



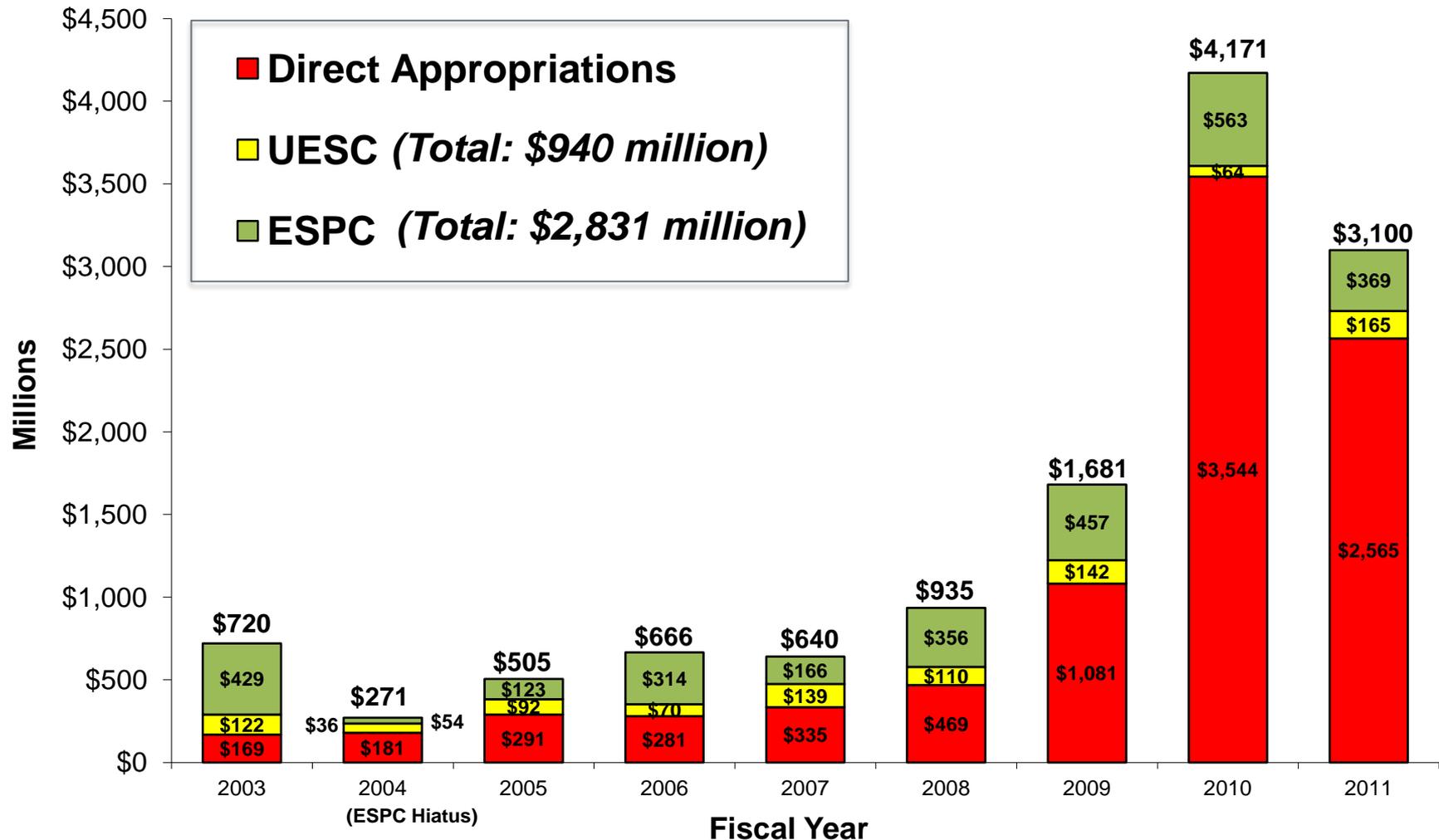
Federal Utility Partnership Working Group Meeting: Washington Update

