



Energy Savings Performance Contracting in the Public Sector

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Overview

- What is Energy Savings Performance Contracting (ESPC)?
- Why ESPC?
- A Look at the ESPC Market
- DOE Resources for States
- Observations & Next Steps

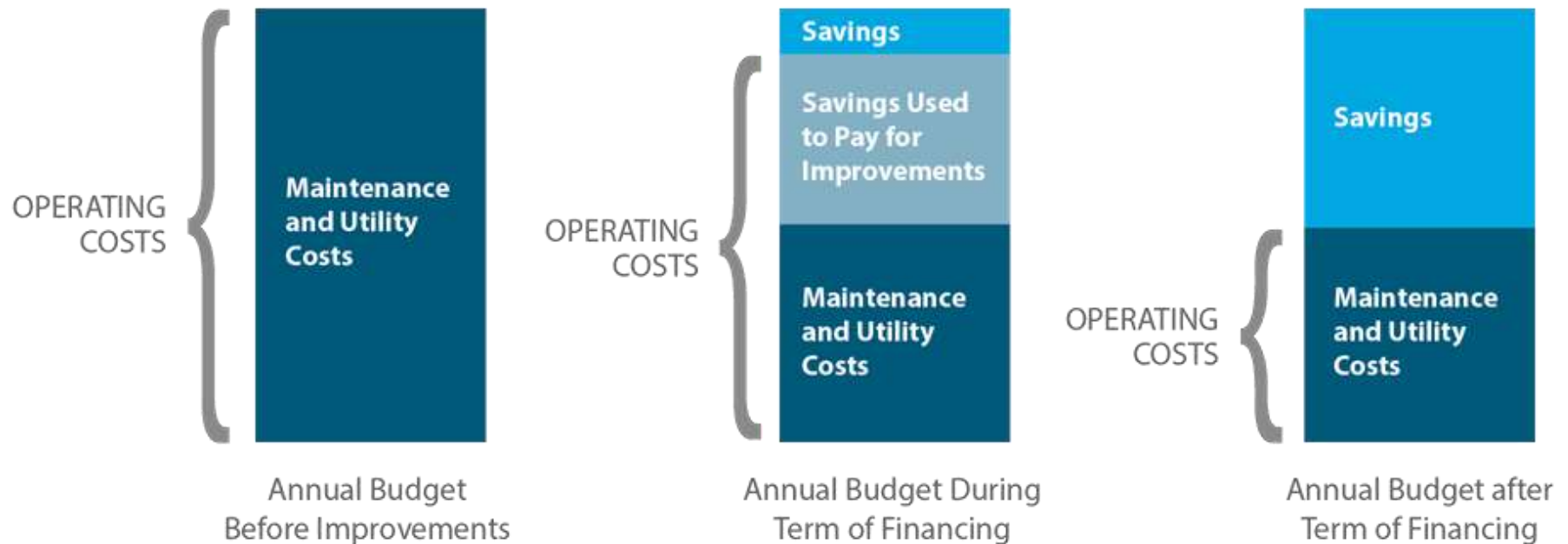
What is ESPC?

