

Moderated by:

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Sponsored by:







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Anthony Buonicore is Managing Director of Buonicore Partners, program administrator for C-PACE in CT and publisher of the daily energy news service, *Building Energy Performance Assessment News*, and is a past president and Fellow Member of the Air & Waste Management Association. Mr. Buonicore is also a Diplomat in the American Academy of Environmental Engineers and a licensed professional engineer. He is chairman of ASTM's Building Energy Performance Assessment (BEPA) Task Group, which developed the E2797-11 BEPA standard, and is a member of the Zero Energy Commercial Buildings Consortium. Mr. Buonicore is also a member of BOMA, IFMA and the International Building Performance Simulation Association.



- Jessica Bailey
 - Director of Commercial & Industrial PACE Program, CEFIA
- Burt Hunter
 - Chief Investment Officer, CEFIA







- Formal Presentation (60 mins)
 - Anthony Buonicore
- Panel Q & A Session (20 mins)
 - Participants submit questions via the 'Question' function on GTW tool bar





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Profiting from the Connecticut Commercial PACE Financing Opportunity

"Standards, Tools & Underwriting Techniques to Ensure Success"

presented by:

Anthony J. Buonicore, P.E.

Managing Director Buonicore Partners, LLC C-PACE Program Administrator

Overview

- CRE Market Today
- Connecticut PACE
- Power of C-PACE in Commercial Real Estate (CRE)
- Underwriting Energy Efficiency Financing
 - Financial
 - Technical
- Program Implementation
- Benefits to Capital Providers
- What Capital Providers Can Do Now
- Summary and Conclusions

Commercial Real Estate Market in CT

- CT CRE market: ~ 35,500 buildings (excluding multifamily)
 - 95% < 50,000 SF
 - Majority multi-tenant (versus owner-occupied)

73% constructed prior to 1990

- Many still rely on original (outdated) mechanical & electrical systems that are near or at the end of their useful lives
- EE investments typically focused on low cost/risk, quick payback retrofit projects using internal funding resources
- Recent recession and economic uncertainty have resulted in
 - CapEx budgets plummeting
 - Operating budget reductions
 - Energy retrofit projects delayed

Commercial Real Estate Market in CT cont'd

- Capital intensive, deep energy retrofits with longer paybacks often delayed
 - Lack of internal resources
 - Desire to preserve capital in uncertain economic times

Despite residual uncertainty in U.S. economic climate

- CRE recovery is evident
- Pent-up demand to replace/upgrade outdated energy-consuming equipment with more efficient equipment
- Result: a major opportunity to accelerate EE market growth

To catalyze this growth opportunity, financing must be

- Easily accessible to building owners
- Supported by a technically sound & fully-transparent underwriting process
- Driven by a process that provides stakeholders with a high degree of confidence in the energy savings

...the PACE financing structure is one such catalyst

C-PACE: Commercially Attractive Financing

C-PACE provides an *innovative financing structure* enabling commercial, industrial, & multifamily property owners to access financing for qualified energy upgrades and repay through a benefit assessment on their property tax.



Repayment through property taxes

A senior PACE lien is put on the property and stays regardless of ownership

CRE Owners Face Barriers to EE Upgrades



REFERENCES

EE Indicator - NA 2010, Johnson Controls and International Facilities Management Association (IFMA)

C-PACE Addresses Key Barriers



C-PACE Program Background

- July 2011 CT passed statewide enabling PACE legislation
- Clean Energy Finance & Investment Authority (CEFIA) directed to establish & administer the program
- Municipalities that "opt-in" are authorized to place a tax lien on a property whose owner has secured financing for a PACE loan.

Municipalities Opting Into C-PACE To-date



Municipalities Opting Into C-PACE To-date

- Beacon Falls
- Bridgeport
- Durham
- Hartford
- Middletown
- Norwalk

- Old Saybrook
- Simsbury
- Stamford
- West Hartford
- Westport
- Wilton
- Windham

Coming soon: Stratford, Waterbury, East Granby, Fairfield, Manchester, Wethersfield, New Haven, Meriden, Plymouth, Cheshire, Putnam

C-PACE Program Background cont'd

- Taxes to repay lien are collected in the normal course by the municipality
- Process is entirely consistent with other benefit assessments (sewers)
- The tax lien (assessment) has priority over existing mortgages
- If an existing mortgage exists, the owner must secure written consent from the lender prior to project approval and lien issuance

