>
<td>Avoided Thermal Cost</td>
<td>$87,210</td>
<td>0</td>
<td>$87,210</td>
</tr>
<tr>
<td>Fuel Cell Natural Gas Cost</td>
<td>-$129,575</td>
<td>0</td>
<td>-$129,575</td>
</tr>
<tr>
<td>Total Energy Cost Savings</td>
<td>$708,546</td>
<td>$31,381</td>
<td>$739,927</td>
</tr>
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777 Main St. Greenworks Lending

For more on the 777 Main St. Greenworks Lending Case, please visit:
HASI (NYSE: HASI) is a publicly traded REIT and has been a leading investor in the sustainable infrastructure markets for over 35 years with over $4.6 billion of managed assets across debt and equity investments, including transactions sizes up to $250 million. Principal investors target approx. $1 billion in transactions annually.

Counterpointe Sustainable Real Estate, one of the pioneers in PACE financing, is staffed with commercial real estate financing professionals with decades of experience at some of the leading financial services firms such as Merrill Lynch, Deutsche Bank, Standard & Poor’s, Moody’s, Guggenheim, GMAC. CounterpointeSRE utilizes its expertise and resources to provide a nationwide funding platform for commercial real estate improvements.
Positioned at the convergence of real estate and sustainability finance.
PACE Program Administration

Counterpointe Energy Solutions administers PACE Programs in the largest, active jurisdictions of the PACE industry. As a Program Administrator, Counterpointe provides engagement, oversight, and servicing to the applicable public agencies through a public private partnership.

CounterpointeSRE is a capital provider up to $100mm per project in active PACE programs nationwide.

- **California**
  - California Statewide Communities Development Agency (CSCDA)

- **Florida**
  - Florida PACE Funding Agency (FPFA)

- **New Jersey**
  - Hudson, Passaic, Union, Middlesex
Utilizing PACE to Improve Resiliency

Ideally suited to support both Property Owners and City Planning Initiatives

Earthquakes
Water Shortage
Wind
Stormwater, Extreme Rainfall, and Heat Waves
Power - CHP units, generators, renewable energy, microgrids
Winter Weather
Coastal Flooding
Pace for Seismic Strengthening

In 2015, San Francisco partnered with Counterpointe Energy Solutions to provide PACE financing for its city-sponsored Soft Story Retrofit Program for mandatory soft story retrofits.

Other California municipalities have since established mandatory seismic retrofit programs.

California state law was enacted to allow PACE financing for commercial seismic improvements throughout the state as of January 1, 2017.
### PACE for Seismic Strengthening

<table>
<thead>
<tr>
<th>Multifamily (condo)</th>
<th>Transaction</th>
<th>San Francisco Mandatory Soft Story Retrofit Program</th>
<th>Property Assessed Clean Energy Financing $100K 30 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multifamily</td>
<td>Transaction</td>
<td>Los Angeles Soft-Story Retrofit Program</td>
<td>Property Assessed Clean Energy Financing $200K 30 yrs</td>
</tr>
<tr>
<td>Multifamily</td>
<td>Transaction</td>
<td>Los Angeles Soft-Story Retrofit Program</td>
<td>Property Assessed Clean Energy Financing $100K 30 yrs</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>Transaction</td>
<td>San Francisco Mandatory Soft Story Retrofit Program</td>
<td>Property Assessed Clean Energy Financing $1 MM 20 yrs</td>
</tr>
</tbody>
</table>
PACE for Extreme Rainfall, Heat Wave, and Storm Water Management

CounterpointeSRE Green Roof Program - Resiliency Benefits

- Storm Water Management
- Low Impact Development - Mitigates Lost Green Space
- Modulates Ambient Temp - Urban Heat Island Effect
- Filters Air, Dust, Toxins and Water Runoff
- Habitat

*Consists of a lightweight engineered material made of organic matter

Source: MCT Graphic
PACE for Hurricane Preparedness

Wind, Storm Surge, Power Outages and Flooding

FLORIDA PACE FUNDING ACT

• Wind Resistant Shingles
• Creating Secondary Water Barrier
• Strengthen Roof Deck Attachment
• Reinforced roof-to-wall connections
• Gable-end bracing
• Storm Shutters or Opening Protections

Assessment Breakdown:

Q1 2018 Florida PACE assessments for Wind Zone (140mph) areas
  69% Impact Windows & Doors
  29% Wind Resistant Roofing
  2% Storm Shutters
# PACE for Resiliency-Wind Resistant Improvements

<table>
<thead>
<tr>
<th>Retail</th>
<th>Transaction</th>
<th>Property Assessed Clean Energy Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Various energy retrofits and wind resistant upgrades including Barrel-vault skylights and roofing for Washington Prime Mall Portfolio in Florida</td>
<td>$12.8 mm</td>
</tr>
<tr>
<td></td>
<td>Various energy retrofits and various wind resistant upgrades for multiple Simon Malls in Florida</td>
<td>$15.7 mm</td>
</tr>
<tr>
<td></td>
<td>Impact Windows and Doors conforming to Miami-Dade County Standards installed in specialty shopping center</td>
<td>$390K</td>
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The Challenge:
Built in 1978, the original roof and 267 windows required replacement and significant upgrade to conform with Wind Speed Maps and updated Florida Building Code for Public Assembly Buildings. With its current mortgage maturing in 2 years, Southern Oaks sought a way to upgrade the facility without refinancing or using equity capital.

The Solution:
Structural retrofit utilizing C-PACE financing for EnergyStar impact windows, upgraded roofing, water barrier and concrete fasteners. In addition, owner upgraded elevator to improve energy efficiency.

The Result:
- Increased safety for patients and staff
- Reduced insurance premiums due to ‘hurricane –proofing’ upgrades
- Decreased energy usage from energy efficient windows, elevator and upgraded roof insulation
- Owner preserves capital with no out-of-pocket costs

Southern Oaks Rehabilitation and Nursing Center, Pensacola, FL

25 year fixed rate PACE financing
$527,860
Impact Windows up to 200mph
Wind Resistant Roofing > 140mph
Contact Information

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HASI Investor Relations
www.hannonarmstrong.com
410-571-6189
$3B
Damage to hospitals in 1994 Northridge quake.

486
Hospitals subject to 2020 deadline
Seton Medical

Built 1963

1,907

Largest employer in Daly City, CA

24,435

Annual emergency visits
$40MM C-PACE
Proceeds from CleanFund and Petros

($65MM)
FY 2015 loss by Daughters of Charity
1963 Tower and Wing
216,155 sf

1978 "Pod" Expansion
29,000 sf

1978 Expansion
109,922 sf
Structural Seismic Compliance

- Grade beams
- Steel gravity framing
- Spread footing
- Fiberwrap concrete columns
- Steel plate and threaded rod collectors
- Window and door replacement
- Curtain wall reinforcement
Non-Structural Seismic Compliance

- Communication systems
- Emergency power
- Bulk medical gas
- Fire alarms and emergency lighting
- Suspended ceilings
- Hospital equipment
- Fire sprinklers
- Above ceiling utilities
C-PACE Eligible Improvements

- Structural seismic upgrades
- Non-structural seismic improvements
- Windows and door replacement
- Mechanical upgrades
- Water efficiency repairs
- Engineering and architectural work
C-PACE for Resiliency

Will Clark, VP of Originations

www.cleanfund.com
The Better Buildings Financing Navigator

The Navigator is an online tool that helps public and private organizations find financing solutions for EE&RE projects.

With the Navigator, you can…

1. **Explore**: Learn the basics of the EE&RE financing market

2. **Find**: Answer a few simple questions to see which financing options might be a fit for your project

3. **Connect**: Speak to Better Buildings Financial Allies who may be able to finance your project

Now available at: [https://betterbuildingssolutioncenter.energy.gov/financing-navigator](https://betterbuildingssolutioncenter.energy.gov/financing-navigator)
2018 Energy Exchange and Better Buildings Summit

August 21\textsuperscript{st}-23\textsuperscript{rd} in Cleveland, OH

Registration is open! Early bird registration ends June 15\textsuperscript{th}

Highlights include:

- Panel sessions and technical trainings (earn CEUs)
- Peer-to-peer discussions
- Ask-an-Expert/FEMP Lounge
- Networking opportunities
- Pre- and post-conference workshops
- Better Buildings Partner sessions
- Building Tours

For more information and to register:
2018energyexchange.com
CPACE for Resiliency Toolkit

- Overview fact sheet
- Introductory webinars
- Case Study: Microgrid in Mixed-Use Building (Greenworks Lending)
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Thanks!

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