April 11, 2012

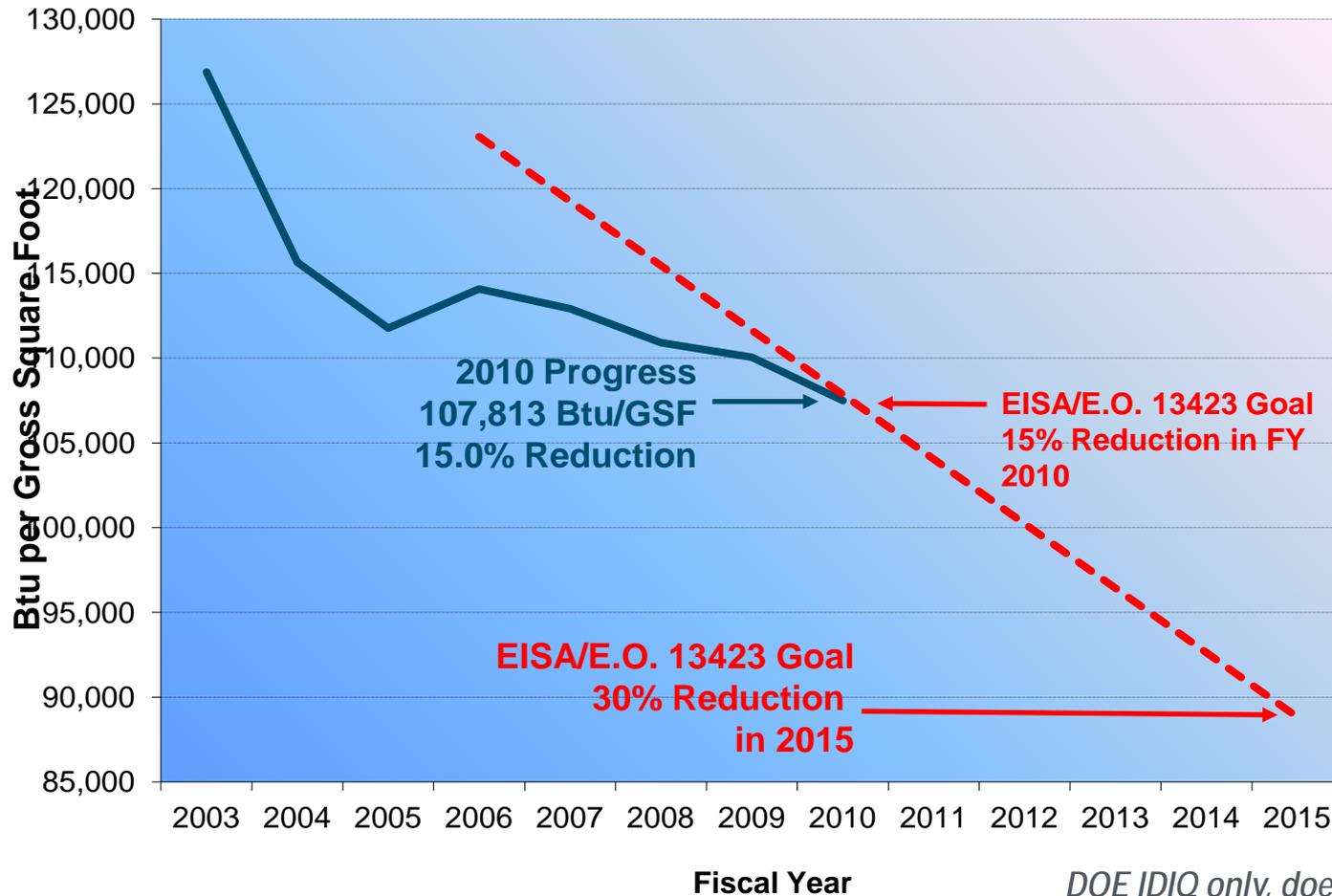
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Program Manager, DOE FEMP

- 1. Status of Federal Goals**
- 2. Presidential Memo**
 - Key provisions
 - Role of UESCs
 - Agency commitments
- 3. Meeting Memo's Goals**
 - New Programs
 - Financing
 - Reporting and Resources
- 4. FEMP Update**
- 5. Mark Your Calendar: GovEnergy 2012**

Federal Facilities: Investment in Energy Efficient Projects



Government Building Energy Intensity FY 2003 - FY 2010 (preliminary data)



How do ESPC contribute to the 30% Energy Intensity Goal?

~ 18,890 BBtu
ESPC Annual
Energy Savings

~ 6,189 Btu per
sq.ft. saved

DOE IDIQ only, does not include Army IDIQ

Section 1

- a) Agencies shall fully implement projects with a pay back of 10 years or less
- b) The Federal Government will enter into a minimum of \$2 billion in performance-based contracts in Federal building energy efficiency within 24 months (*December 31, 2013*)
- c) Agencies are encouraged to use a installation wide/portfolio approach that combines long and short term projects to maximize efficiency and ROI

Performance-based contract: A contract that identifies expected deliverables, performance measures, or outcomes, and makes payment contingent on their successful achievement...Performance-based contracts, which include ESPCs, can be performed by any qualified contractor, including utilities.

