Roundtable on Lead-by-Example Financing for Public Buildings: ESPC and Other Tools

National Association of State Energy Officials/ U.S. Department of Energy

August 2018

Rules of Engagement

- We are all friends here!
- If you want to speak, turn your tent card vertical and wait to be called on
- Identify yourself by name and organization
- Be concise, specific, and focus on the topic at hand
- Respect the opinions and perspectives of others
- Respect the speaker by waiting your turn and not interrupting them
- Make forward looking recommendations for solutions
- Everyone participates as we want to hear from all sides
- Consensus is nice, but not required

Introductions

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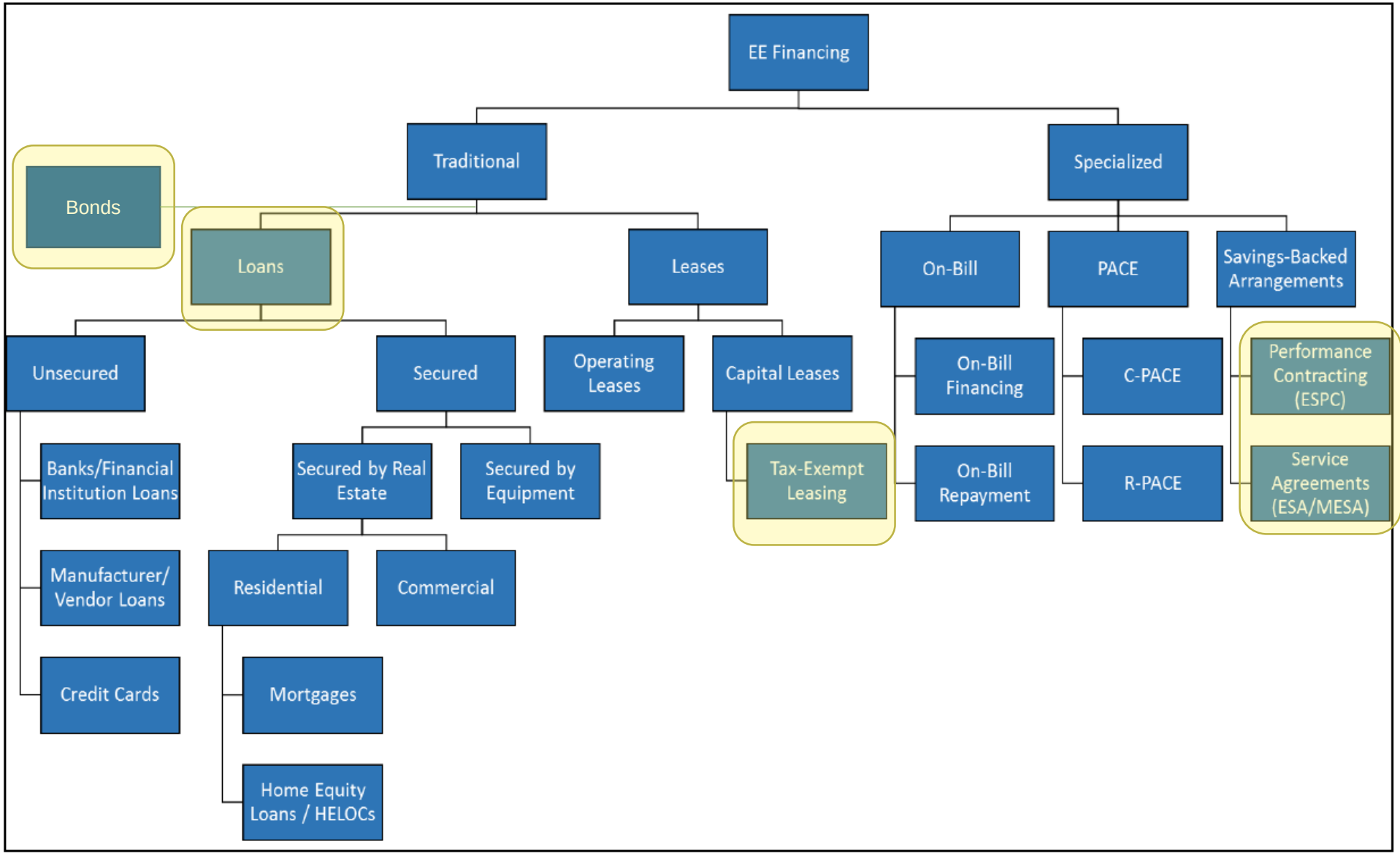
Roundtable on Lead-by-Example Financing for Public Buildings: ESPC and Other Tools

August 24, 2018

Market Overview: Financing Products



Leventis, et al 2016: https://eta.lbl.gov/sites/all/files/publications/lbnl-1006406.pdf

Revolving Loan Fund: What Is It?

