



Empowering you to make  
smart energy choices

Clean Energy Finance and Investment Authority

**C-PACE:**

**A financing tool for CHP in commercial &  
industrial buildings**

# Energy Challenge in Connecticut



## High Cost

CT has THE highest cost for electricity in the "lower 48"



## Old, Energy Inefficient Building Stock

CT has some of the oldest and most energy inefficient building stock



## Need for "Cleaner / Cheaper" Energy Sources

Programs that will diversify our energy mix into renewable/clean power



## "More Reliable" Grid

5 major storms in 2 years with unacceptable outages

# CEFIA is Connecticut's "Green Bank"



...transitioning programs away from government-funded grants, rebates, and other subsidies, and towards deploying private capital

...CEFIA was established in 2011 to develop programs that will leverage private sector capital to create long-term, sustainable financing for energy efficiency and clean energy to support residential, commercial, and industrial sector implementation of energy efficiency and clean energy measures.



# Property Assessed Clean Energy

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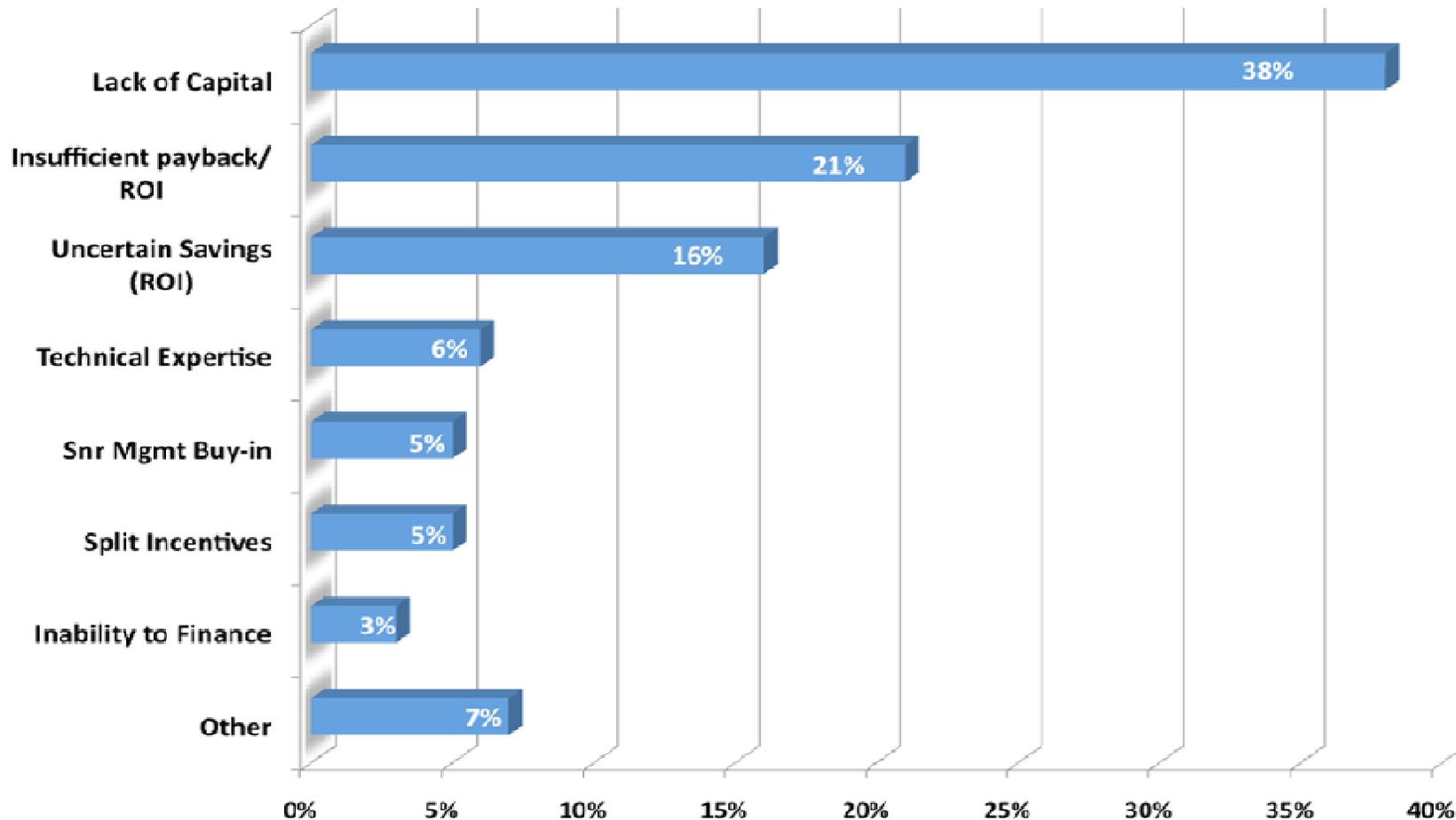
- An innovative financing structure that enables commercial, industrial, and multi-family property owners to access financing for qualified energy upgrades and repay through a benefit assessment on their property tax.

