



# Energy Project Finance

Matt Cohen – State of CT DEEP Program

Peter Flynn – Bostonia Partners

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Christopher Silkie - Cardno

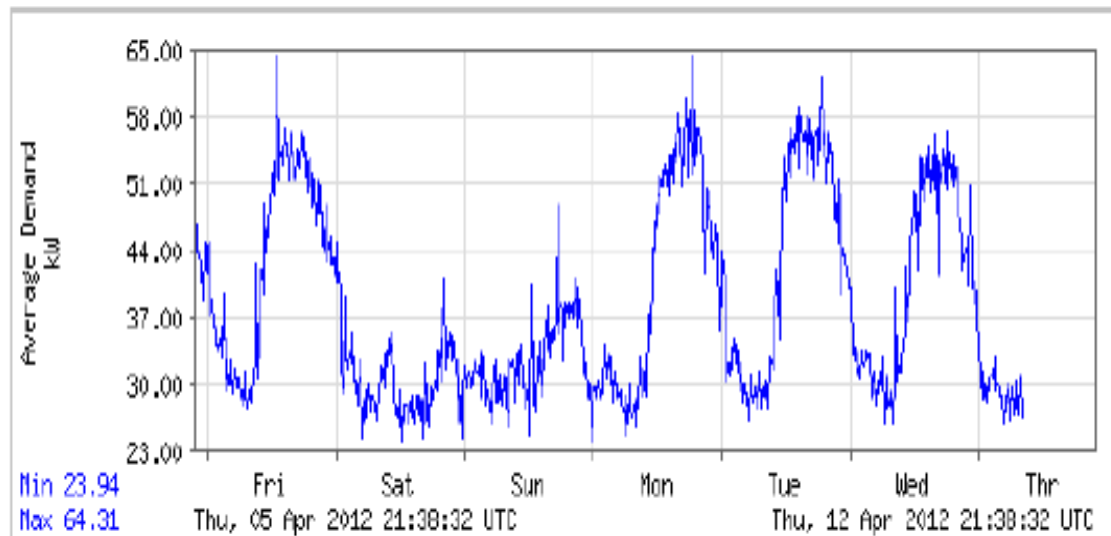


# Definitions

Performance Contract

Energy Services Company (ESCO)

Cost of Delay



# Energy Reduction Business Value Creation



# Description of PACE

- PACE, property assessed clean energy, was passed into law in California in 2008 and is now available in 31 states.
- The program provides for the issuance of municipal bonds/loans backed by a property tax assessment on the property.
- Proceeds from the issuance of the bonds provide 100% non-recourse term financing for energy efficiency and renewable energy installations on properties leased to port authority tenants.

# PACE Description

**Security:** PACE is a tax assessment; payment is made with the property taxes. There is no deed of trust or UCC-1 filing.

**Amount:** 100% financing which includes all fees and expenses

**Rate:** Approximately 6.5% - 7.0% for 20 years

**Accounting Treatment:** PACE is off-balance sheet financing.

# PACE Description

- Recourse: PACE is non-recourse and looks only to value of the property.
- Lease Treatment: PACE is a property tax assessment and passed-through to the Port Authority's tenants.
- Underwriting: 80% LTV; 1.25x debt service coverage

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*Bostonia Partners*



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# P3 Financing for Energy Projects