A program that makes direct loans from a pool of capital (the loan fund) and as the loans are repaid the money flows back to the fund and is “revolved” to make new loans.

Revolving Loan Fund: Market

- EE/RE focused revolving loan funds:
  - Currently over **30 state EE-focused RLFs**. State and local ARRA-funded RLFs total over $300 million in capital
  - **62 university RLFs**, totaling $131 million in capital
  - Federal CWSRF (potential $6 billion in EE capacity)
- Examples:
  - Texas LoanSTAR, as of December 2017, has funded 290 loans totaling more than $457 million.

SECO
State Energy Conservation Office

Energy Savings Performance Contracting: What Is It?

Energy Savings Performance Contracting (ESPC or EPC) is

"a financial mechanism used to pay for today's facility upgrades with tomorrow's energy savings – without tapping your organization's capital budget. An ESPC/EPC constitutes a partnership between a facility owner and an energy service company (ESCO)…"

-NAESCO

<u>Savings guarantee unique among finance options</u>

ESPC: Market

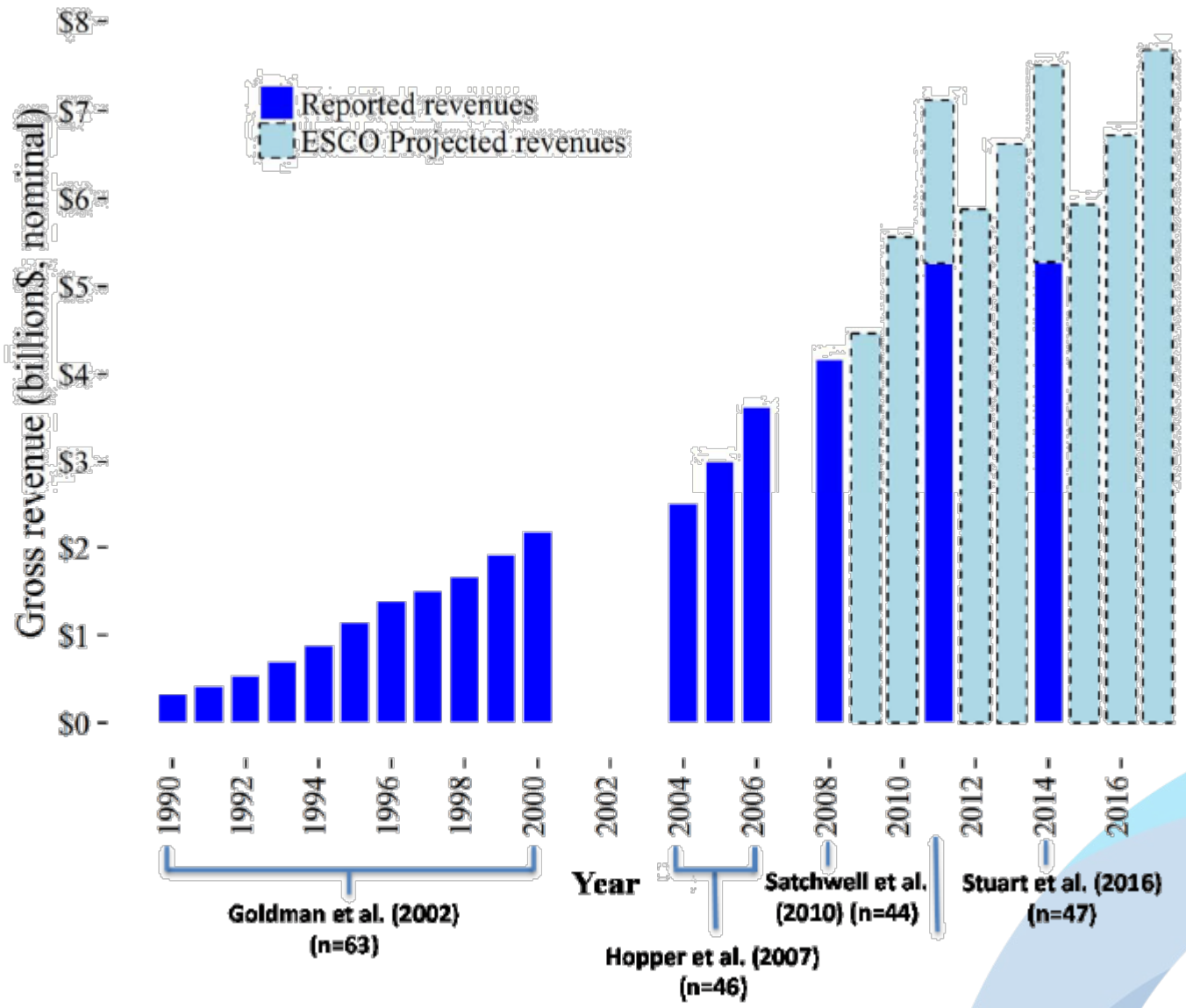
- Most ESCOs focus on the public sector
- Concept being applied in new areas:
  - Transportation fleet fuel savings guarantee