Private capital provides 100% upfront, low-cost, long-term funding

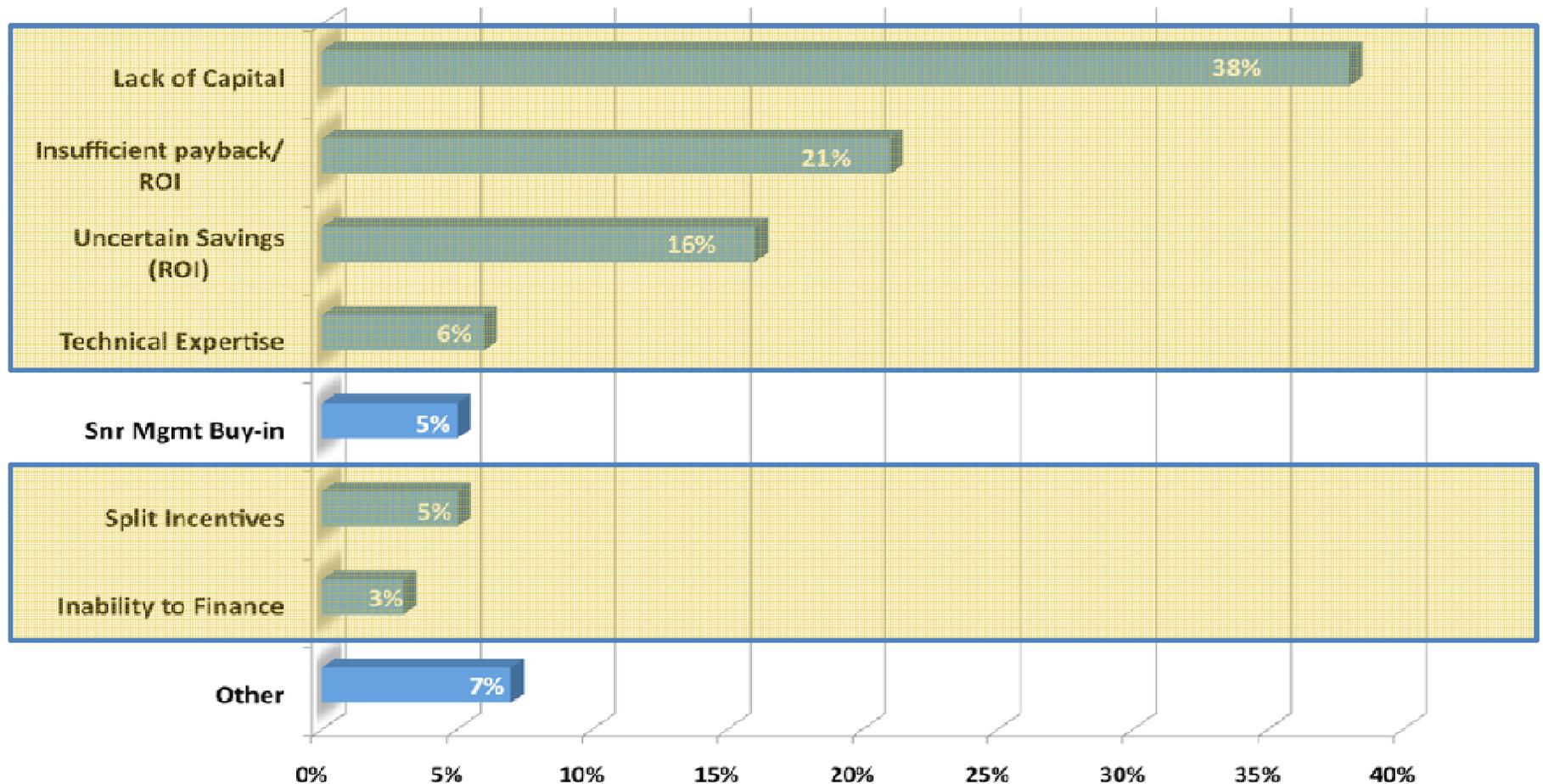
Repayment through property taxes

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

# CRE owners face barriers to upgrades



# PACE addresses key barriers



# C-PACE Advantage for Owners

Near term plan to sell?

Lack of funding?

Cannot assume more debt?

Insufficient payback/ROI?

Split incentives?

Uncertain savings/technical expertise?

**Tax obligation fixed to property**

**100% upfront, 20 year financing**

**Assessments may qualify as OPEX**

**Positive cash flow in year 1**

**Assessment/savings pass to tenants**

**Technical underwriting / SIR>1**

# CHP Challenge in Connecticut

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- Barriers to CHP development:
  - large upfront investment cost
  - standby fees
  - lengthy and convoluted interconnection processes
  - insurance requirements add cost and uncertainty.
- Connecticut efforts to reduce barriers
  - \$6M 3 year funding pilot authorized by Public Act 11-80 in 2011 provides grants and low-cost financing for CHP
  - LRECs provide long-term REC contracts for fuel cells
  - 2013 Comprehensive Energy Strategy



# C-PACE Advantage to other stakeholders

## Capital Providers

- Low risk investment opportunity
  - Senior lien
  - Secure repayment mechanism (taxes)
- Legal and technical structure administered by CEFIA

## Mortgage Lenders

- Improves Building Financials/Risk
  - Lowers OPEX
  - **SIR>1**
  - No acceleration
- Creates a more attractive building for occupants and owners
- Finances deferred maintenance needs

## Municipalities

- Creates economic development & jobs
- Reduces energy costs for businesses
- Reduces pollution