Definition

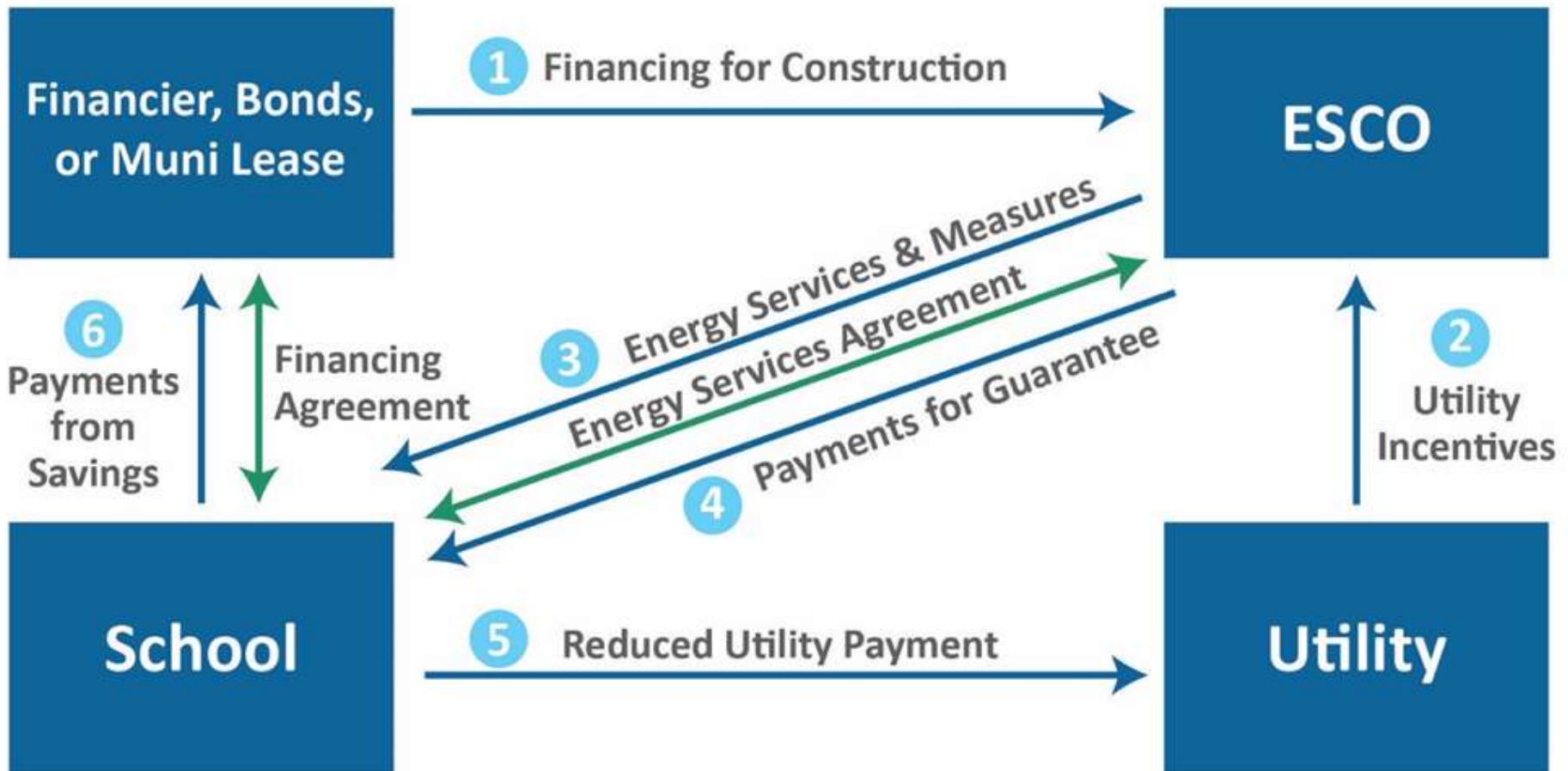
ESPC is

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

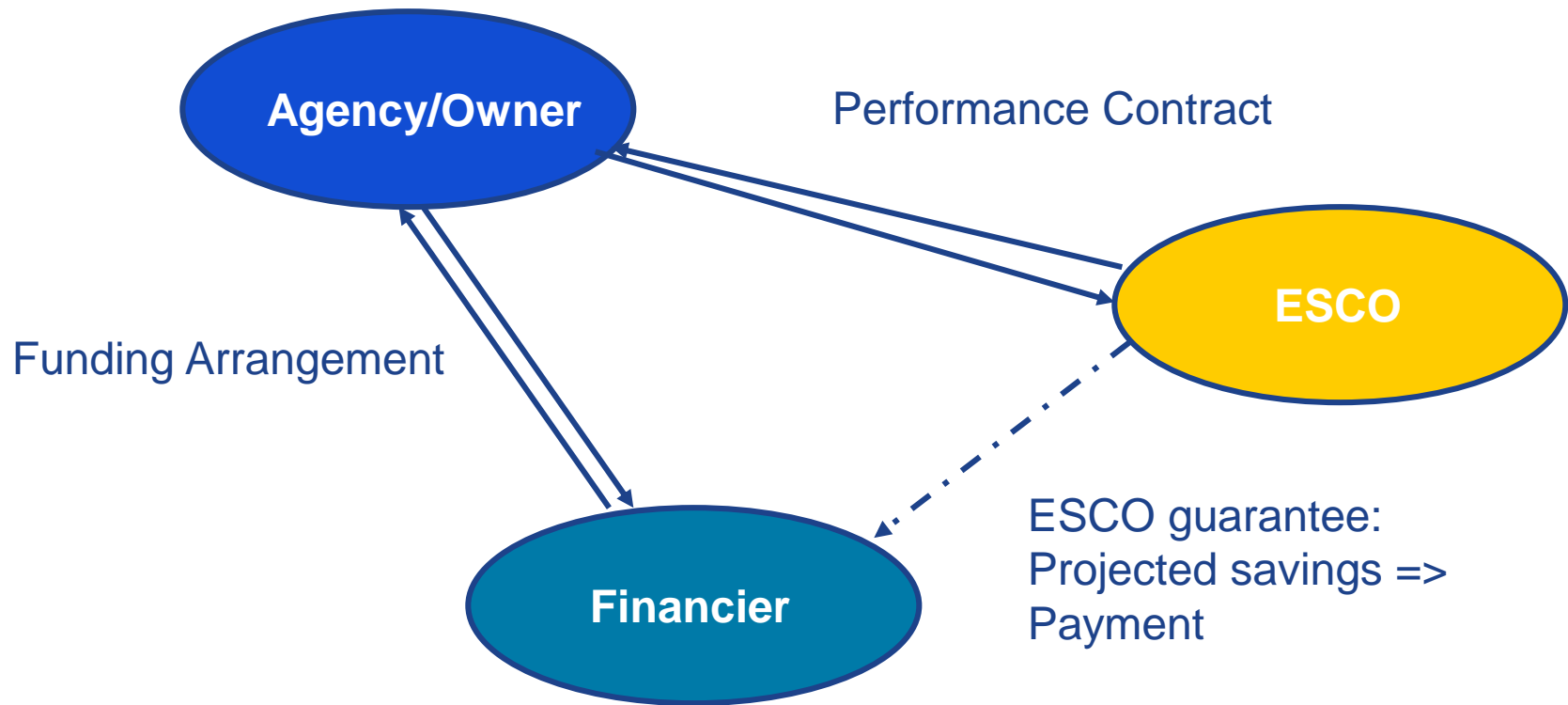
How Does it Work in Practice?



