



**Empowering you to make
smart energy choices**

Energy Financing Options for Colleges and Universities

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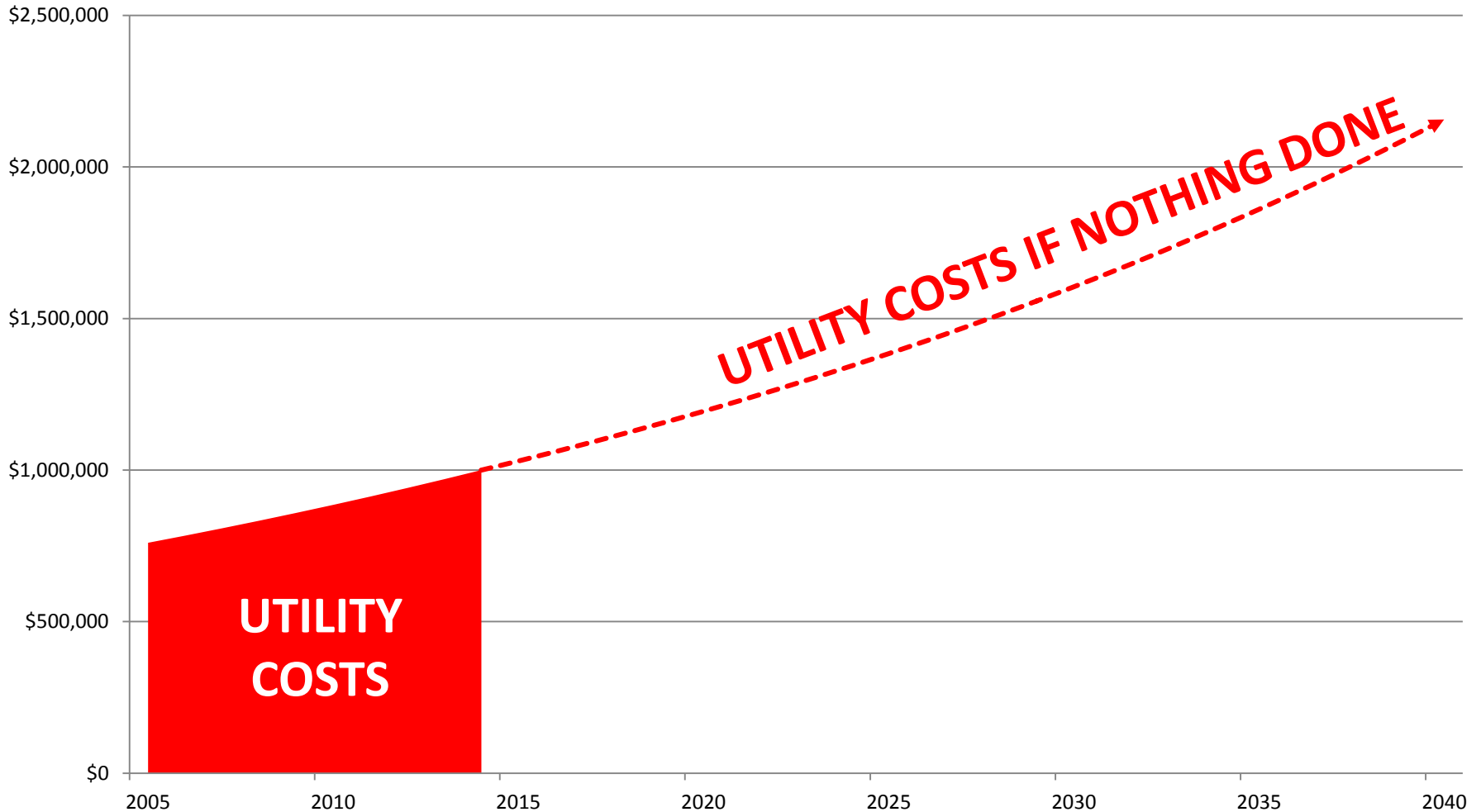
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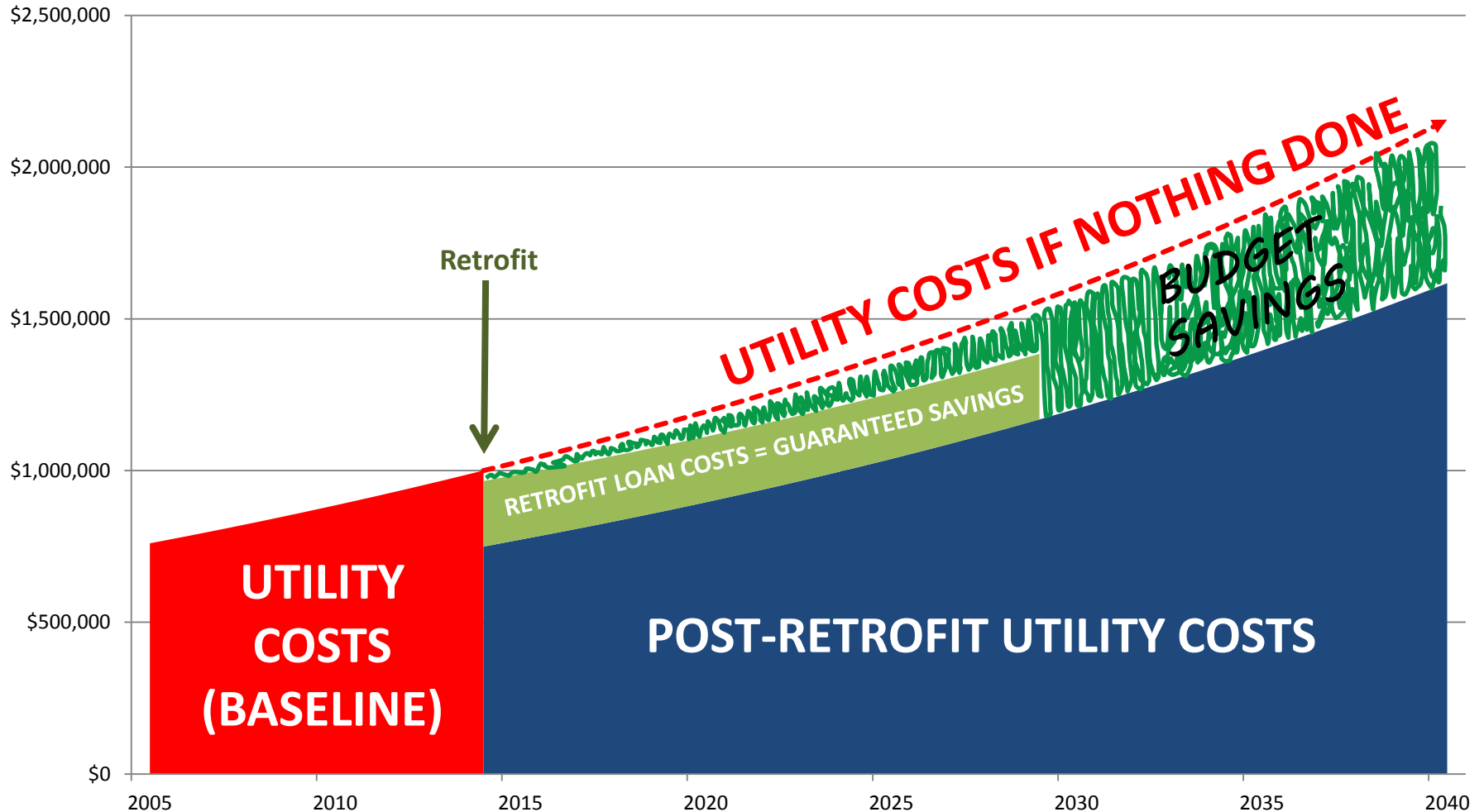
Agenda