AAPA 2014 Energy & Environment Seminar

September 17, 2014

Peter Y. Flynn  
Bostonia Partners

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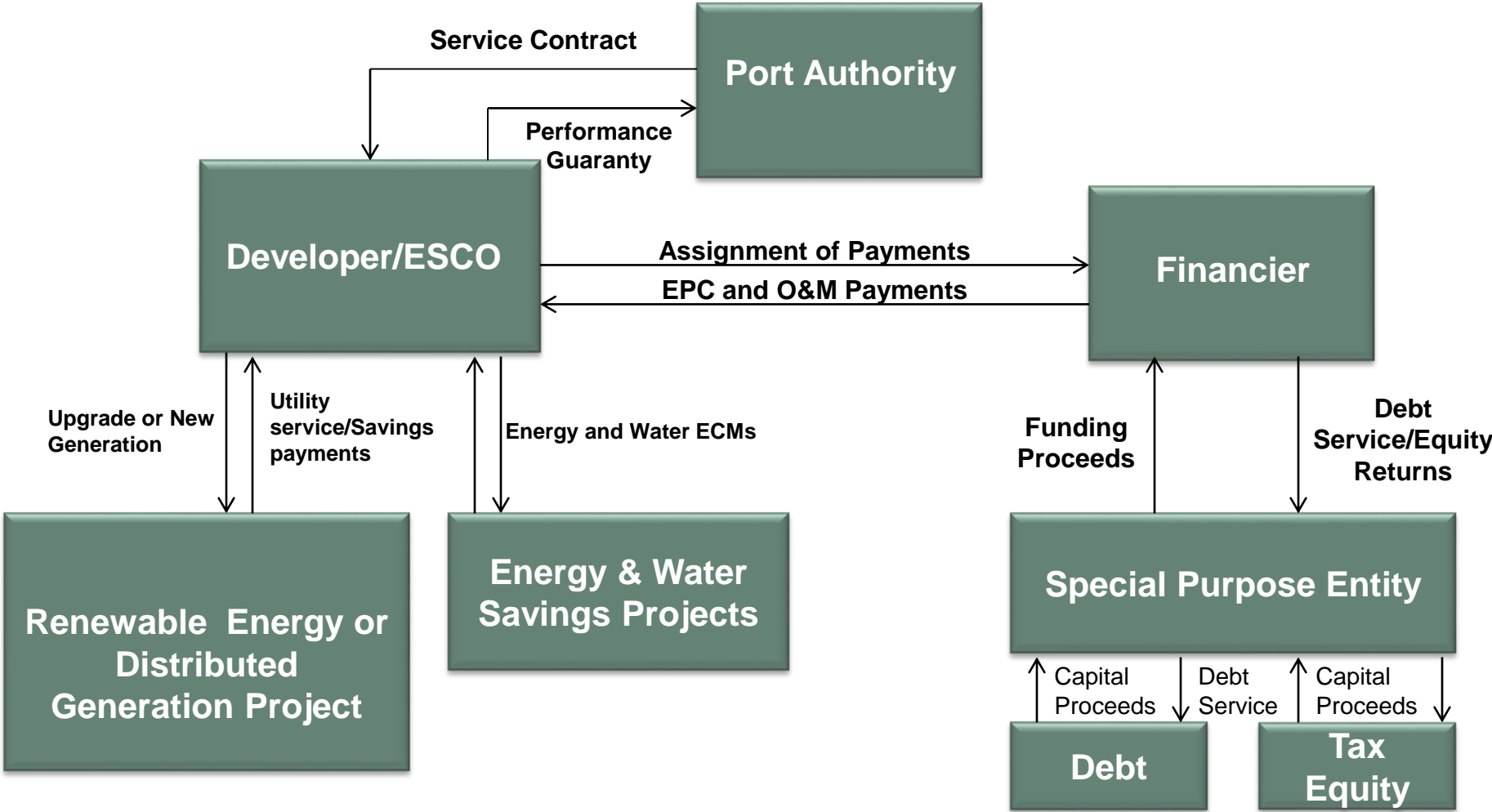
# Evaluating 3P's