OMB's Position on UESCs and Memo

UESC contracts will count toward memo provided contracts have contractor performance requirements including:

1. Performance assurances or guarantees
2. M&V of savings through commissioning or retro-commissioning
3. Requiring competition or an alternatives analysis

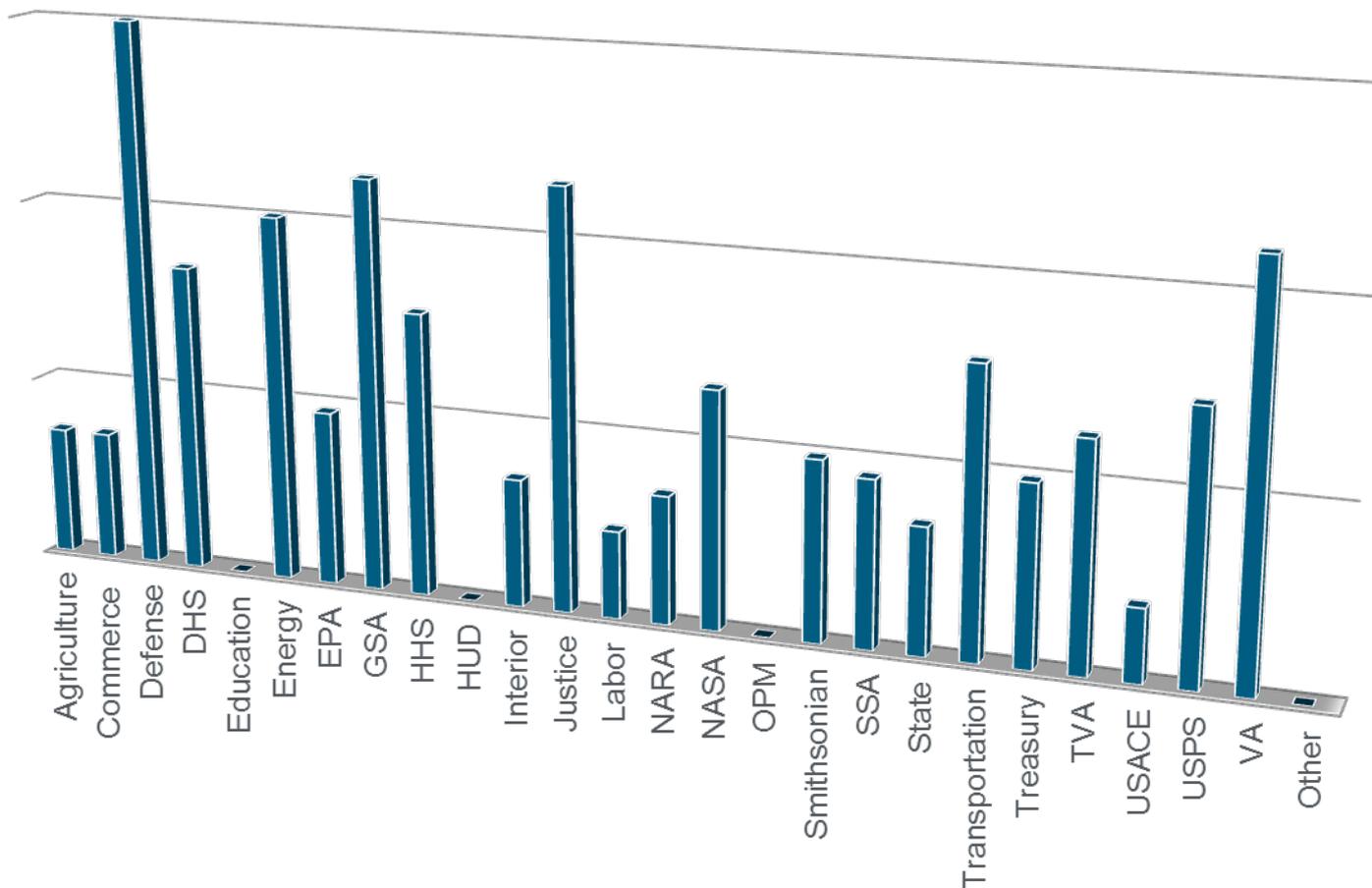
This is consistent with FEMP's "Best Practices"