- Clean Energy Financing Concept
 - Projects that cashflow shouldn't be limited to low-hanging fruit
- Credit-Based vs. Performance-Based
 - Tax Exempt Lease Purchasing
 - C-PACE
 - Expanding CCIC Campus Efficiency Now Pilot Program
- Role of CT Green Bank
 - Institutional Sector Survey
- Next steps

Clean Energy Financing Concept



Clean Energy Financing Concept



Aggregated Measures Balance Payback

1-5yr Payback



– High Efficiency Lighting



– Optimized energy management systems



– Low flow fixtures

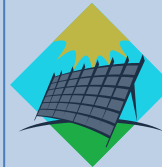
10-20+yr Payback



– Advanced HVAC Systems



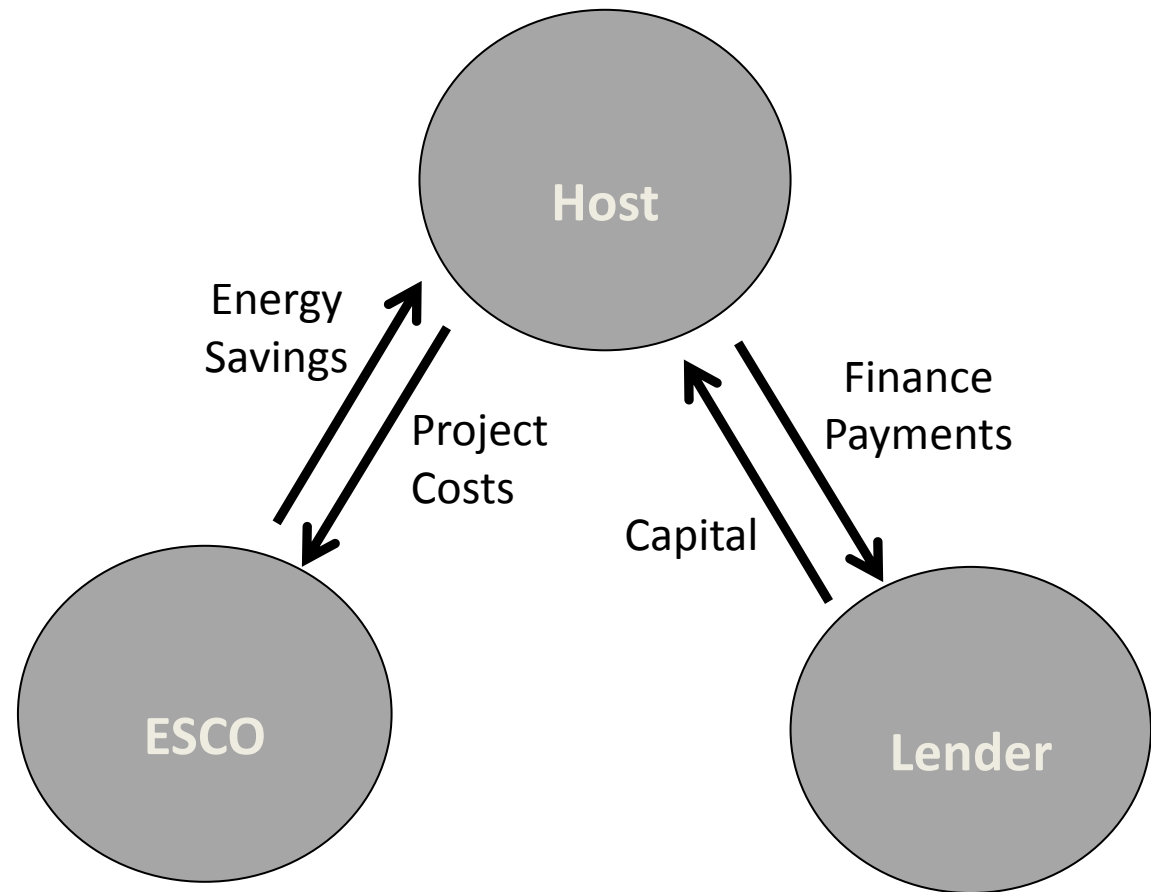
– Windows and building weatherization



– Renewable energy systems

Credit-Based Financing

- Host facility's debt
- Examples:
 - Bonds
 - Tax Exempt Lease Purchase (TELP)
 - Energy Savings Performance Contracting
 - ESCO Guarantees $SIR > 1$
 - C-PACE
 - Repay loan through property tax bills



CT Energy Performance Contracting Program



- Pre-approved, standardized documents and process
 - Required for use by state agencies, including public colleges/universities
 - Available for use by municipalities

- Pre-qualified vendors (QESPs = “ESCOs”)



- Technical and Financial Support



CT C-PACE Program

- 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.