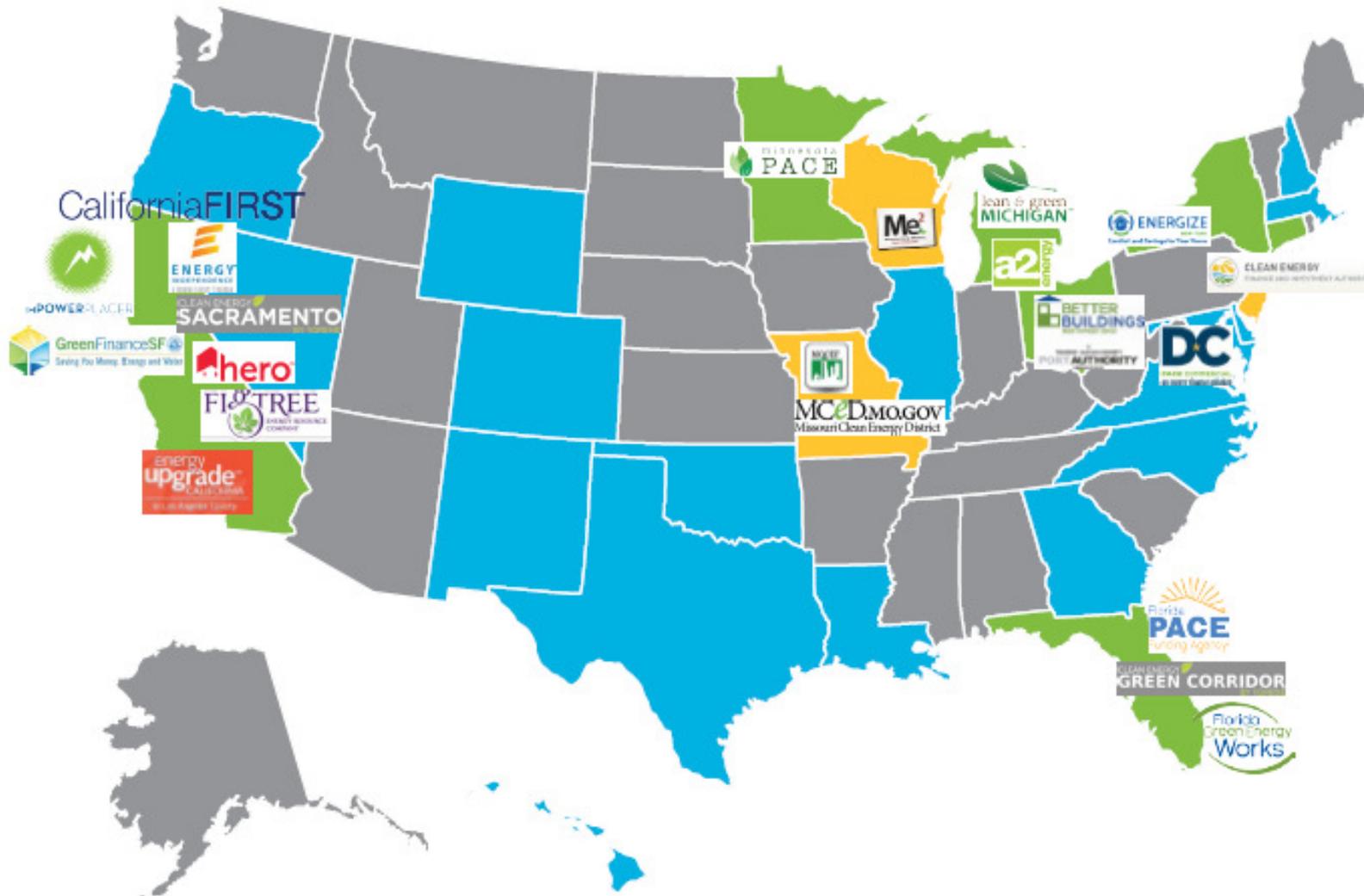
■ Enabling legislation and active programs

■ Enabling legislation and emerging programs

■ Enabling legislation (26 states)

■ No commercial PACE legislation

\* The map shows active PACE programs and PACE programs in development.



# Connecticut Special Session

## Public Act 12-2 (June 2012)

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- Commercial, industrial & multi-family property
- Requires the consent of the existing mortgage lender
- Requires SIR>1; permanently affixed
- Enables municipalities to opt-in
- Enables CEFIA to administer a statewide program

# CEFIA's Role in C-PACE

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## Design Program

- Publish Guidelines November 2012
- Onboard Municipalities
- Website launched ([www.c-pace.com](http://www.c-pace.com))

## Administer Program

- Technical Underwriting
- Marketing & Outreach
- Work with Existing Mortgage Lenders

## Attract Private Capital

- Qualify Capital Providers
- Offer Credit Enhancement tools (as needed)
- Provide capital (as needed)
- Develop warehouse / bonding authority (Q2 2013)

# Customers Apply Into C-PACE

**cpace** CREATING CLEAN ENERGY OPPORTUNITIES

BUILDINGS PROJECTS EXPLORE MAP RESOURCES APPLICATION

**Connecticut is moving towards an energy future that is cleaner, cheaper, and more reliable.**

CEFA is launching a finance program that will allow commercial and industrial building owners to access capital to upgrade their buildings.