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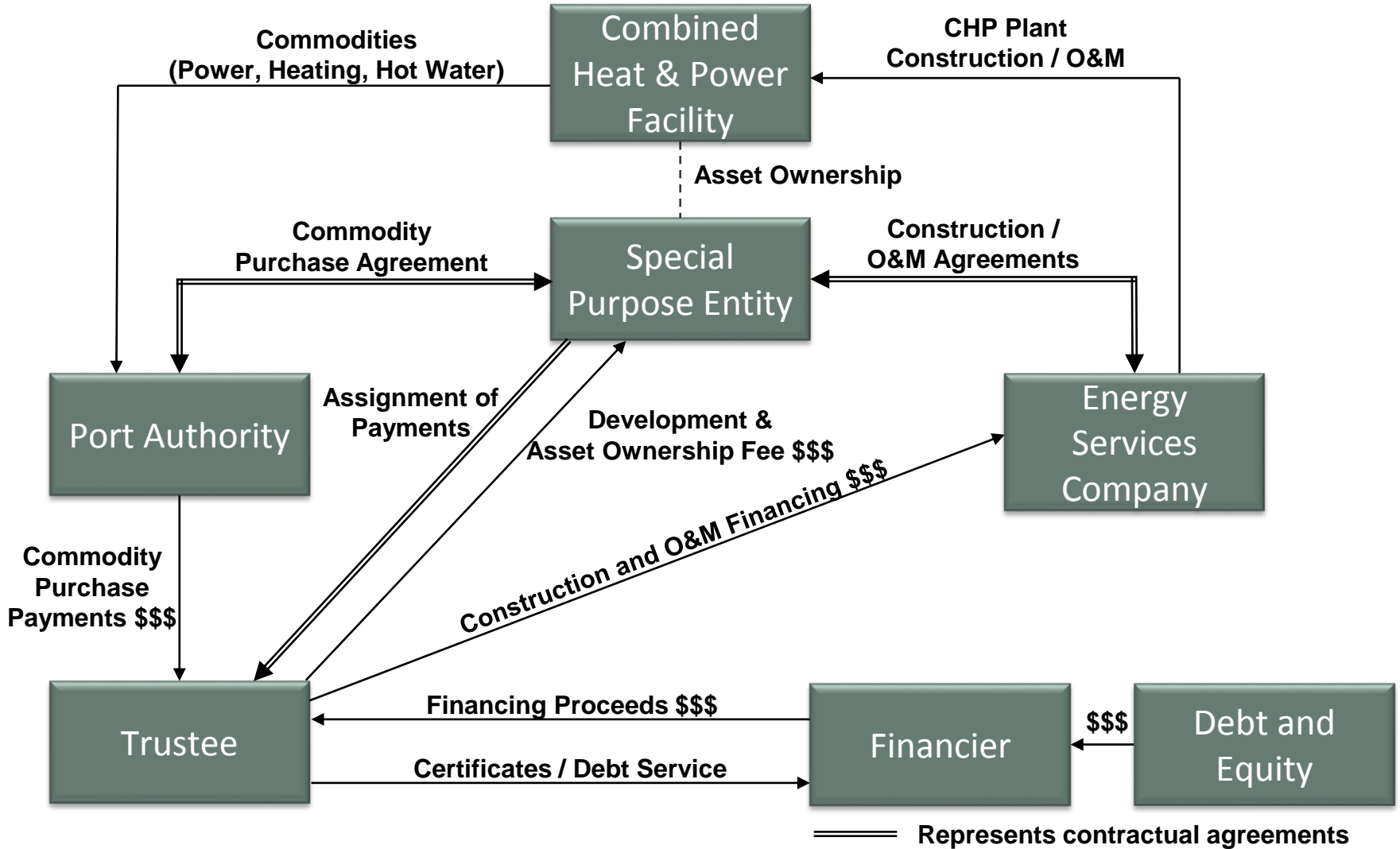
- Common misperception is that PPPs are always a **more expensive form of project delivery for Governments and Quasi-Governmental Public Authorities**
- As highlighted by the National Council for Public-Private Partnership's (NCP3P) white paper, "Testing Tradition: Assessing the Added Value of Public-Private Partnership", a thorough and proper evaluation involves several analyses:
  - Costs of deferred maintenance, repair, replacement
  - Project timing
  - Complete financial analysis using Value for Money (Vfm) assessment on Net Present Value (NPV) basis
- Establish Public Sector Comparator (PSC) as baseline to compare to PPP or privatized options
- Conduct full Life-Cycle (FLC) cost and revenue analysis for each option
- Value and assess transfer of risk more effectively

***Financing costs for projects may be higher for PPPs however FLC analysis often shows savings over time due to risk allocation, design, construction, and long-term O&M.***

# 3P Financing Structure – Energy Efficiency Project



# CHP Ownership and Financing Structure



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# CT's Standardized Energy-Savings Performance Contracting (ESPC) Program

## Lessons Learned

**Matt Cohen**

Program Manager, ESPC Program

Department of Energy and Environmental Protection (DEEP)