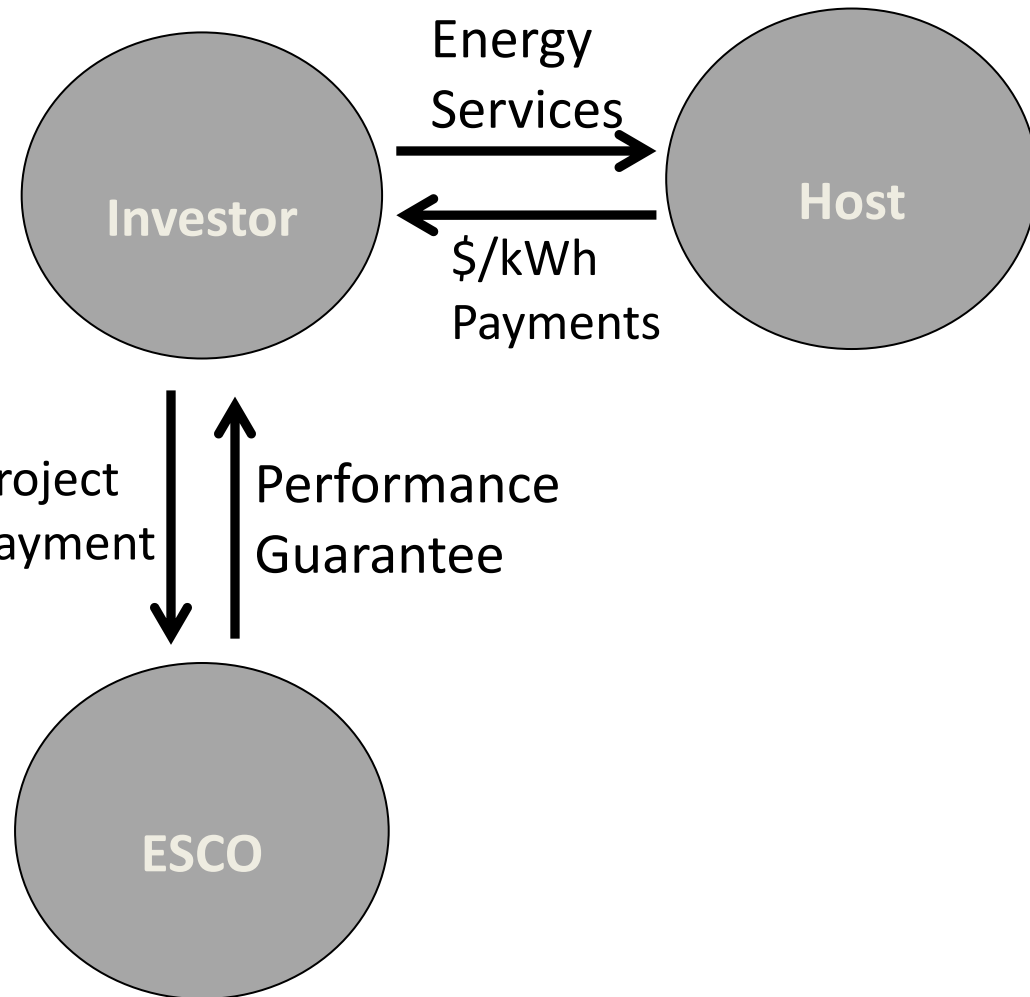
CEFIA provides 100%
upfront, low-cost,
long-term funding

Owner repays over
time through
property taxes

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

Performance-Based (“Off-Credit”) Financing

- Investor’s debt
 - No debt issued by host
 - Self-supporting, contingent payments
- Examples:
 - Energy Savings Agreement (ESA)
 - CCIC Campus Efficiency Now Pilot
 - Power Purchase Agreement (PPA)
 - Can utilize federal ITC