ESPC Relationships



Financing Options



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

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



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%



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 consumption⁶
 - A typical ESPC project in the MUSH market saves approximately 13% to 31% annually compared to its baseline consumption⁷
- High market growth potential for ESPC
 - Anticipated 2017 revenues of \$7.6 billion, representing an average annual growth of 13% over the period 2015-2017⁸
 - Estimated ESPC project investment opportunity in MUSH market: ~\$51.8-\$86.8 billion⁹



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

18 More than \$2 billion invested in MUSH ESPC contracts

The ESPC Toolkit

<https://betterbuildingsolutioncenter.energy.gov/espc/home>

- Considering ESPC
- Implementing ESPC
- Establishing ESPC
- Expanding ESPC
- ¹⁹ 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

GOAL
To reduce energy intensity in state-owned buildings by 20 percent by 2020, based on 2010 levels

SCOPE
State agencies with net undertaking energy efficiency projects due to lack of upfront financing

SOLUTION
Minnesota created the Guaranteed Energy Savings Program (GESP), a state-led initiative to deliver technical, financial, and contractual assistance to state agencies to support the implementation of Energy Savings Performance Contracting (ESPC), a mechanism that provides upfront project capital that is ultimately repaid by the energy savings generated by the project.

GOVERNANCE
Within five weeks, GESP had a portfolio of 20 energy efficiency projects impacting more than 100 buildings and 10 million square feet

Implementation Model: Guaranteed Energy Savings Program

OVERVIEW
Energy savings performance contracting unlocks upfront capital that enables energy efficiency projects to get financing. For Minnesota, ESPC represented an opportunity to realize projects that would move the state toward its energy savings goals of building owners experienced ESPC and how to use it effectively. This in 2012, Minnesota established a dedicated team in the Department of Commerce to offer comprehensive ESPC consulting services. The team is called the State Energy Savings Program (SESP) and is a joint effort of the Department of Commerce, the Department of Administration, and the Department of Energy Services. The team is working to develop a comprehensive approach to project implementation.

Key Attributes of ESPC Program Features for the day to achieve long-term success:

1. **Proactive capitalization**
Alternative capitalization guarantees the legitimacy for public sector to enter into a guaranteed energy savings performance contract (GESPC) if they establish the policy, related and provide program performance metrics to quantify each side of the savings guarantee. Allocation of savings, operational metrics, and cost & benefit metrics provide financing metrics and validation and reporting requirements.
2. **Financial independence model**
Subcontractor model transfer provides to state agencies and contractors, program responsible for design, construction, and operation of the project. Contractors benefit to deliver to building owner's business.
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Implementation Model: Green Energy Treatment Program

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Energy Savings Overview

Welcome to Your Virtual Technical Assistant for Energy Savings Performance Contracting (ESPC)

ESPC offers a way to make energy improvements to public facilities even when there is no budget to fund the work. The public entity contracts with an energy service company (ESCO) to identify and install cost-effective improvements and guarantee the energy savings. The ESCO can facilitate financing for the project, and the financing is repaid from the energy cost savings.