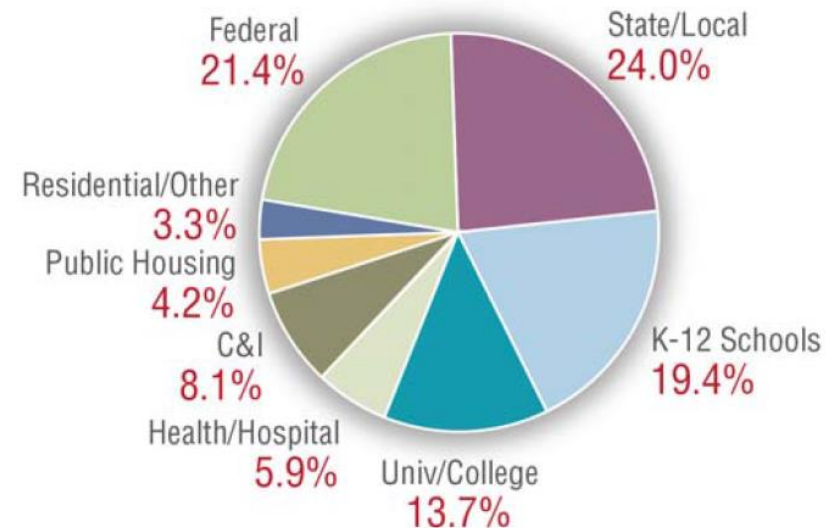
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# What is ESPC?

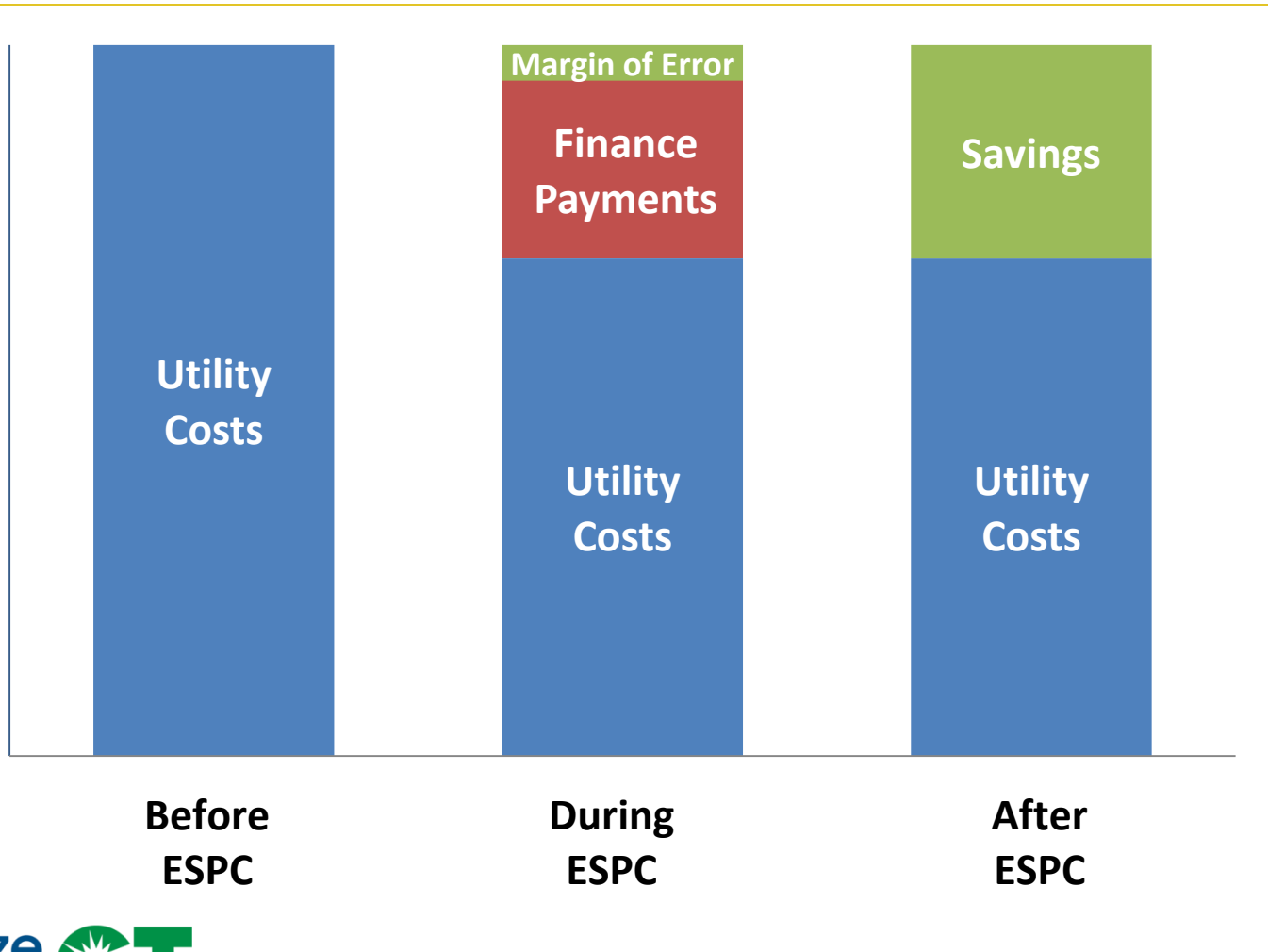
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- Implementation of energy saving measures, paid for by guaranteed savings from future operating budget
- Approach is over 30 years old, approx. \$4.1 billion market in U.S. in 2013<sup>1</sup>
  - “SMUSH” Sector > 50% of ESPC Market