C-PACE Program Background cont'd

- The goal: attract private capital to fund EE & RE initiatives
- Costs covered by the project financing may include:
 - Engineering and construction costs
 - Energy audits
 - Renewable energy feasibility studies
 - Post-construction measurement & verification of energy savings
- Owners may recruit their own capital providers
- 8 capital providers (to-date) have been pre-approved to fund projects

Funding: Capital Sourcing

Qualified Capital Providers

- CEFIA qualified 8 capital providers through a RFI
- "Lending tree" model

Owner Arranged Financing

- Property owner is free to choose their capital provider from the private market
- There is no government financing required





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C-PACE Program Innovation

- Flexibility: recognizing program will evolve as experience is gained
- Designed by staff with an understanding of CRE industry needs
 - Limited available capital directed at core business activities
 - Energy efficiency is not core to CRE which has resulted in "pent-up demand" for targeted upgrades
 - Economic uncertainty caused past audit recommendations to be shelved
 - Preference for positive cash flow impact resulting from investments
 - Sale of CRE is opportunistic not a problem under the C-PACE financing as projects have relatively long payback times, & loan is attached to the property

C-PACE Program Innovation cont'd

- Pre-screening" process for whole building upgrades
 - Identify buildings where the potential for significant EE improvements exists
 - Increase likelihood for project financing
 - Time & cost effective for building owner
- Includes a "Fast Track" review pathway

C-PACE Program Innovation cont'd

- Review process supports range of project types & sizes
 - Both large and small projects
 - Targeted (single) ECM projects
 - Less technically complex projects (such as lighting)
 - Renewable energy projects only (such as solar)
 - Projects pre-approved by other CT state programs for rebates/ incentives, but still requiring some level of owner self-funding
 - Projects with prior energy audits completed, but not acted upon due to lack of financing options & owner inability to self-fund

C-PACE Program Innovation: Project "Life Cycle" Data Management Platform (CDMP)

- Project data are entered & tracked in CDMP for use by all deal stakeholders across the entire project life cycle (project development through M&V)
 - Powered by SRS's cloud-based software platform
 - Facilitates consistency & transparency



The Power of C-PACE Financing: "An Offer Building Owners Will Find Difficult to Refuse"

- Capital improvements without capital expense
- 100% of project cost covered (including upfront energy audit /renewable energy feasibility study and M&V costs)
- PACE assessment is an obligation of the property, not the owner
- Repayment made through property tax bill

The Power of C-PACE Financing: "An Offer Building Owners Will Find Difficult to Refuse"

- Property tax payments may qualify as an operating expense
- Obligation not accelerated at the time of sale (remains with property)
- Tax payments may be passed through to tenants who enjoy the benefits (for some gross leases or most triple net leases)
- Long-term financing (up to 20 years)
 - Energy savings will exceed investment cost
 - For most projects positive cash flow from day one
 - Increases building value
 - Enhances building's competitive position in the marketplace

The Power of C-PACE Financing: "An Offer Building Owners Will Find Difficult to Refuse"

CEFIA

- Acts as a conduit for private investment
- Encourages CRE owners to arrange their own financing
- Will connect owners to capital providers (if needed)

CRE Owners

- Negotiate rate, terms, conditions & schedules
- Financing terms are agreed to between the owner and capital provider
- Security of the tax lien provides a financing solution for CRE owners (LLCs) who lack credit quality
- Can undertake deeper more capital intensive retrofits with greater savings potential & longer payback periods

C-PACE Underwriting

- Financial
- Technical

C-PACE Financial Underwriting

- **Tax lien holds a senior** (priority) **position** (above the mortgage)
- Consent of property mortgage holder required
- Existing debt, with PACE assessment obligation, must be less than the property value*
- Total savings over the financing term must exceed the total project investment (SIR > 1)

* each property with its financials is evaluated on a case-by-case basis

C-PACE Financial Underwriting cont'd

Property must have clear title with no encumbrances

- Property taxes should be current
- There should be no outstanding tax liens or notices of default
- Mortgage payments must be current
- No easements or subordination agreements that would conflict with PACE assessment
- Project useful life must be longer than the financing term