Table 3. 2014 ESCO industry revenue by market segment

Market Segment	Share of Total Revenue
State/Local	25.4%
K–12 Schools	23.5%
Federal	20.7%
University/College	10.0%
Healthcare	5.9%
Commercial/Industrial	7.9%
Public Housing/Other	6.6%
SUBTOTAL (n=43)	**100.0%**

-Lawrence Berkeley National Lab, U.S. Energy Service Company (ESCO) Industry: Recent Market Trends, 2016

ESPC: Market Size



-Lawrence Berkeley National Lab, U.S. Energy Service Company (ESCO) Industry: Recent Market Trends, 2016

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ESPC Programs

- Major barrier to ESPC can be complexity, especially for a first-time participant
- State and local governments have developed programs to simplify ESPC for constituents:
  - Pre-qualify ESCOs
  - Standardize contractual documents and approaches
  - Provide technical assistance
  - Provide low-cost financing

Minnesota Department of Commerce
Division of Energy Resources

- Example: Minnesota Guaranteed Energy Savings Program
  - Pipeline of over 550 buildings and 26 million square feet, with an estimated annual savings of $10.8 million
  - Promotes awareness of ESPC
  - Provides ESCO pre-qualification, standardized contracts, and technical support

Energy Services Agreement: What Is It?

An **Energy Services Agreement (ESA)** is:

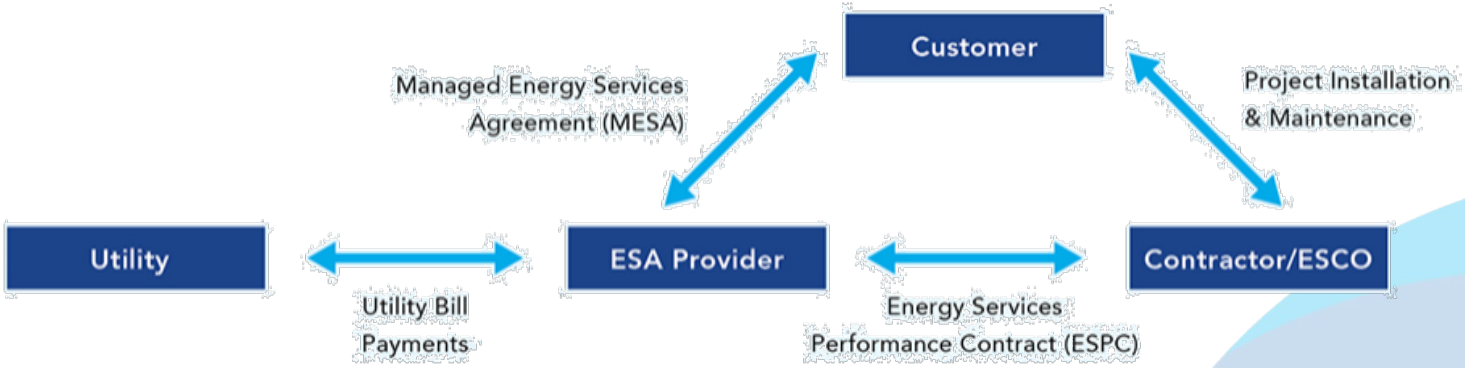
"a pay-for-performance, off-balance sheet financing solution that allows customers to implement energy and water efficiency projects with no upfront capital expenditure. The ESA provider pays for project development, construction, and maintenance costs. Once a project is operational, **the customer makes service payments that are based on actual energy savings**, resulting in immediate reduced operating expenses."