[LEARN MORE](#)

**FEATURED BUILDINGS** Use the map below to discover more about our most recent energy efficient buildings in Connecticut, or [EXPLORE ALL 543 BUILDINGS](#)

- State Capitol** Energy Efficiency [VIEW PROFILE](#)
- Greenwich Hospital** Energy Efficiency
- Yale University-Sterling Memorial Library** Energy Efficiency
- Connecticut Science Center** Energy Efficiency

[EXPLORE ALL 543 BUILDINGS](#)

**FEATURED PROJECTS** Learn more about some of our featured energy efficient projects below, or [VIEW ALL 432 PROJECTS](#)

**State Capitol**  
LOCATION: 123 Location RD East Hartford CT  
BUILDING TYPE: Government

[MORE DETAILS](#)

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**step two | building information**

**Address of Property**  **Date of construction**

**Is a parking area associated with the building?** If yes, provide description (above/below ground, connected) **Gross square footage** (not including any parking area)

Yes  No

**Who occupies this property?**  Owner  Tenant

**Date and description of last major renovation.** (defined as a renovation that either involved expansion or reduction of the building's gross floor area by 10% or more, or that impacted total building energy use by more than 10%) **What type fuel use?** natural gas, oil, steam; fuel provider (s) info

**Electricity provider**

**Do you currently pay property taxes on building?**  Yes  No **Are payments current?**  Yes  No

**Is there a current mortgage on the property?**  Yes  No If yes, note the mortgage holder(s) **Upload recent annual financial statement of property**

**Property assessed value**  **Date of last assessment**  **Estimated current value**

**Amount of debt** (current outstanding loan balance, including a breakdown of the amount of the 1st or 2nd)

**Are mortgage payments current?**  Yes  No

**Do you have clear title to the property with no encumbrances?**  Yes  No

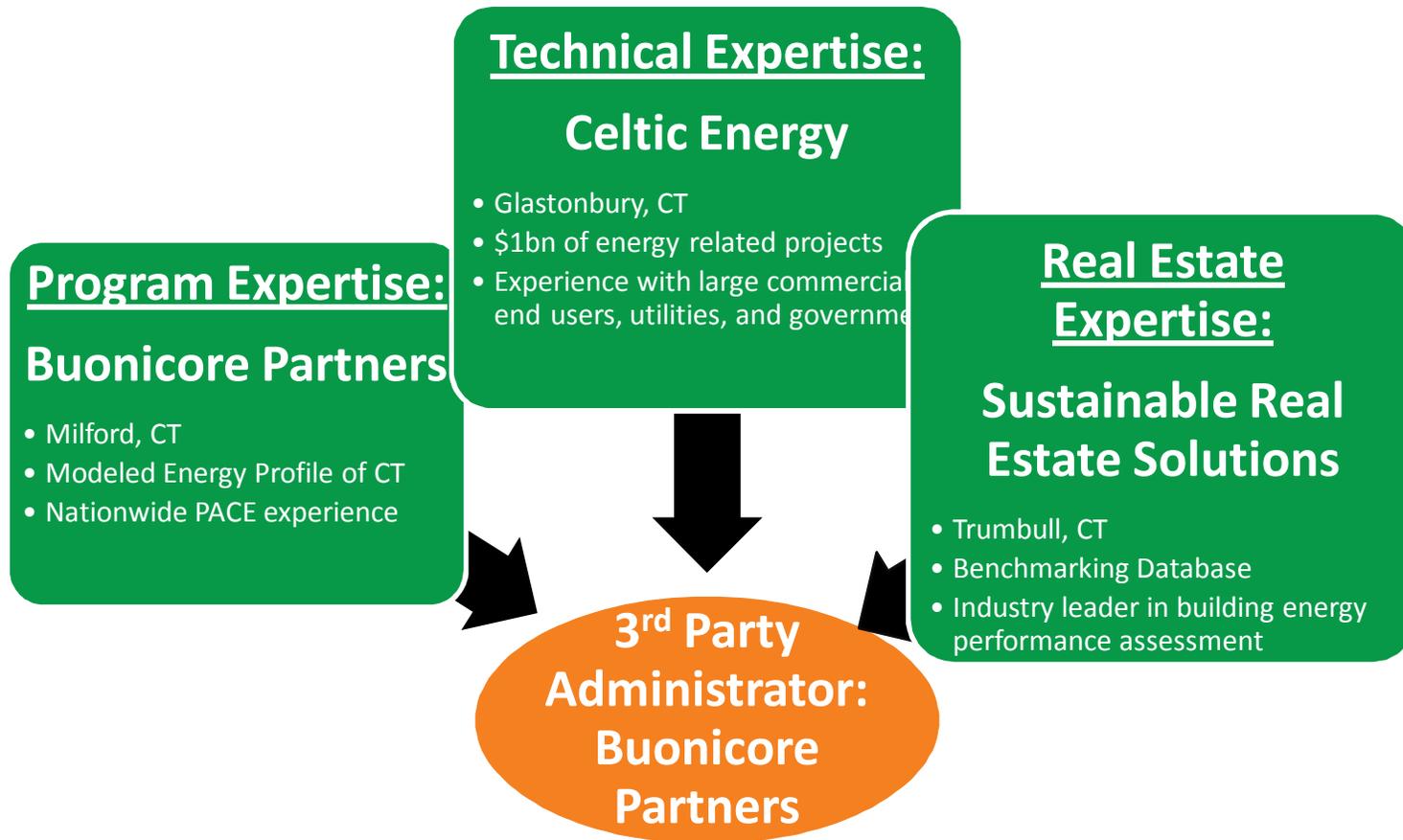
**Are there any outstanding tax liens or notices of default?**  Yes  No

