Overview

▪ What is Energy Savings Performance Contracting (ESPC)?

▪ Why ESPC?

▪ A Look at the ESPC Market

▪ DOE Resources for States

▪ Observations & Next Steps
What is ESPC?
ESPC is

A contracting and financing method that provides upfront financing for energy efficiency projects and repaid by the savings on utility bills resulting from the upgrades.
How Does it Work in Practice?

- **Operating Costs**: Maintenance and Utility Costs
  - Annual Budget Before Improvements

- **Operating Costs**: Maintenance and Utility Costs
  - Savings
    - Savings Used to Pay for Improvements
    - Annual Budget During Term of Financing

- **Operating Costs**: Maintenance and Utility Costs
  - Savings
    - Annual Budget after Term of Financing
ESPC Relationships

1. Financing for Construction
2. Utility Incentives
3. Energy Services & Measures
4. Payments for Guarantee
5. Reduced Utility Payment
6. Payments from Savings
Financing Options

Agency/Owner ➔ Performance Contract ➔ ESCO

Funding Arrangement ➔ ESCO guarantee: Projected savings ➔ Payment

Financier
The Performance Guarantee

- Unique feature of ESPC

The ESCO:
- Assumes financial, operating, and performance risk
- Guarantees project savings
- Measures and verifies savings
- Provides reimbursement if guaranteed savings not met and/or fixes the problem at no additional cost
Why ESPC?
General ESPC Benefits

- No upfront costs needed
- ESCO accountable for project design, construction, and post-installation monitoring
- ESCO serves as single point of contact for project
- ESCO takes on project risks
- Guaranteed cost and energy savings
- Savings measured and verified as “real”
A Few Examples

McKinley County, NM
- Total Cost: $2.2 million
- Project Description:
  Comprehensive retrofit of >40 county facilities totaling >350,000 sq. ft., including the courthouse & the adult detention center
- Annual Savings: $334,000/18%

Grand Rapids, MI Water Resource Recovery Facility
- Total Cost: $1.9 million
- Project Description: Variety of building envelope measures as well as an energy management system and an expanded & reworked energy recovery HVAC system
- Annual Savings: $145,000/10%

University of Kentucky
- Total Cost: $24.7 million
- Project Description:
  Comprehensive retrofit of 61 campus buildings totaling 5.2 million sq. ft.
- Annual Savings: $2.4 million
A Look at the ESPC Market
A Perfect Storm for ESPC

- Tight budgets for energy efficiency retrofits
- Good energy savings track record
  - ESPC projects active in 2012 saved 34 million TWh and 224 million MMBtu or approximately 1% of total US commercial building energy consumption\(^6\)
  - A typical ESPC project in the MUSH market saves approximately 13% to 31% annually compared to its baseline consumption\(^7\)
- High market growth potential for ESPC
  - Anticipated 2017 revenues of $7.6 billion, representing an average annual growth of 13% over the period 2015-2017\(^8\)
  - Estimated ESPC project investment opportunity in MUSH market: \(\sim$51.8-$86.8\) billion\(^9\)

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\(^{7}\) LBNL/NAESCO database of ESCO projects
Note Regarding ESPC Legislation

- Most states have legislation enabling ESPC
- Individual states might have language addressing ESPC specifically for school districts
- Legislation may set requirements for procurement, allowable energy conservation measures, financing terms, structure of the guarantee, M&V, and budget streams
- Good practice to consult your General Counsel, the State Energy Office, and/or project facilitator

What’s Holding Back the ESPC Market

Frequent barriers to broad use of ESPC expressed by MUSH market:

- Complicated and time-consuming procurement process
- Hard-to-access data on existing projects
- Inadequate data to make business case for ESPC
- Insufficient knowledge about mechanism details
- Inexperience in using ESPC in certain market sectors

DOE Resources for States
ESPC Presents Opportunity

- DOE’s goal: Enable access to the upfront financing needed for the public sector to deploy energy efficiency projects

- DOE offers technical assistance:
  - Work has included information resources, individual technical assistance and training
  - 2014-2016 DOE offered the ESPC Accelerator, working with 18 states, 6 cities, and 1 school district
  - New resource: ESPC Accelerator Toolkit
Accelerator Profile

Timeframe
2014-2016

Partners
25 partners (18 states, six cities, one school district)

Purpose
Expand access to Energy Savings Performance Contracting (ESPC) as a promising option for financing energy efficiency retrofits in the public sector

Outcome
More than $2 billion invested in MUSH ESPC contracts
The ESPC Toolkit

https://betterbuildingssolutioncenter.energy.gov/espc/home

- Considering ESPC
- Implementing ESPC
- Establishing ESPC
- Expanding ESPC
- Assessing ESPC Results
Establishing ESPC

- ESPC Key Attributes
- Implementation Models
- Guidelines for Developing ESPC Program
- Virtual Technical Assistant (in document form)
- Networking Toolkit
- Champions Toolkit
Barrier

“We have one staff person but 17 agencies that own buildings. How can we cultivate ESPC projects to help us meet our ambitious state energy savings goals?”

Solution

Tools to empower agency staff to be the SEO’s eyes and ears on the ground for developing energy efficiency retrofits via ESPC.
Expanding ESPC

- ESPC Primer for K-12 Schools
- ESPC Guide for Fleets and Fueling Infrastructure
- Implementation Model: Expanding ESPC to New Markets (coming soon)
Assessing ESPC Results

- FEMP’s M&V Guidelines (4.0)
- ESPC Project Benchmark Sheets
  - State & Local Governments
  - K-12 Schools
  - Post-Secondary Institutions
  - Public Housing
- Overview of Economic Impact Analysis Tools
Observations & Next Steps

- State and Local ESPC Market Healthy
- Substantial Opportunity Remains in the MUSH Market
- Technical Assistance Needs Still Remain
- Collaboration Will Continue with Stakeholder Organizations
- ESPC Toolkit Will Continue to Expand
Thank You!

Questions?

For additional information, contact

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