Campus Efficiency Now Pilot

- \$1M funding from CT Green Bank
 - Partnered with single “ESCO” – GreenerU
 - Five year ESA structure
 - Two university projects
 - University of New Haven
 - Four buildings
 - Lighting controls, high efficiency motors, variable speed drives, automated HVAC controls
 - University of Hartford
 - Three buildings and outdoor lighting
 - Lighting and controls, HVAC units and controls, lab ventilation controls, water-saving fixtures
- Opportunity to expand program
 - With outside capital

Role of Green Bank

- Leverage public funds to drive private sector investment and scale up implementation of clean energy and energy efficiency projects
- Step 1: Determine needed market interventions
 - Survey of Institutional Market
 - Hospitals
 - Private colleges
 - Private schools
 - Capital providers

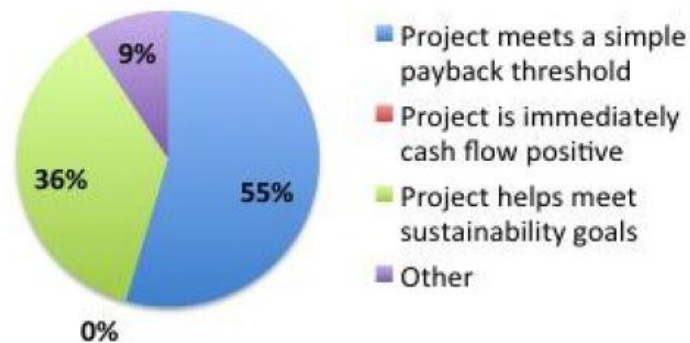
SURVEY: End Users

- Sent to **34** private schools and hospitals in CT through CHEFA
 - 19% of the market
- Currently **13** respondents
 - 7% of the market
- Questions included:
 - What **types** of upgrades have you made? Are you looking to make?
 - How do you **decide** whether or not to invest in an efficiency project?
 - How do you typically **fund** these types of projects? Where do you apply?
 - What are your **barriers** to accessing financing?
 - What types of **financing structures** have you used in the past?
 - Why have these **worked/not worked** for your organization?

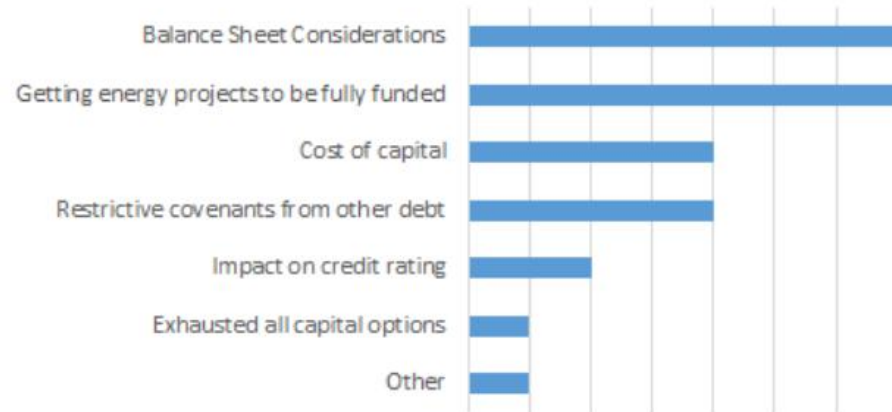


END USERS: Early Findings

How do you decide whether or not to invest in an energy project?



Biggest Obstacles to Energy Efficiency Projects



Average cost of completed energy efficiency project:

