Energy Savings
Performance Contracting

“a vehicle for public facility retrofits”

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Who is ESC?

Energy Services Coalition

- 501(c)(3)
- Nearly 400 public and private sector members nationwide
  - Financiers, ESPC administrators, end users, ESCOs, manufacturers reps, utility representatives
- Outreach and Education
- Code of Conduct
- Technical Assistance Provider
Resources

- 10 Key Attributes of Successful Programs
- Race to the Top - illustration of success
- Nation’s case study database
- Papers – webinars
- HANDS ON SUPPORT
What is it?

“The use of guaranteed savings from the maintenance and operations budget (utilities) as capital to make needed upgrades and modernizations to your facility environmental systems, financed over a specified period of time.”

-United States Department of Energy
Another Perspective

A diversion of utility dollars to effect . . .

- Infrastructure Modernization
- Long term reduction in energy consumption
- Environmental Stewardship
- A way to reach your efficiency goals
Public Facility Retrofits

Options for upgrades and improvements

A. Funded by capital improvements
B. Funding grants
C. Funding by efficiency
   i. not new
   ii. not sexy
   iii. very different
What’s the rub?

- Costs too much
- Loss of control
- Savings aren’t real
- Savings aren’t persistent
- Guarantees are worthless
- Risk of poor project

And here’s a new one
… is it debt????
Costs too much

- Studies say no
- Full transparency – NOT OPEN BOOK
- Some states bid the subcontractors – not the most desirable but it can work
Loss of control

- Who’s project is it anyway
- Oversight from the program
- Oversight from state landlord agency
- Oversight from owner’s representative
Savings aren’t real

- Program integrity is at risk when savings are stipulated
  - Understand M & V costs up front
  - M & V costs must be in the IGA
  - Why reclaim the risk

- Escalation factors
Guarantees are worthless

- Stipulate the savings – I concur
- Deploy a program per best practices – expect success
Risk of poor project

- Selecting the provider you’ve known the longest
- Use their RFQ/RFP
- Use their contract
- Accept the stipulated savings
- Don’t worry about M & V
- Have no oversight

Your odds just keep going up
Capitalization is debt

- Tax exempt municipal lease
- Non appropriations clause
- Capital lease not operating lease

What do you call the income generated from the sale of potable water?
Solutions

- Templates – all 10 key attributes
- State program extended to local governmental entities
- Leadership
- Oversight
- The value of technical assistance
- Outreach and education
Remaining Challenges

- Moody and Fitch
- Small and rural projects
- Measuring success
- Third party measurement and verification
Questions

Unresolved . . .
Raises another thought . . .
But what about . . .
Tell me more about . . .

Thank you!

Dale L. Hahs
How Does The Money Flow?

Client

Excess Savings
Utility and operations budget
Finance Repayment

Finance

ESPC Project

Savings from Improvements

Before Improvements

Maintenance Costs
Energy Costs

After Improvements

Maintenance Costs
Savings Repay Improvements
Energy Costs
Results

![Diagram of energy use over time showing baseline, increased production, ECM installation, and reporting periods.](image)
To Do What?

Dispersion of Technologies in Energy Saving Performance Contracting by ESCOs (2005)

Adapted from ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY LBNL-55002
Public and Institutional Markets for ESCO Services: Comparing Programs, Practices and Performance
Typical Process

Performance Management

Project Commissioning

Measurement & Verification

Workshops and Interviews

Comprehensive Energy Audit

Funding Coordination

Engineering and Design

Construction Installation

Construction Management

Equipment Selection

Implementation

Single Source of Responsibility
Financing Vehicles

- Municipal Lease
  [http://energyservicescoalition.org/resources/financing.htm](http://energyservicescoalition.org/resources/financing.htm)

- Bonds
  - Traditional
  - Tax Credit Bond Financing
  - Community Development Bonds

- Grants and Incentives
  - Utility Incentives
  - American Recovery and Reinvestment Act Incentives
Why Use Energy Performance Contracting?

- Speed of the process from beginning to post construction
- Single Point Accountability before, during, and after the construction period.
- Quality Assurance – Performance and savings are guaranteed
Benefits

- Contractually guaranteed measured savings
- Integrated project analysis, design, and construction
- Long term monitoring of savings and performance
- Up-to-date training for facility operating personnel
- Services and materials based upon quality and life cycle value, rather than on lowest first cost
Pitfalls

- Overzealous savings projections
- It’s my project, not yours
- We’ll work that out later
- Only we can pick products
- Training, who needs training
- Commissioning vs. Start-up
- Energy cost escalations
- Savings based on averages
- Who do I call when
- What assumptions
- Facility dynamics
Energy Service Company’s Role

- Identify and evaluate opportunities
- Design systems (engineering), specify & purchase
- Manage construction
- Arrange for financing without upfront costs
- Provide long-term energy management services
- Guaranteed performance!
Energy Services Companies

- How do I pick one?
Owner’s Role

- Oversight
- Clear Understanding
  - Savings
  - Project Scope
  - What If
  - Assumptions
  - Information Sharing
- Win, Win or No Deal
Measurement and Verification

- A. Retrofit Isolation: Key Parameter Measurement
- B. Retrofit Isolation: All Parameter Measurement
- C. Whole Facility
- D. Calibrated Simulation
Resources

www.energyservicescoalition.org

Performance Contracting and Energy Efficiency in the State Government Market
http://eetd.lbl.gov/EA/EMP/reports/lbnl-1202e.pdf

Introduction to Energy Performance Contracting

Emerging Technologies for Energy Savings Performance Contracting in the Federal Sector

Emerging Technologies for Energy Savings Performance Contracting in the Federal Sector

Funding Options and Financial Incentives for On-Site Renewable Energy Projects - Introduction to Energy Performance Contracting

Assessing U.S. ESCO Industry Performance and Market Trends: Results from the NAESCO Database Project