UESC Performance Assurance Plan

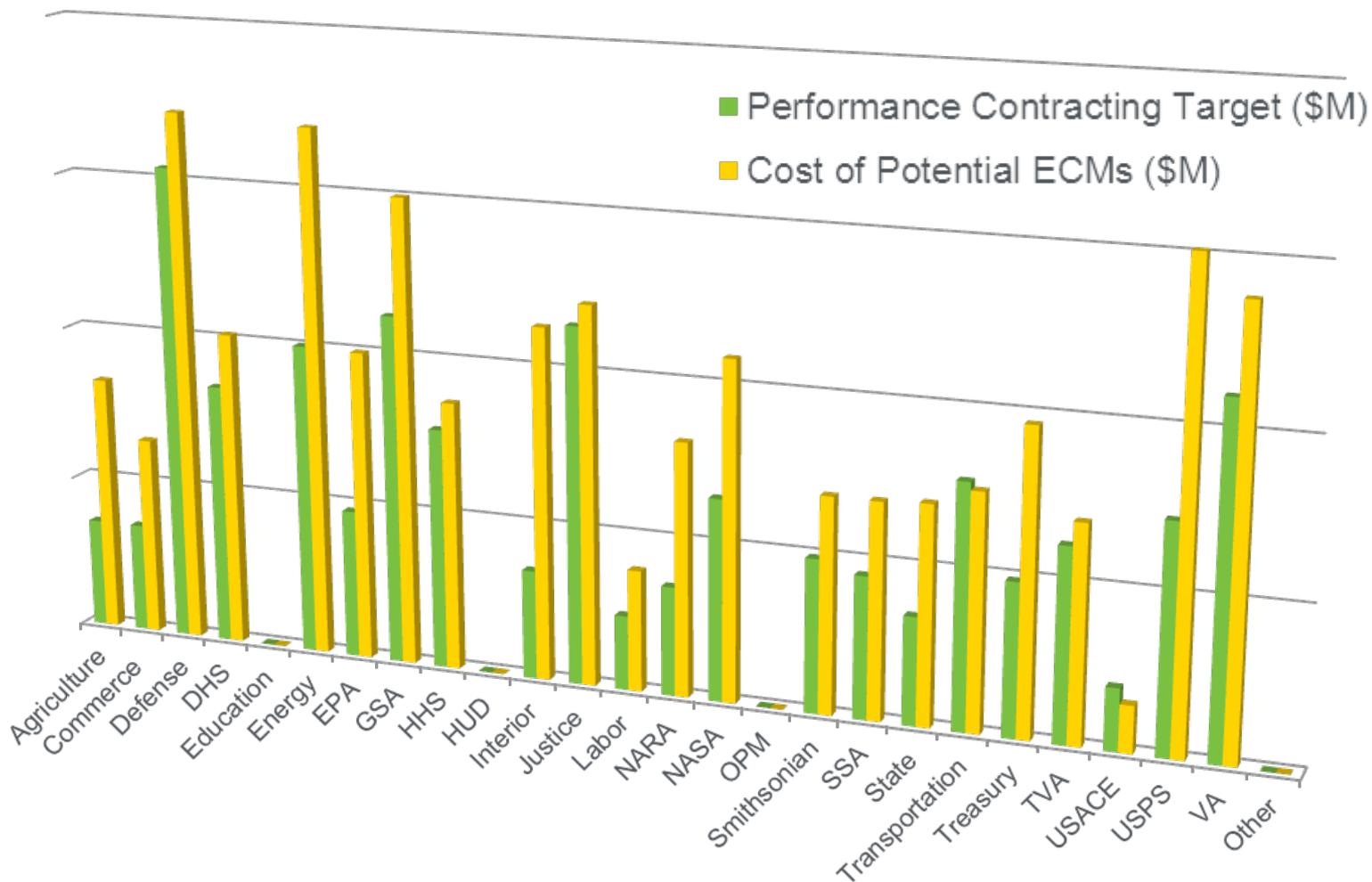
The minimal performance assurance plan recommended by the Federal Energy Management Program for alternatively financed UESC energy conservation measures is:

- Establish baseline pre-installation
- Start-up performance verification (based on measured data) prior to acceptance
- Performance verification at the end of warranty period (based on measured data)
- Operations and maintenance training (required in the more common instance where the agency continues to operate and maintain installed equipment)
- Provision of continuing training throughout the contact period as specified in the contract as determined by the needs of the facility
- Periodic inspections and verification of appropriate O&M performance.
- Performance discrepancy resolution

Agency Investment and Performance Contracting Commitments



Potential ECMs Compared to 2013 Targets by Agency



ECMs are determined by audits that are 50% completed. Some previously identified ECMs may have been implemented.