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# C-PACE Partners do Technical Underwriting



# Determine project eligibility

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**Anything that saves energy from baseline** ... *as long as it isn't going anywhere*

- High efficiency lighting
- HVAC upgrades
- New automated building and HVAC controls
- Variable speed drives (VSDs) on motors fans and pumps
- High efficiency chillers, boilers, and furnaces
- High efficiency hot water heating systems
- Combustion and burner upgrades
- Fuel switching
- Water conservation
- Heat recovery and steam traps
- Building enclosure/envelope improvements
- BMS
- Renewable energy systems

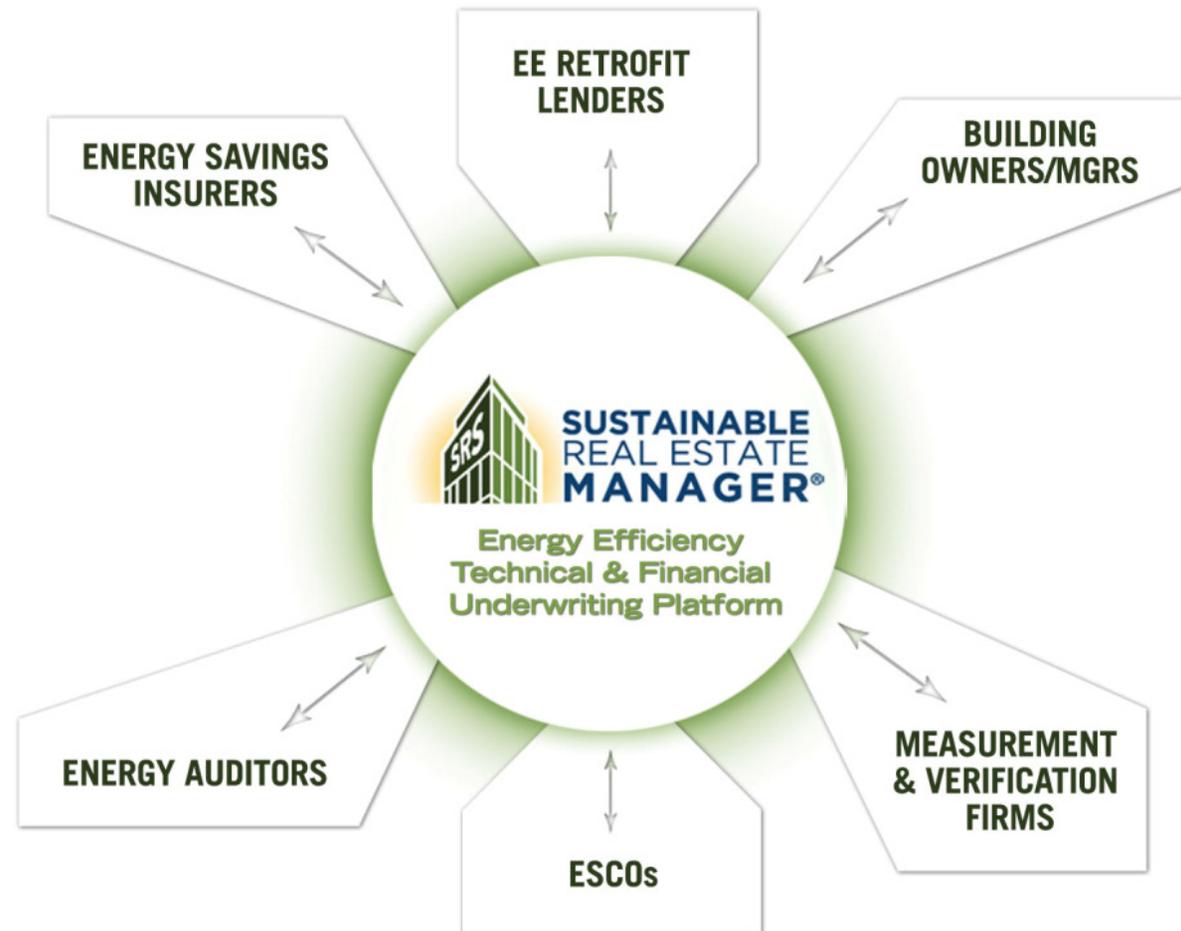
# M&V: Data Management Platform

## The Challenge

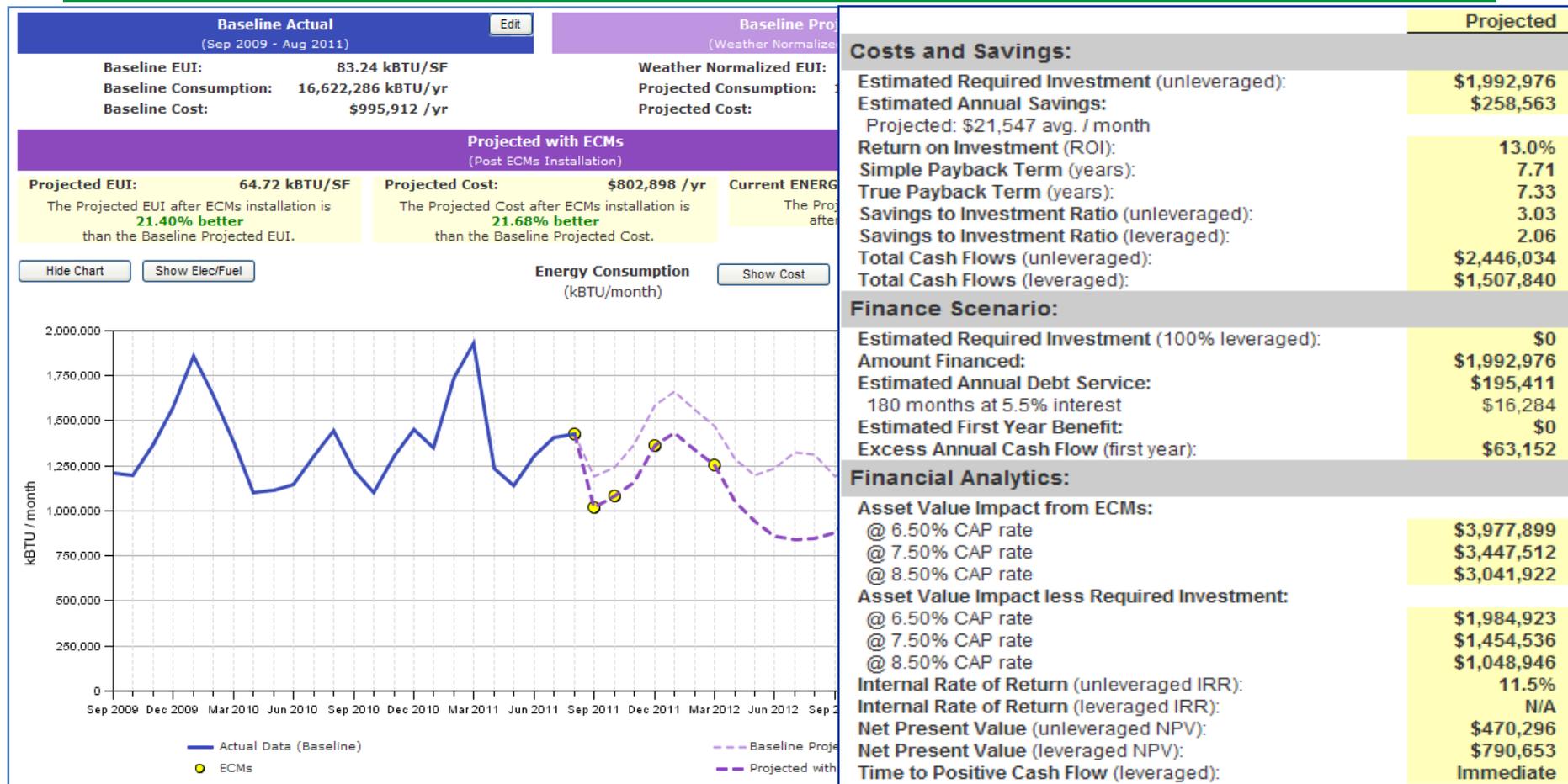
- Multiple interdependent stakeholders have divergent interests

## The Solution

- C-PACE's transparent,
- unbiased technical & financial underwriting:
  - align interests
  - remove barriers
