Energy Project Finance

Matt Cohen – State of CT DEEP Program
Peter Flynn – Bostonia Partners
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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

<table>
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<tr>
<th>Recourse:</th>
<th>PACE is non-recourse and looks only to the value of the property.</th>
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<td>Lease Treatment:</td>
<td>PACE is a property tax assessment and passed-through to the Port Authority’s tenants</td>
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<td>Underwriting:</td>
<td>80% LTV; 1.25x debt service coverage</td>
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P3 Financing for Energy Projects
AAPA 2014 Energy & Environment Seminar

September 17, 2014

Peter Y. Flynn
Bostonia Partners
Evaluating 3P’s

• 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 (NCPPP) 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

- Developer/ESCO
  - Upgrade or New Generation
  - Utility service/Savings payments
  - Energy and Water ECMs
- Energy & Water Savings Projects
  - EPC and O&M Payments
- Port Authority
  - Performance Guaranty
- Financier
  - Funding Proceeds
  - Debt Service/Equity Returns
- Special Purpose Entity
  - Debt
  - Tax Equity
  - Capital Proceeds

Assignment of Payments
- Utility service/Savings payments
- Energy and Water ECMs
- EPC and O&M Payments
CHP Ownership and Financing Structure

- **Commodities (Power, Heating, Hot Water)**
  - Commodity Purchase Agreement
  - Assignment of Payments
  - Development & Asset Ownership Fee $$$
- **Port Authority**
  - Commodity Purchase Payments $$$
- **Trustee**
  - Financing Proceeds $$$
  - Certificates / Debt Service
- **Special Purpose Entity**
  - Asset Ownership
  - Construction / O&M Agreements
  - Construction and O&M Financing $$$
- **Financier**
  - Financing Proceeds $$$
- **Energy Services Company**
  - Debt and Equity
  - $$$
- **Combined Heat & Power Facility**
  - CHP Plant Construction / O&M
  - Represents contractual agreements
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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)

September 2014
What is ESPC?

- 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 2013¹
  - “SMUSH” Sector > 50% of ESPC Market

ESPC Concept

Before ESPC

Utility Costs

During ESPC

Utility Costs

Finance Payments

Margin of Error

Savings

After ESPC

Utility Costs

Cash Flow ($)

Before

During

After

ESPC

ESPC

ESPC
Why do one?

- 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

Aggregate Payback <15 years
So: Don’t eat the low-hanging fruit!

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

Energy Savings > Finance Payments

- Energy Services Agreement
- Qualified Energy Services Provider
- Energy Savings
- Project Payment
- Municipalities, Agencies, or Institutions
- Capital $
- Loan, Lease, or Bond Agreement
- Financial Institution
How do I proceed?

**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

City of Bristol – Selected QESP, beginning IGEA

Dept of Motor Vehicles - IGEA phase

Town of Enfield – Selected QESP, beginning IGEA
Lessons Learned to Date: Development Stage

- 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

- 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
www.ct.gov/deep/leadbyexample

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