



## Doing Business with the Federal Government

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Federal Energy Management Program

FEMP provides the services, tools, and expertise to Federal agencies to help them achieve their Federal energy management goals.

These are delivered through project funding mechanisms, technical assistance, and communications and training.

- Why Do Business with the Federal Government?
  - Federal Energy Requirements
  - Federal Government Energy Opportunities
- Project Funding Opportunities
  - The demand (\$2B+) and market
  - Partnering with ESCOs
- How to sell energy-efficient products to the Federal government
  - Federal procurement requirements
  - Understanding ENERGY STAR, FEMP-designated, and low standby
- FEMP Outreach

“In the middle of difficulty lies  
opportunity.”

-Albert Einstein

# Federal Energy and Water Mandates

## Outcome Based Requirements

EPAct 2005

EISA 2007

E.O. 13514

§203  
Renewable  
Energy Use

§142  
Fleets Petroleum  
Reduction

§431  
Energy Intensity  
Reduction

§2(a), 2(b) + 2(c)  
Greenhouse Gas Reductions

§2(g)  
HPSB Agency  
Compliance

§2(d)  
Water Conservation  
& Reduction

## Design Standards Requirements

EISA 2007

E.O. 13514

Guiding Principles

§433  
Energy Eff.  
Performance  
Standards

§523  
Solar Hot  
Water Heaters

§2(g)  
HPSB Facility  
Compliance

GP#1  
Employ  
Integrated  
Design

GP#2  
Optimize  
Energy  
Performance

GP#3  
Protect and  
Conserve  
Water

GP#4  
Enhance  
Indoor Env.  
Quality

GP#5  
Reduce Env.  
Impact of  
Materials

## Prescriptive Process Requirements

EPAct 2005

EISA 2007

E.O.  
13423

E.O. 13514

Dec. 2 Presiden-  
tial memo

§103  
Advanced Metering

§432  
EISA Sec. 432  
(Evaluate, Benchmark, Implement/M&V)

§203  
Use of Alt.  
Fuels -  
Facilities

§701  
Use of Alt.  
Fuels -  
Fleet

§528  
Government  
Efficiency  
Status Reports

§441  
Building life-  
cycle costs

§525  
Product  
Procurement

§523  
New Renewable Energy

§2(c)  
GHG Reporting

§2(i)  
Electronic  
Stewardship

§2(h)  
Contracts

Performance  
contracting

§523  
Water Efficiency

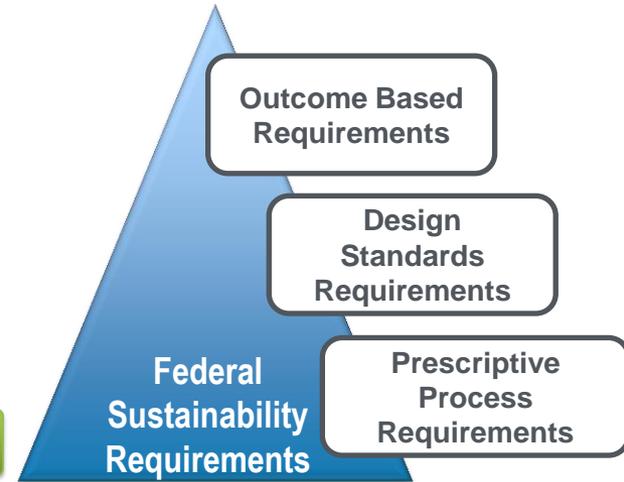
§246  
Fuelling  
Centers

§435  
Leasing

§434  
Sub-  
Metering

§438  
Storm-  
water

§141  
Fleet  
Purchasing



- **Use Renewable *Electric* Energy**

- **Goal:** use renewable electric energy equivalent to a least 5% of total electricity use; at least half of which must come from sources developed after January 1, 1999. Must be at least 7.5% in FY 2013 and thereafter.
- **Status:** 5.2% overall