\$2 million

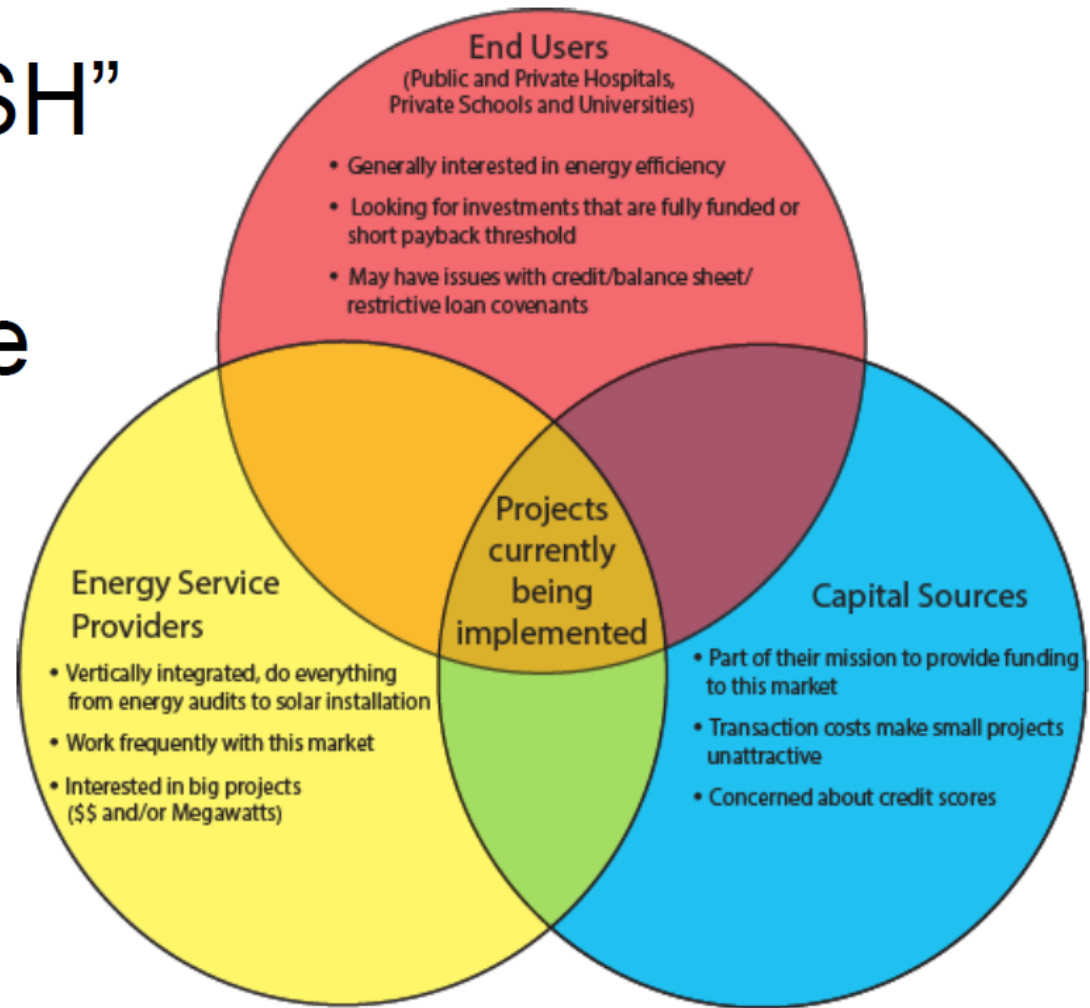
Average estimate of **additional cost** to make facilities "...as efficient as you would like them to be":

\$7.5 million

Most respondents fund projects directly through cash flow/capital budget, not debt financing



Connecticut's "USH" Energy Efficiency Finance Ecosystem



Key issues for expanding financing

END USERS

- **Outreach + marketing issue:** energy efficiency upgrades compete with other capital investments; not understood as source of cash flow + good returns
- **Debt issue:** After recession, reluctance or inability to take on more debt; some covenants restrict participation in PACE

CAPITAL SOURCES

- **Scale issue:** Reluctance to get involved; not enough deals to justify time investment in deal structures. Want \$100M in total value of deals, not \$10M
- **Restrictive Covenants:** CHEFA bonds don't allow PACE financing
- **Credit issue:** Many schools and hospitals don't meet minimum credit requirements

Next Steps

- Discussion
 - Examples of projects that haven't been able to move forward, and internal barriers
 - Examples of projects that have gone through, degree of difficulty, results
 - Complete survey if you haven't already or you have more thoughts
 - Can email it to you if needed
- Step 2: How can we work together to:
 - Create sufficient demand for capital providers to justify investment of time and \$?
 - Educate others that energy improvements are source of cash flow and returns?



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THANK YOU!

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