-DOE Better Buildings

ESA: How it works

- Two types:
  - Standard Energy Services Agreement (ESA)

  - Managed Energy Services Agreement (MESA)



-Better Buildings Solutions Center ESA/MESA

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ESA: Market

- Commercial and industrial, MUSH, government
- Easier for larger projects
- **More likely to remain "off-balance sheet"** after upcoming changes to lease accounting (go into effect end of 2019)
- Market Size ~$35 million annually
  - From the news:
    - SCIEnergy $400 million MESA fund
    - Noesis $30 million ESA fund
    - Metrus $75 million pipeline M/ESA projects

Tax Exempt Lease (Lease Purchase): What Is It?

A tax-exempt lease is a form of rental agreement issuable by qualified public sector entities that provides a federal income tax exemption on interest earned by the lessor.

Tax Exempt Lease: Features

- Features:
  - Non-appropriation clause - Traditionally not considered debt, so did not require voter approval
  - Can last for the full useful life of the equipment
  - Option to purchase equipment at end of lease for a nominal amount (typically for $1)

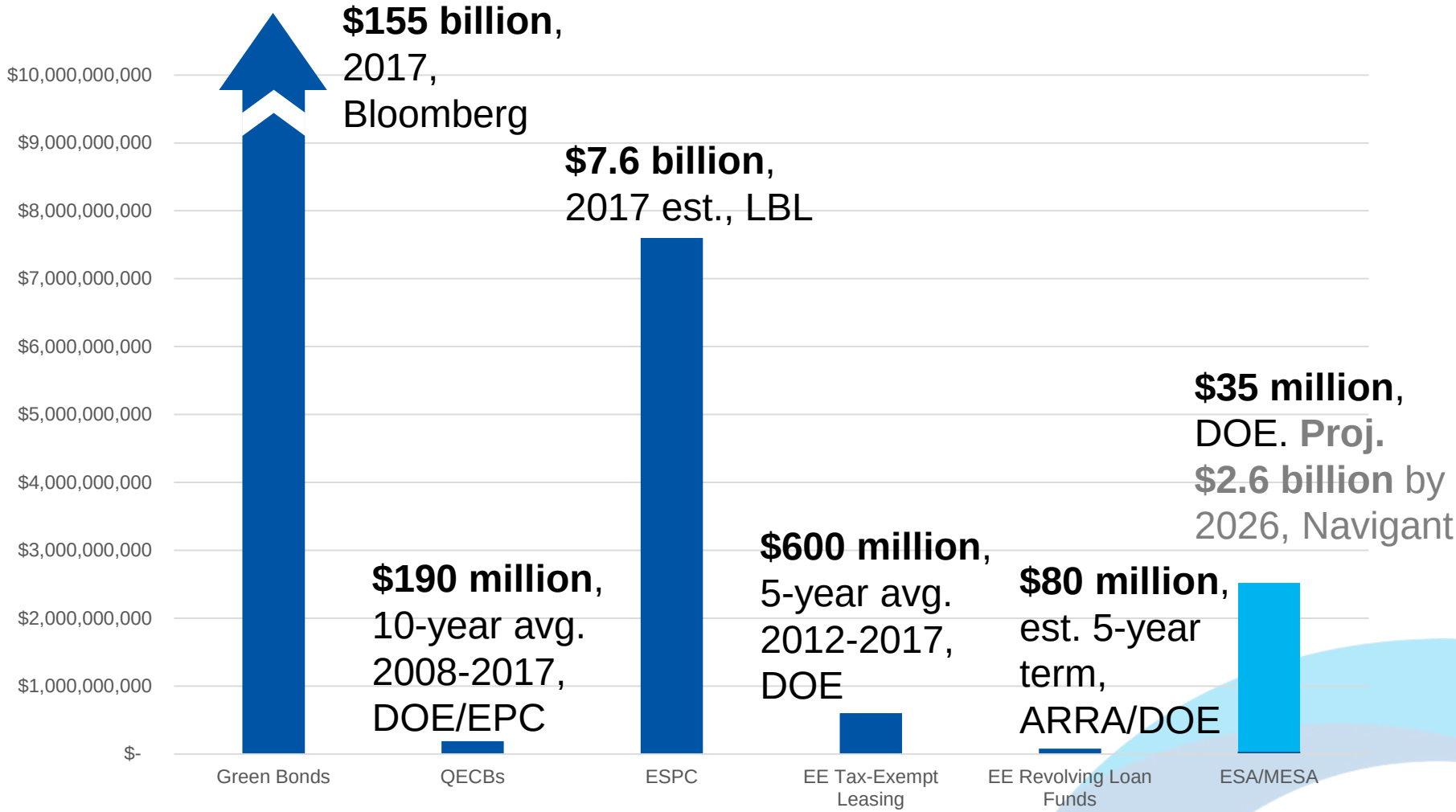
- Market:
  - Annual market for all equipment leasing: $400 billion
  - EE equipment leasing: $500-$600 million

-Better Buildings Solutions Center ESA/MESA

Bond: What Is It?