FEMP will improve on best annual performance:

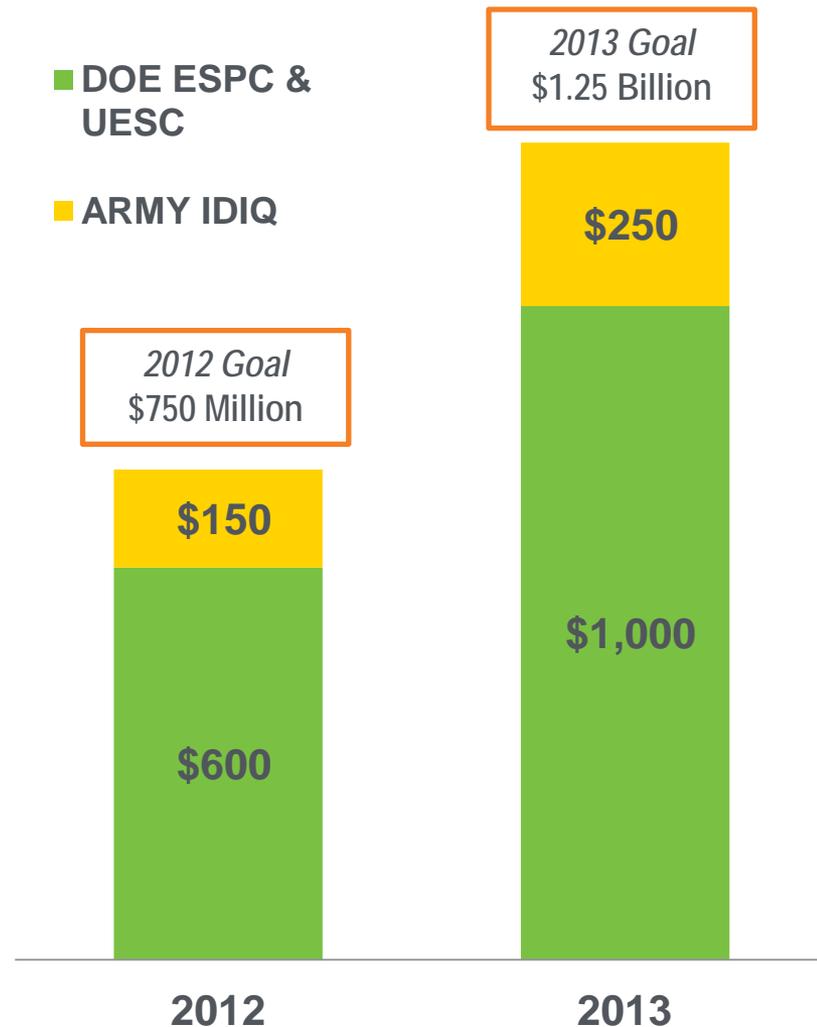
- To meet ~\$1 billion annually, 87% increase needed
- To meet ~67¹ projects annually, 72% increase needed

¹ Average project value is \$15 million

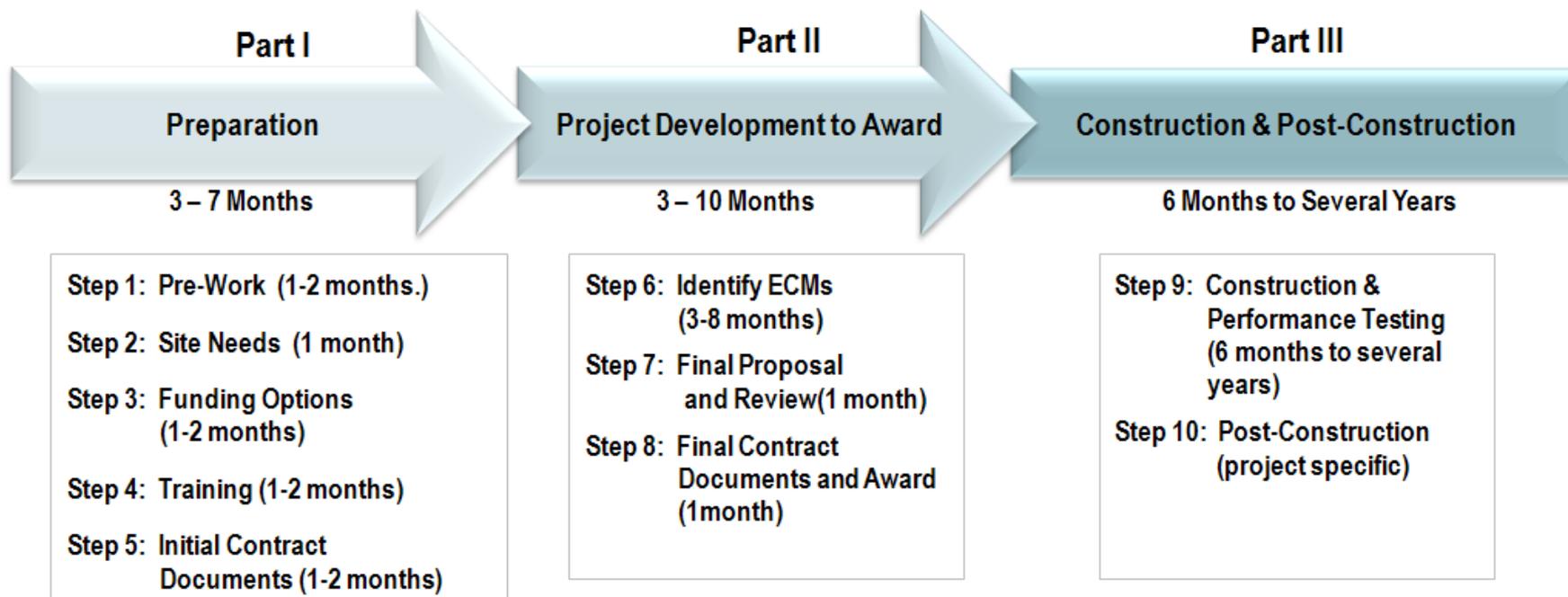
Goals (\$MM)

