U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Facility Infrastructure Renovation through Standardized Templates (FIRST)

Weatherization & Intergovernmental Programs Office

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Outline

- Who/what is WIP?
- A brief history of DOE's ESPC initiatives
- The ESPC Accelerator
- New Tools & Progress
- What's next?

Weatherization & Intergovernmental Programs Office

WIP is part of EERE's balanced research, development, demonstration, and deployment (RDD&D) approach to accelerate America's transition to a clean energy economy.

- WIP's **mission** is to significantly accelerate, in partnership with State and local organizations, the deployment of energy efficiency and renewable energy technologies and practices by a wide range of government, community, and business stakeholders.

- WIP supports DOE's **strategic objective** to "**deploy the clean energy technologies we have**." These typically near-term activities produce almost immediate results in the form of greater energy efficiency, lower energy use, expanded renewable energy capacity, and economic development.

WIP Structure

- Weatherization Assistance Program (WAP): State/local agencies carry out residential energy retrofits in low – income residences that reduce energy consumption while concurrently reducing energy costs for these families.

- State Energy Program (SEP): State-led energy projects serve as an important foundation for reducing energy use and costs, developing environmentally conscious state economies, and increasing renewable energy generation.

- Policy & Technical Assistance Team (P&TA): Assist in developing tools and solutions to barriers facing state and local government expansion of energy efficiency policies and programs and replicating successful efforts demonstrated by public sector leaders.

The Potential of ESPC

- Market growth since 1990s
- Public and institutional projects represented about 84% of ESCO industry revenue in 2011, with the state and local government share steady
- Market penetration highest in K-12 schools sector (42%), 30% in the state/local sector, 25% in the university market, 18% in public housing, and <10% in healthcare
- Estimated 2013 revenues of $6.4 billion, with a projected growth of ~12% in the next three years
- Estimated ESPC project investment opportunity in MUSH market: ~$51.8-$86.8 billion
- Estimated annual energy savings potential in MUSH market: ~199.5-262.3 trillion Btu
- A typical ESPC project in the MUSH market saves approximately 13% to 31% annually compared to its baseline consumption[1]

[1] LBNL/NAESCO database of ESCO projects
Source for all other slide facts: "Current Size and Remaining Market Potential of the U.S. Energy Service Company Industry" by Elizabeth Stuart, Peter H. Larsen, Charles A. Goldman, and Donald Gilligan. September 2013.

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

The Concept

To take advantage of the potential of performance contracting, partners and DOE will be working to:

- Streamline ESPC documentation and processes
- Standardize project reporting and benchmark contract performance
- Demonstrate successful ESPC practices and projects
- Expand the use of ESPC in underserved market sectors

DOE Support for ESPC

- Goal: To enable access to the upfront financing needed for the public sector to deploy energy efficiency projects
- Work includes:
  - Individual technical assistance under ARRA
  - Information resources and training through Technical Assistance Program
  - Support for 14 states undertaking ESPC through State Energy Program Competitive awards
- Next: Accelerator aligns with and supplements these activities

SEP Competitive Projects on ESPCs

- FY 2012: Fee-based Self-funded Public Facility Retrofit Programs (~$6.0 million)
  - 8 states (AK, CA, KY, MN, NV, NC, VA, WA)
  - Developing/improving and implementing comprehensive and self-sustaining programs to finance upgrades to state and municipal buildings, National Guard assets, school districts and water/wastewater facilities
- FY 2013: Driving Demand for Public Facility Retrofits (~$3.0 million)
  - 6 states (IA, MD, MA, SC, TN, WI)
  - Create models to serve as “how-to” guides on methods that help drive demand for EE retrofits in market sectors such as municipalities, K-12 schools, technical colleges and wastewater facilities

Better Buildings Initiative: ESPC Accelerator

Objectives

- Significant expansion of public sector ESCO/ESPC projects (states, municipalities, K-12 schools).
- Catalyze $2B investment by December 2016.

Goals

- Demonstrate successful examples for public entities to use.
- Disseminate successful, streamlined tools/templates needed to undertake ESPC projects: legal framework; model procurement documents; contracts; MRV; etc.
- Develop standardized methods for measuring and reporting energy savings, and for tracking and benchmarking projects.
- Share best practices on public buildings retrofits.
- Where applicable, tailor to type of public entity.

Better Buildings Initiative: ESPC Accelerator

Partner Benefits

- Streamlined process/tools to help finance and implement clean energy projects (modeled on FEMP).
- Improved tracking and reporting of project results.
- Capacity building from training, webinars, peer exchanges, national subject matter experts.
- Public recognition as national leader from DOE.
- DOE point of contact for each partnership.
- Access to central ESPC process/results repository.

Requested Partner Commitments

- Pledge ESPC goal ($).
- ID >= 1 barrier; find solution within 18 months.
- Participate in technical assistance forum.
- Share materials, results, lessons learned.
- Report semi-annually on progress.

The ESPC Accelerator Today: $1.57 Billion Commitment

- Alabama
- Cincinnati, OH
- Colorado
- **Connecticut**
- El Paso, TX
- Fort Worth, TX
- Hawaii
- Houston, TX
- **Illinois**
- Massachusetts
- Michigan
- Minnesota
- **Montana**
- New Mexico
- Newark, NJ
- **North Carolina**
- Philadelphia School District
- Virgin Islands
- Virginia
- Washington State

*** Indicates new partner since December 2013**

Key Partner Barriers

Partners named:

- Skepticism and Lack of Understanding of ESPC
- Complexities of ESPC Process; Project Design
- New Sectors, including Small/Rural Projects
- Lack of Project Data & Limited Knowledge of Financing Options
- Support Infrastructure

DOE will provide

- Working Groups to Develop Joint Solutions
- Customized Assistance to Build Permanent Solutions

New Tools & Future Successes

From Concept:

- Streamline ESPC documentation and processes
- Standardize project reporting and benchmark contract performance
- Demonstrate successful ESPC practices and projects
- Expand the use of ESPC in underserved market sectors

To Reality:

- Refreshed model documents issued – standardized templates
- e-Project Builder available
- Implementation models from SEP Competitive and ESPC Accelerator forthcoming
- Some SEP and Accelerator partners are focusing on small entities, local community projects

ESPC Model Documents

- ESCO Solicitation
  - RFQ to Pre-Qualify ESCOs
  - RFP to Select ESCO from Pre-Qualified Pool
- Investment Grade Audit and Project Proposal
  - Scope of work, M&V plan, cost and pricing exhibits, deep energy retrofit planning
- Energy Savings Performance Contract
  - Contract, savings guarantee, payments & schedule, design & construction phase, post-construction, administration
- Financing Solicitation
  - Sample provisions for lease contract, financing proposal letter

Progress Since December 2013

Partners have

- Reviewed and Finalized ESPC Model Documents
- Reviewed and Provided Feedback on Data Tool for ESPC projects
- Identified Individual ESPC Barriers to Overcome

Next steps

- Partners to Test Drive eProject Builder
- Partners to Begin Resolving Identified Barriers

What's Next?

- High Performance Outdoor Lighting Accelerator
- Water/Wastewater Utilities – what is the opportunity for ESPC in this sector?
- Small/Rural Community Projects – is aggregation the best path?

Thank You!

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