Mortgage Holder Consent Issue

- Legislation requires existing mortgage lender to consent to a PACE lien
- Why lenders will consider and in many cases provide consent:
 - Savings from PACE assessment assures that the cash flow of the building will be improved (higher NOI)
 - Value of collateral is improved
 - Connecticut's open market program gives the mortgage lender the opportunity to provide the energy efficiency financing to their customer (resulting in increased business)
 - In the case of a property owner default, only the past due C-PACE assessment (the portion in arrears) sits ahead of the mortgage lender (the obligation is not accelerated)

Credit-Enhancements

Default Protection

Non-acceleration clause in PACE program

- Require only the low monthly property tax payment to be paid by the foreclosing bank
- Entire PACE loan does not become due upon default
- Significantly reduces impact of PACE's priority lien on lender in the event of a default
- C-PACE legislation allows establishment of a loan loss reserve funds to cover bridge payments to lenders in default situations

Underperformance Risk Protection

- Energy Savings Insurance (ESI)
- Third party technical review
- Performance guarantees

Other

- CEFIA/Green Bank project construction financing
- CEFIA/Green Bank co-investing

Energy Savings Insurance Option

- Can provide a backstop for energy savings performance guarantees, if needed
- ESI insurer agrees to pay any shortfall in energy savings below a pre-agreed baseline, less a deductible
- Premium paid up-front, but cost can be rolled into financing

Technical Underwriting

Key challenge: "Will the projected energy savings be realized?"

- Problem #1: Energy savings can't be measured directly
- Problem #2: Lack of a standardized methodology to underwrite energy efficiency financing
- Problem #3: Without a solution to #1 & #2, EE financing cannot become a mainstream financial asset class with a high degree of standardization, predictability and scale

No longer true today!

Foundation of C-PACE Technical Underwriting

Thanks to nationally recognized technical standards defining the total process from data collection to energy savings measurement and verification...



- Energy savings can now be forecast with a high degree of confidence
- Actual energy savings performance can be measured and verified in a reliable, consistent and fully-transparent manner
- Risk of underperformance is low

C-PACE Program Technical Standards

- Rely on three established industry protocols:
 - ASTM Building Energy Performance Assessment Standard E2797-11
 - Methodology for collecting & analyzing baseline energy data
 - ASHRAE Level I, II, III Energy Audit Guidelines
 - Methodology to identify energy conservation measures (ECMs) & project energy savings with high degree of confidence
 - International Performance Measurement & Verification Protocol (IPMVP)
 - Methodology for energy savings measurement & verification
- Underwriting methodology is technically sound, standardized, reliable & fully-transparent AND is easily available to the capital provider

C-PACE Program Technical Standards cont'd

- C-PACE Program project information entered into CEFIA's Data Management Platform (CDMP) to facilitate underwriting
- All deal stakeholders have access to CDMP
 - CEFIA
 - Building owner
 - Capital provider
 - ESCOs
 - Contractors
 - Insurer (if ESI used)
- CDMP follows the project post-installation thru M&V
- CDMP meets all reporting needs of various project stakeholders

Projected Energy Savings in CDMP



Key Financial Metrics in CDMP for Capital Providers

	Projected
Costs and Savings:	
Estimated Required Investment (unleveraged): Estimated Annual Savings: Projected: \$21,547 avg. / month	\$1,992,976 \$258,563
Return on Investment (ROI): Simple Payback Term (years): True Payback Term (years): Savings to Investment Ratio (unleveraged): Savings to Investment Ratio (leveraged): Total Cash Flows (unleveraged): Total Cash Flows (leveraged):	13.0% 7.71 7.33 3.03 2.06 \$2,446,034 \$1,507,840
Finance Scenario:	
Estimated Required Investment (100% leveraged): Amount Financed: Estimated Annual Debt Service: 180 months at 5.5% interest Estimated First Year Benefit: Excess Annual Cash Flow (first year):	\$0 \$1,992,976 \$195,411 \$16,284 \$0 \$63,152
Financial Analytics: Asset Value Impact from ECMs:	
@ 6.50% CAP rate @ 7.50% CAP rate @ 8.50% CAP rate Asset Value Impact less Required Investment:	\$3,977,899 \$3,447,512 \$3,041,922
 @ 6.50% CAP rate @ 7.50% CAP rate @ 8.50% CAP rate Internal Rate of Return (unleveraged IRR): 	\$1,984,923 \$1,454,536 \$1,048,946 11.5%
Internal Rate of Return (leveraged IRR): Net Present Value (unleveraged NPV): Net Present Value (leveraged NPV): Time to Positive Cash Flow (leveraged):	N/A \$470,296 \$790,653 Immediate