■ DOE ESPC & UESC

■ ARMY IDIQ



Assumption of 80% DOE ESPC/UESC and 20% ARMY IDIQ



Timelines vary depending on project complexities; review time; and acquisition team and utility experience

- Projects will take 6-18 months to implement **“if all goes well”**
- More time is needed for “new ” sites/utilities
- Projects will need to be identified and in process by this summer/fall to be awarded by Dec 2013 “if all goes well”

ORNL Study on Mixing Appropriations & Private Finance

- Finding: Using appropriations to direct fund shortest-payback ECMs has many drawbacks
 - Limits savings
 - Limits investment
 - Costs the Agency more in terms of LCC
 - Limits the Agency's options for funding future projects
- Conclusion: Build the biggest project possible using private finance, including all the shortest payback ECMs. Use appropriations as buydowns, or to fund additional long-payback ECMs

ENABLE – A new small-buildings pilot initiative that will allow small sites to enter into performance contracting agreements for specific energy conservation measures.

- For Federal facilities <200,000 square feet
- Three types of ECMs: lighting, water, controls
- FEMP provides:
 - Standardized process to quickly award projects within 6 weeks
 - Excel-based survey tools
 - M&V process and template
 - Technical assistance
- Could be informative for UESCs at smaller sites

Small Buildings

319,000 Federal buildings are less than 5,000 square feet.¹

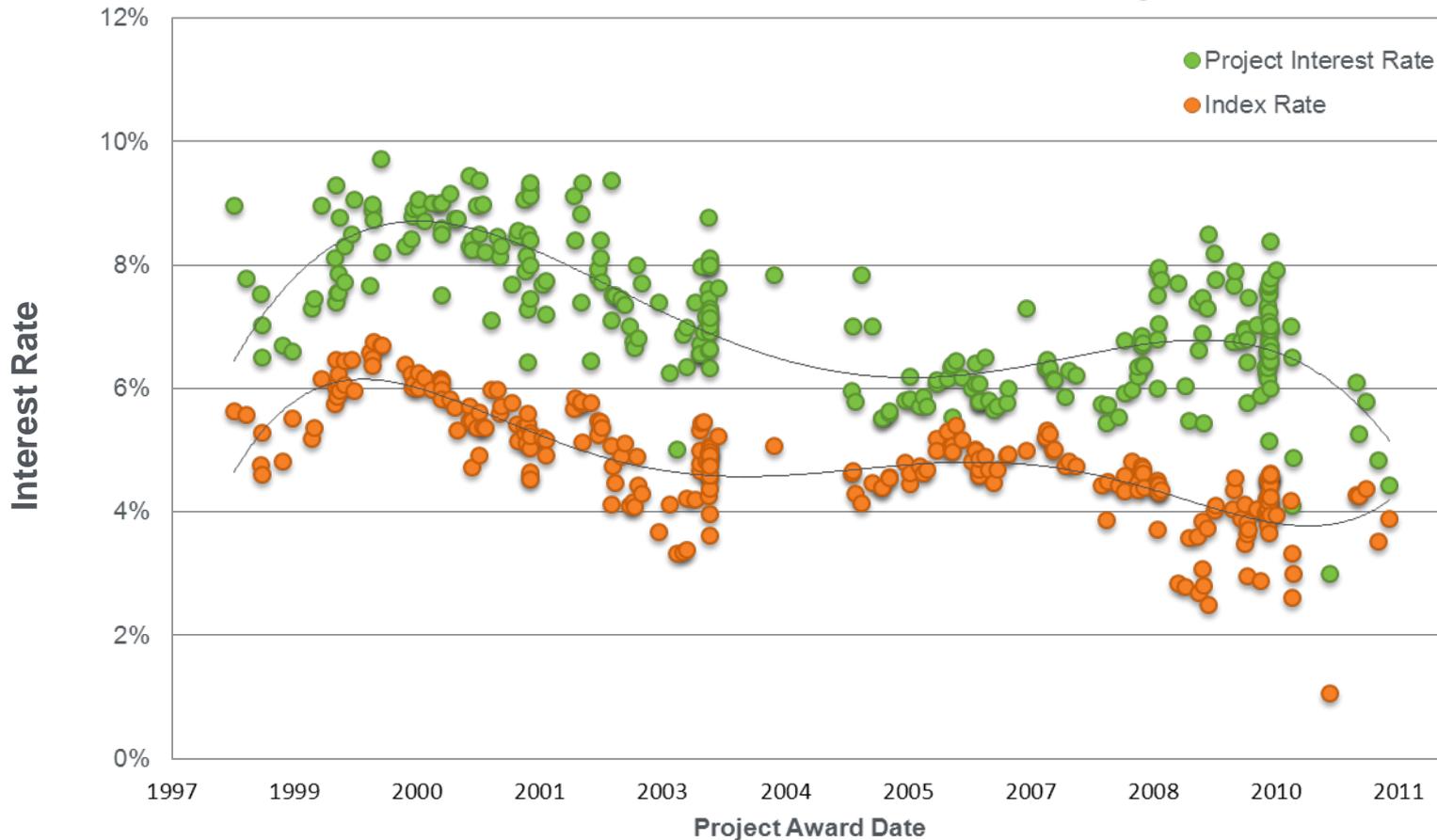
¹ GSA Federal Real Property Profile (FRPP), FY 2010