<sup>1</sup> Lawrence Berkeley National Laboratory, “Current Size and Remaining Market Potential of U.S. ESCO Industry”. (Presentation to Energy Services Coalition, August 13, 2013)



# ESPC Concept

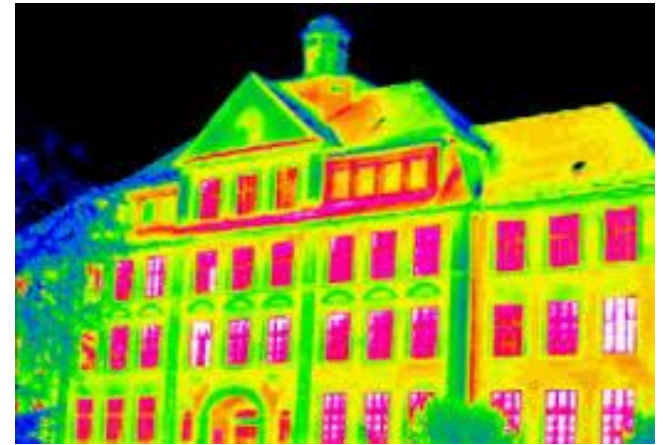




# Why do one?

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- Repurpose wasted utility dollars to:
  - Upgrade to high efficiency energy systems
  - Stabilize energy costs
  - Improve budget accuracy