  - close deals!



# M&V: Data Management Platform



# Capital Partners

## Qualified Capital Providers

- CEFIA qualified 10 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.

## Construction and Term Financing from CEFIA

- CEFIA authorized \$20M short term facility for construction and term financing



# Program snapshot

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- Program launched January 2013
- 1 project closed April 1, 2013
- 10 projects under technical review
- 150+ applications = over \$50 million\*
- 45 towns eligible = 55% of C&I market state-wide
- 170 contractors trained
- 10 qualified capital providers
- \$20M in CEFIA capital





# Case Study: Norwalk Shopping Center

## Project

- \$285,000 exterior LED lighting upgrade
- \$450,000 solar parking canopy

## Financing

- \$185,000 of lighting upgrade financed through 13 year C-PACE assessment. CEFIA providing construction financing.
- Solar parking canopy to be financed through a separate C-PACE assessment

## Impact

- Owner and tenants see positive cash flow year 1
- Savings of \$17,500 annually for lighting and \$37,000 for solar.



# CHP Opportunity for C-PACE

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- 400 megawatts of technical potential remain in the industrial sector today
- Community Energy Systems
  - District Heating & Cooling
  - Microgrids



# SIR for CHP

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For Solar “Savings” =

Avoided annual electricity costs

+

Annual demand charge reduction (if applicable)

+

Annual revenue from excess electricity sales back to the grid (if applicable)

+

Annual revenue from sale of RECs

+

Any other system-related project revenues (not including any tax benefits)





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Genevieve Sherman, Manager C-PACE  
Clean Energy Finance and Investment Authority  
860.257.2889  
[genevieve.sherman@ctcleanenergy.com](mailto:genevieve.sherman@ctcleanenergy.com)  
[www.c-pace.com](http://www.c-pace.com)