Request for Information (RFI)

Title: Financing Alternatives and Criteria for ESPC Projects and Other Government Performance-Based Contracting for Energy Savings,
DE-SOL-0003702, www.fedconnect.net

- Released 3/2/12, Responses Due 3/30/12
- Financing cost is a significant component of an ESPC project's cost structure—roughly equivalent to project investment at about 42% of over all costs
- Solicits input from the banking, financing, investment and ESCO industries for improving processes, procedures and funding availability, in support of \$2B Presidential Goal
- Creative ideas that will simplify and expedite the process for an ESCO to obtain financing, and reduce the cost of this financing (e.g., interest rate, transaction costs, etc.)
- Findings may help inform UESC process

Good Time to Use Private Funding



Interest rates peaked during the credit crisis. However, since then interest rates have fallen significantly, thereby creating an opportunity to lock in a lower rate with an ESCO.

Reporting

- New Monthly Project Tracker
- Scorecard Reporting & Sustainability Plans

ESCP Implementation Schedule												
Project Implementation Phase												
					Agency Develops Acquisition Plan/NOO		Agency Releases NOO		Agency Selects ESCO		ESCO Develops PA	
Facility Name	Project Champion	Facility Zip Code	Estimated Project Value	Contract Vehicle	Due Date	Actual	Due Date	Actual	Due Date	Actual	Due Date	Actual
				DOE	3/30/12		3/31/12		4/30/12		6/29/12	
				DOE	3/30/12		3/31/12		4/30/12		6/29/12	
				DOE	3/30/12		3/31/12		4/30/12		6/29/12	
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				DOE	3/30/12		3/31/12		4/30/12		6/29/12	

Customer Service

Former Customer Service Model

- Each FEMP staffer assigned to one/two agencies
- Varying degrees of success
- Needed more strategic approach

Customer Service

New Three-Pronged Customer Service Approach

1. **Agency-Specific Concentration**
 - Target one agency
 - Direct budget and staff resources
2. **Project Focus for All Agencies**
 - Identify specific projects
 - Track projects through to completion
3. **Reform Interagency Working Groups**
 - Firm up purpose and mandate of working groups
 - Coordinate customer service across agencies

Web-Based Tool Created for Technology Deployment

Goal: Accelerate the adoption of new and underused technologies to help Federal agencies meet the energy and greenhouse gas reduction goals in Executive Order 13514.

- Focuses on retrofitting existing buildings
- Ranks technologies that have the most potential to reduce Federal energy use
- Technology categories include:
 - Building Envelope
 - Heating, Ventilation, and Air Conditioning
 - Lighting
 - Water Heating
 - Refrigeration, Computer Power Management, and Vending Machine

Outreach Campaigns and Recognition

- NSTC Building Technology R&D Subcommittee now reviewing “Behavior and Buildings: An Action Oriented Framework” developed with multiple agency collaboration
- Federal Building Personnel Training Act online course and Pre-GovEnergy Workshop focusing on institutional and behavior change being developed
- Federal –wide outreach campaigns now emphasizing “awareness” to “action” message and activities, i.e. Energy *Action* Month, GovEnergy messaging and Harnessing the Power of People track
- Federal Energy Awards selection criteria modified to reward replication and institutionalization of project results

FEMP Net Zero Support for DoD

Army

- Support for the Nine Army Net Zero Energy Sites
 - Review of all energy audits, renewable and grid assessments
 - Development of Net Zero Roadmaps to get Army to Net Zero by 2020

Navy, Air Force, Marines

- Tech support at Southern Maryland Navy locations
- Development of net zero policy and action plan for the Air force
- Renewables optimization for 29 Marine locations.