ESPC offers many benefits:

- Upfront project financing
- Guaranteed energy savings
- ESCOs can offer information on how financing is generally managed
- The ESCO is the single point of contact, accountability
- Cuts volatile energy prices and long-term rising costs
- Addresses deferred maintenance
- Improves productivity via better air quality, lighting, and temperature control

The goal of the Virtual Technical Assistant is to guide you through the five phases of the ESPC process, beginning with identifying potential projects and ending at the single point of contact completion. **Click the ESPC icon** can supplement this guide with an in-person visit at the outset of the process and by phone at key points along the way. **Click the ESPC icon** recommends engaging an outside representative at the beginning support necessary for a project to be forced into the

ESPC Program Results as of December 31, 2014

Category	Count	Value
Projects Completed	10	\$1.2M
Projects Underway	5	\$0.8M
Projects in Planning	3	\$0.5M
TOTAL	18	\$2.5M

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Table 1: Energy Savings Performance Contracting (ESPC) Program Results

Table 2: Energy Savings Performance Contracting (ESPC) Program Results

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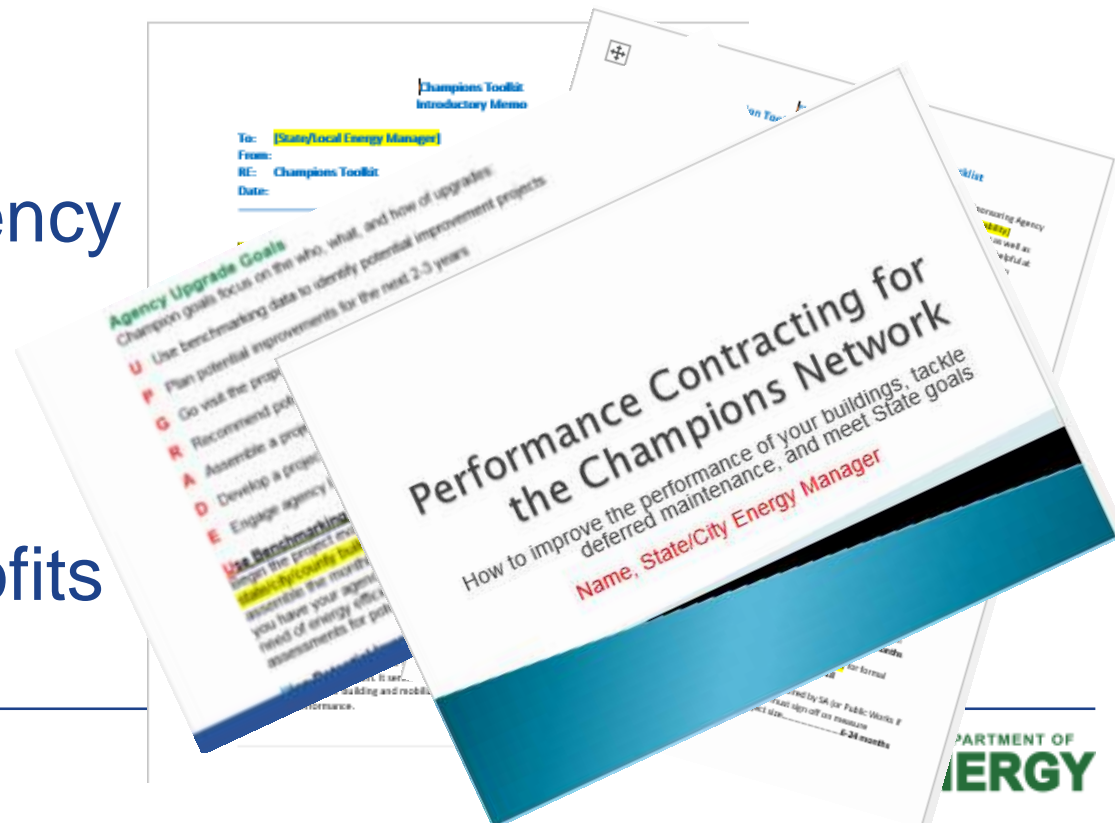
Tool: ESPC Champions Toolkit

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



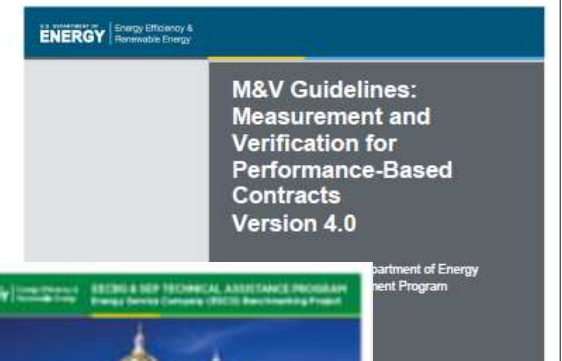
Expanding ESPC

- ESPC Primer for K-12 Schools
- ESPC Guide for Fleets and Fueling Infrastructure
- ESPC Guide for Water Resource Recovery Facilities (coming soon)
- 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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