A bond is a debt instrument, like a loan, except the issuer borrows money from the public instead of from a single financial institution. Bonds typically have a defined time period and payment schedule.

Market Sizes Compared



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Resources

- Better Buildings Financing Navigator
- DOE's State and Local Solution Center
- DOE Better Buildings ESPC Toolkit
- NASEO's State Energy Financing Library
- NASEO's Financing Programs Page

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Contact

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Discussion Questions

- Along with ESPC, do ESCOs generally offer other EE financing models (and what other kinds of financiers offer these models)? If so, which models are best for which circumstances? Which offer guaranteed savings? Do potential customers usually understand the differences between these financing models?

- What are the key factors decision-makers typically ask about with regards to financing options? Is it the impact on debt (on/off balance sheet), the complexity of the procurement process, the length of the agreement, title to the property/security interest?

- How difficult would it be to "pilot" some of these alternative financing mechanisms in your state? What resources would you need to do so? Have you done so already? What was the experience?

- For state agencies, how would you determine how these services would be procured and under what statute are they enabled?

- Do certain types of public buildings generally lend themselves to certain financial models? For example, is energy-as-a-service more suited towards buildings trying to attract less energy-intensive clients?

Discussion Questions

- Are certain models better suited than others towards smaller projects with lower financing limits?
- How should states begin the process of educating other agencies on the various types of models? What best practices exist in this space?
- What are some models that states have come up with to finance small facilities? How do various participants define "small" projects?
- How have recent changes in finance impacted these energy efficiency finance models, if at all?

Break!

MOVING THE *MUSH* MARKET

DISCOVERY
Is waste obvious?

QUANTIFICATION
What value is at risk?

MOTIVATION
"Why should we act?"

ACTION
What should a response entail?

OUTCOMES
To whom shall costs and benefits accrue?

□ Energy performance benchmarking
- x *No metrics established*
- x *No accountability for performance*

□ Energy audit obtained
- x *No funds available*
- x *No budget category for this expense*

□ "Ownership" of costs & benefits DECLARED
- X *Turf disconnects: spender ≠ do-er ≠ beneficiary*
- X *Competes poorly with established priorities*
- X *No authority to initiate or comply (FEAR)*

□ Business model for construction, finance
- ? *Design/build: In-house staff or vendor*
- ? *Finance method*
- ? *Energy performance contract*

□ Costs & benefits REALIZED
- □ *Budget-to-actual performance monitored*
- □ *New value is measured and assigned*
- □ *Make SOME better off, NONE worse off*

LEGEND: □ *CRITICAL SUCCESS FACTORS*
X *DEAL KILLERS*

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Discussion Questions

- What support should states provide for localities and other MUSH market components to help them decide if ESPC or some other EE project mechanism is the way to go?
  - Are there standardized or template contracts and other documents?
- Is there some minimum scale for successful ESPC projects (by floor area, utility spending,…?)?
- Are there possibilities for aggregating projects covering multiple buildings or agencies within a jurisdiction? What are the obstacles that the group has seen or envisions to aggregating these projects?
- How can states overcome the reluctance of rural communities to take on debt? Are there financing mechanisms that can help make that debt manageable for smaller communities?
- What are some successful ways for a state to identify buildings that are good candidates for ESPC or other financing models? How can they qualify eligible facilities and get a ballpark figure for the energy savings those buildings can produce?
- Would there be any benefit in establishing a very prescriptive model for small projects that could advance the retrofits/efficiency/etc. similar to FEMPs ENABLE concept?

Discussion Questions

- When is M&V most often used in your state? When or why is it avoided?
- Are rural communities and/or MUSH understanding the need for M&V and tracking with these financial models? What help do they need here?
- What are some best practices to ensure that building owners are maintaining new equipment to manufacturer standards of performance? Who trains building employees to properly operate new equipment?
- Is M&V typically done for the entire length of the contract or for a lesser period? For programs with a shorter-than-full term requirement for M&V, what are the considerations that led them to choose this practice?
- Are there any estimates of the proportion of M&V done under each of the IPMVP Options (A, B, C, D)?
- How can a state pay for technical assistance to localities/MUSH for pursuing M&V of their projects?
- Do the savings in an ESPC contract have to come purely from energy, or can they come from other areas (water reduction, reduction on O&M expenses?) that could help meet the contract obligations? Are these measured and verified with any common standard or method?

Contact Us

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