Energy Savings Tracking in CDMP (Post ECMs) for Stakeholder Reporting



C-PACE Innovative Technical Underwriting Process



CEFIA Forwards Payments to Capital Provider for Assessment Term



Key C-PACE Program Implementation Criteria

- Energy improvements include any retrofit of qualifying commercial real estate defined as:
 - Commercial
 - Industrial
 - Multifamily > 4 units
- The opportunity must reduce energy consumption or include a renewable energy system that is:
 - Permanently affixed to the qualifying commercial property
 - Achieves a savings-to-investment ratio (SIR) > 1

PACE Program Results in Benefits to Capital Providers

- CEFIA energy efficiency technical underwriting accessible to capital providers via the CDMP
- Potential to increase business with existing customers & solicit new customers from institutions not participating in PACE programs
- Lending to existing customers where property is collateral
 - Can protect collateral and help avoid obsolescence
 - Existing customers may have avoided replacement or upgrading of equipment due to the recession – so it may need to be done anyway
 - PACE program could make replacement a more attractive proposition
- Potential for secondary market (securitization)
- Public relations

What Can Capital Providers Do Now?

- Learn as much as you can about the C-PACE Program
- Understand how EE improvements and the C-PACE financing structure can benefit your customers
- Develop a policy directed at EE financing
 - Internal underwriting procedures
 - Use of CEFIA's technical underwriting
 - Response to requests to provide consent for a priority lien
 - Will you provide consent?
 - If so, under what conditions?
 - When will you prefer to provide the capital to your customer?
- Lending officers need to be trained on C-PACE opportunity
- Discuss C-PACE opportunity with existing commercial customer base and determine potential for EE improvement lending thru C-PACE program (increase lending business = increased profit)

Summary of Stakeholder Benefits: A Win-Win!

Project Capital Providers

- Provides low risk investment opportunity:
- Senior lien
- Association with secure payment stream (taxes)
- Legal and technical structure administered by CEFIA
- Comprehensive technical underwriting of EE improvements conducted by CEFIA

Property Owners

- Gives access to low cost, long term financing (for 100% of project cost) to improve building energy use
- No upfront capital
- Automatically transfers in the event of a sale (no debt acceleration)
- Improves attractiveness and comfort of property
- May qualify as an operating cost that potentially can be a pass-through to tenants (solving the split incentive problem)
- Can result in positive cash flow from day one

Existing Mortgage Holders

- Lowers operating costs for building and could improve NOI
- Non-accelerated obligation
- Improves value of collateral
- Creates a more attractive building for occupants and future owners
- Potential opportunity to increase business

Municipalities

- Reduces energy costs for businesses
- Attract business
- Reduce GHGs
- Create economic development opportunity, including job creation

Conclusion

- Energy savings can now be forecast with a high degree of confidence resulting in a low risk of underperformance
- Actual energy savings performance can be measured and verified in a reliable, consistent and fully-transparent manner
- C-PACE technical underwriting represents industry best practice today
- C-PACE financing structure is very attractive to CRE owners and provides "an offer that is very difficult to refuse"
- C-PACE is enabling CRE EE financing to become a mainstream financial asset class with high degree of standardization, predictability & scale for capital providers





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Chairman & CEO Sustainable Real Estate Solutions, Inc.



Additional Resources

ASHRAE

www.ashrae.org

ASTM

- http://www.astm.org/Standards/E2797.htm
- Building Energy Performance Assessment News
 - www.bepinfo.com
- CT Clean Energy Finance and Investment Authority
 - www.ctcleanenergy.com/YourBusinessorInstitution/CommercialPropertyAssessed CleanEnergyCPACE/tabid/642/Default.aspx
- International Performance Measurement and Verification Protocol (IPMVP)
 - www.evo-world.org
- LinkedIn BEPA Group
 - http://www.linkedin.com/groups?mostPopular=&gid=2859478