- Address deferred maintenance
- Eliminate costly emergency repairs

# Aggregating Measures Balances Payback

## 1-5yr Payback



– High Efficiency Lighting



– Optimized energy management systems



– Low flow fixtures

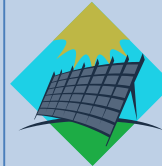
## 10-20+yr Payback



– Advanced HVAC Systems



– Windows and building weatherization



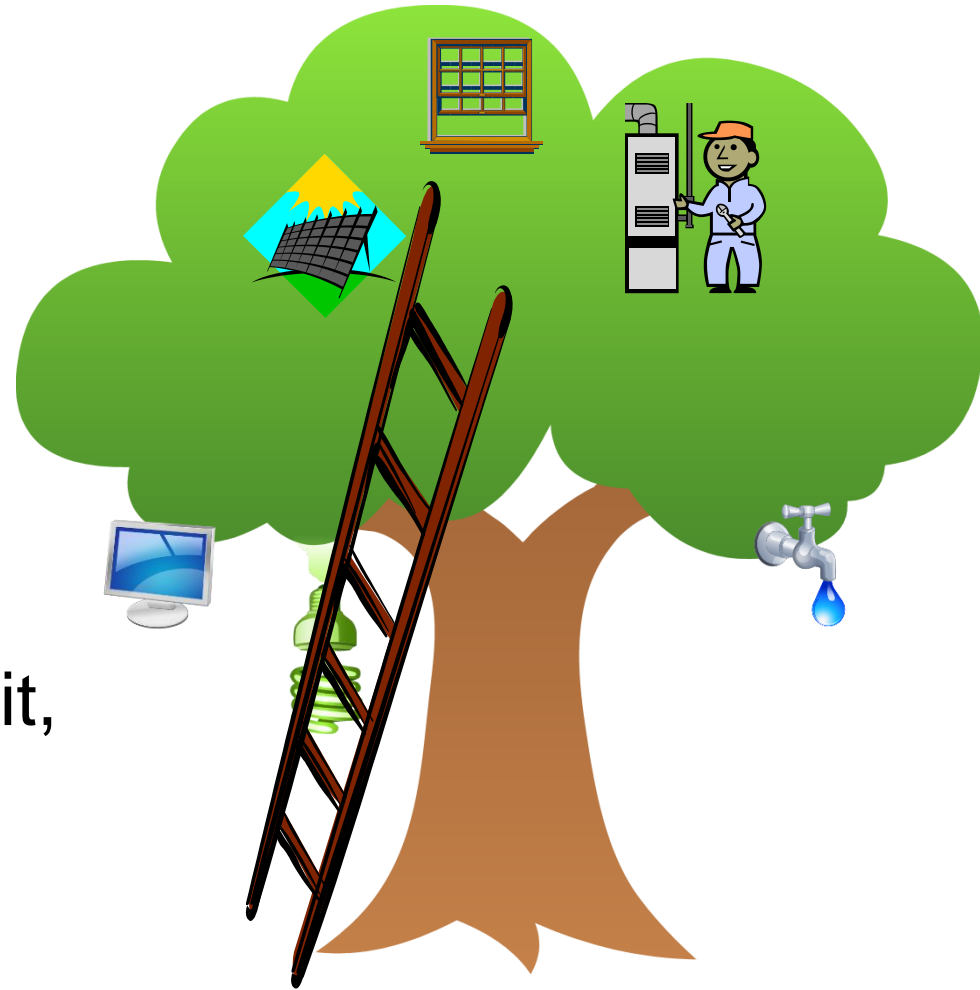
– Renewable energy systems

# So: Don't eat the low-hanging fruit !

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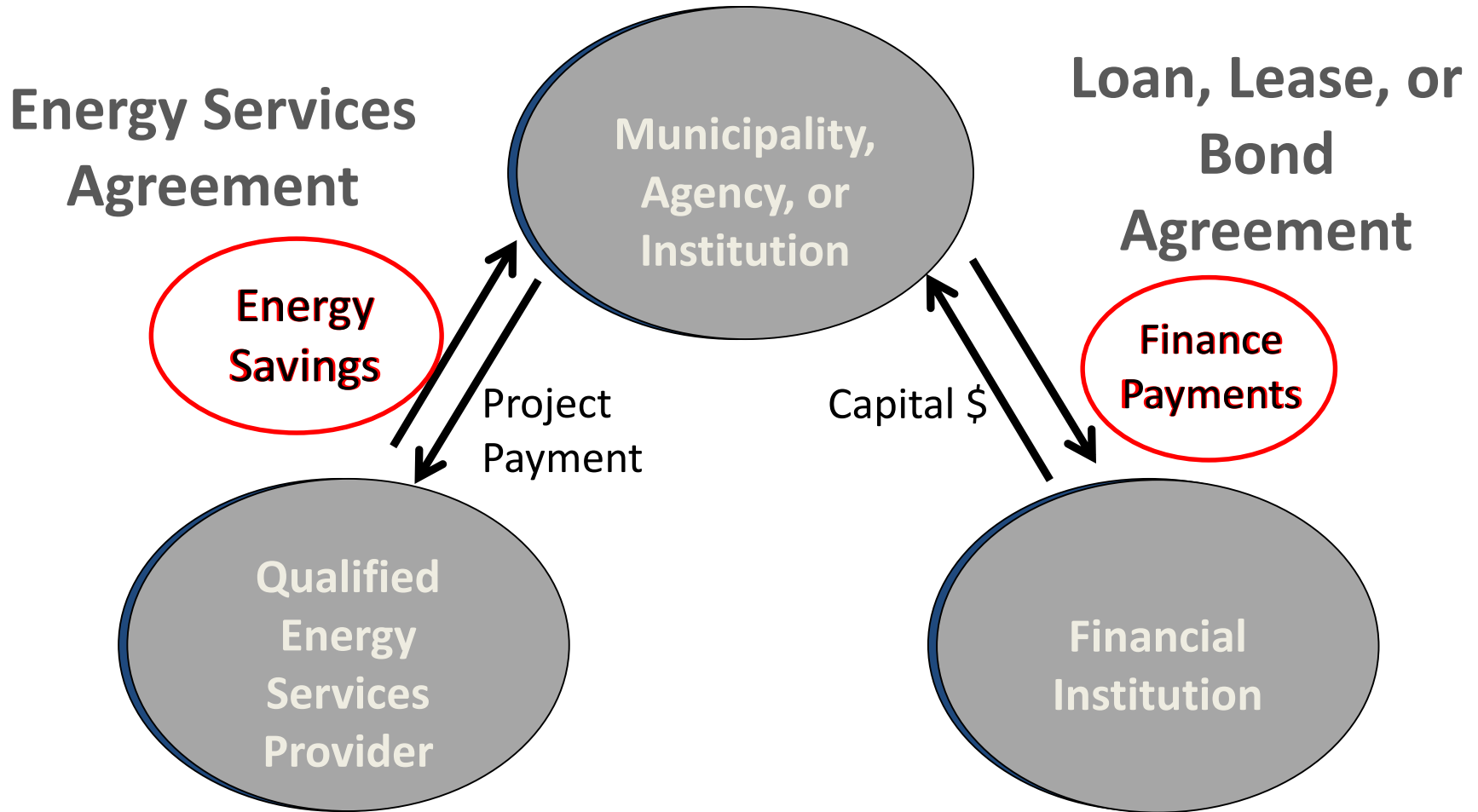


- We will package and sell it, to buy a ladder, to reach the higher fruit



# Basic Financing Concept:

**Energy Savings > Finance Payments**



# How do I proceed?

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**Step 1: Select Energy Service Company (ESCO)**

**Step 2: Investment Grade Energy Audit (IGEA)**

**Step 3: Arrange Financing**

**Step 4: Finalize ESPC Contract...Construct**

# First Projects under CT ESPC Program



**Connecticut Valley Hospital –  
IGEA phase**



**Dept of Corrections –  
IGEA phase**



**Dept of Motor Vehicles -  
IGEA phase**



**City of Bristol –  
Selected QESP, beginning  
IGEA**



**Town of Enfield –  
Selected QESP, beginning  
IGEA**

# Lessons Learned to Date:

## Development Stage

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- Schedule stakeholder meeting asap. Management must lead to obtain buy in, define roles and responsibilities
- Standardized contract documents protect host's interests
  - Significant value add for state program
- Negotiate minimum ESCO mark ups as part of the selection criteria
- Need to define and communicate anticipated % design complete at contract signature
- Not really “no up front cost” ...
  - Need to reserve funds for IGEA
    - May include utility interconnection study fees for DG
  - Must engage Registered PE as owner's agent to review PSA, IGEA calculations, and Scope of Work
  - May need to install sub-metering to establish baseline
    - Will avoid/reduce M&V costs during performance stage

# Lessons Learned to Date: Study and Implementation Stages

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- Maintain open channels of communication
- Get utility to provide ALL historic consumption data in electronic format
- Seek to leverage savings from recently completed projects to fund long payback ECMs
- Stage ECM installation start dates to follow completion and acceptance of design
- Require Fault Detection and Diagnosis software
  - FD&D will be owned and operated by ESCO with split responsibility for corrective action





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smart energy choices

[www.ct.gov/deep/leadbyexample](http://www.ct.gov/deep/leadbyexample)

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# Resources

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