FEMP's Exterior SSL Initiative

With support from FEMP, the USACE is developing a policy and implementation plan, including guidance materials, training, qualified product lists, and performance specifications in support of the widespread adoption of exterior SSL in the Federal sector.



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

FEDERAL ENERGY MANAGEMENT PROGRAM

A FEMP Outdoor SSL Initiative

Resources for Outdoor SSL Applications



LED lighting installed in the parking garage of the Frances Perkins Building, U.S. Department of Labor Headquarters, Washington, D.C.

Outdoor Solid-State Lighting in the Federal Sector

The Federal Energy Management Program (FEMP) is encouraging Federal agencies to accelerate the thoughtful application of outdoor solid state lighting luminaires. The FEMP Outdoor SSL Initiative offers a unique opportunity for the Federal sector to lead a large-scale implementation effort focused on an SSL application that is ripe for near term implementation through a process that recognizes the technology's potential, as well as its challenges. This initiative is intended to help Federal energy managers overcome the widespread misinformation they are encountering, learn about this technology and its unique attributes, and provide the tools needed to make good decisions that result in cost effective energy savings, and good quality lighting.

As part of this initiative, FEMP will leverage existing SSL outdoor tools and materials, and will develop new ones as needed to meet the unique needs of Federal agencies. This paper provides an overview of existing outdoor SSL resources developed by the US Department of Energy's SSL Program and other Federal initiatives including:

- SSL Street/Roadway Lighting
- SSL Site (Parking Lot/Garage) Lighting
- General SSL Resources

Street/Roadway Lighting

A variety of resources are available for facility managers interested in pursuing SSL street and roadway lighting, including DOE SSL GATEWAY demonstration project results, a Fitted Target Efficacy Calculator, and DOE CALiPER test results.

Municipal Solid-State Street Lighting Consortium Fact Sheet – The Consortium shares technical information and experiences related to LED street and area lighting demonstrations. The Consortium also serves as an objective resource for evaluating new products on the market intended for street and area lighting applications. http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/consortium_fs.pdf

DOE SSL GATEWAY Demonstration Project Results – DOE GATEWAY demonstrations showcase high-performance LED products for general illumination in a variety of commercial and residential applications. Demonstration results provide real-world experience and data on state-of-the-art solid-state lighting (SSL) product performance and cost effectiveness. The following studies have been completed on Street/Roadway lighting:

- **LED Roadway Lighting: Palo Alto, California**
Assessment of energy, economic, and performance impacts of replacing high-pressure sodium street lights with LED and induction street lights. http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/gateway_palo_alto.pdf

According to the U.S. Department of energy, no other lighting technology offers as much potential to save energy and enhance the quality of our building environments, contributing to our nation's energy and climate change solutions.

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/dec2010_guiding-market_factsheet.pdf

- **LED Street Lighting: Lija Loop, Portland, OR**

Analysis of the energy and performance impacts of replacing eight high-pressure sodium street lights on one residential street with LED luminaires.

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/gateway_lija_loop.pdf

- **LED Roadway Lighting: I-35W Bridge**

Analysis of Phase 1 results, completed in September 2008, Phase 2 involves long-term monitoring to evaluate lumen depreciation, physical effects, and performance impacts over time.

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/gateway_i-35w-bridge.pdf

[continued >](#)

DOE SSL Program

- Municipal Solid State Street Lighting Consortium
 - Performance Specification
 - Financial Analysis Tool
- DOE SSL Gateway Demos
 - Case Studies
- CALiPER test results
- www.ssl.energy.gov

DOE's Commercial Buildings Energy Alliances (CBEA)

- Specifications for:
 - Parking Lot Lighting
 - Parking Structure Lighting
- www1.eere.energy.gov/buildings/alliances/

www1.eere.energy.gov/femp/technologies/solid_state_lighting.html



Save the Date!

August 19-22, 2012

15th Annual Workshop and Trade Show

THE GATEWAY TO

SMART ENERGY SOLUTIONS



AMERICA'S CENTER CONVENTION COMPLEX ■ ST. LOUIS, MISSOURI

Questions?

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