- **Reduce Greenhouse Gas Emissions**

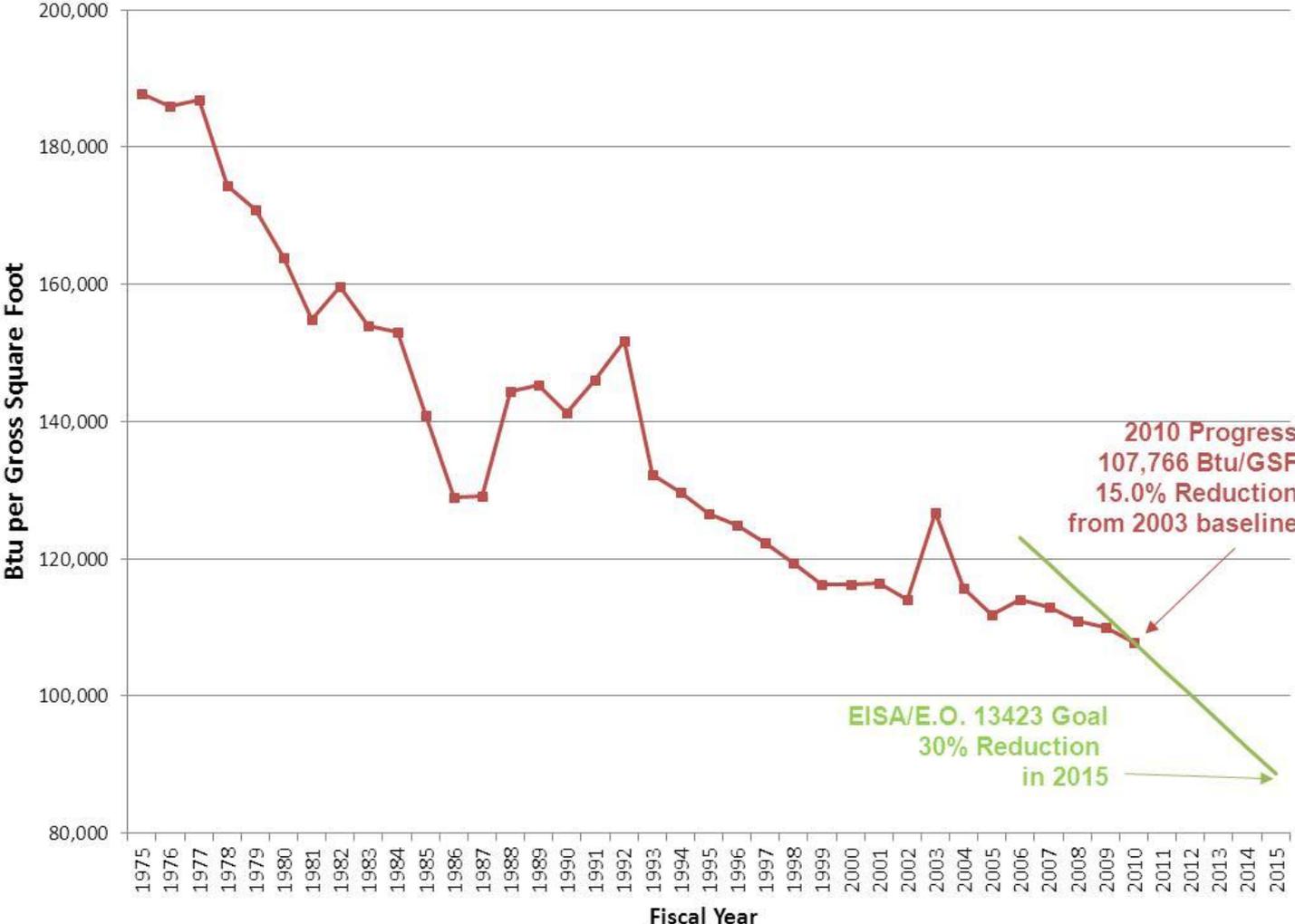
- **Goal:** reduce government-wide GHG emissions by 28% for Scope 1&2 emissions and 13% for Scope 3 emissions by 2020 (from 2008 levels)
- **Status:** 6.4% for Scope 1&2; Scope 3 pending

- **Energy Efficient Product Procurement**

- **Goal:** Federal agencies are required to procure ENERGY STAR-qualified and FEMP-designated products in procurements involving energy-consuming products and systems
- **Status:** Status pending

# Federal Progress Towards Requirements

### Federal Building Energy Intensity, 1975 through 2010



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-Albert Einstein

## How Big is that Slice of Pie?



*Photo by flickr user sciondriver.*

## Federal Government Energy Use

- The US Federal government consumes over 1 quadrillion Btu/yr (>1 EJ/yr)
- \$20 billion in FY 2010 for all energy use.\*
- Largest single energy user in the United States
- Represents 1 percent of the Nation's energy consumption

Comparable to energy use in:



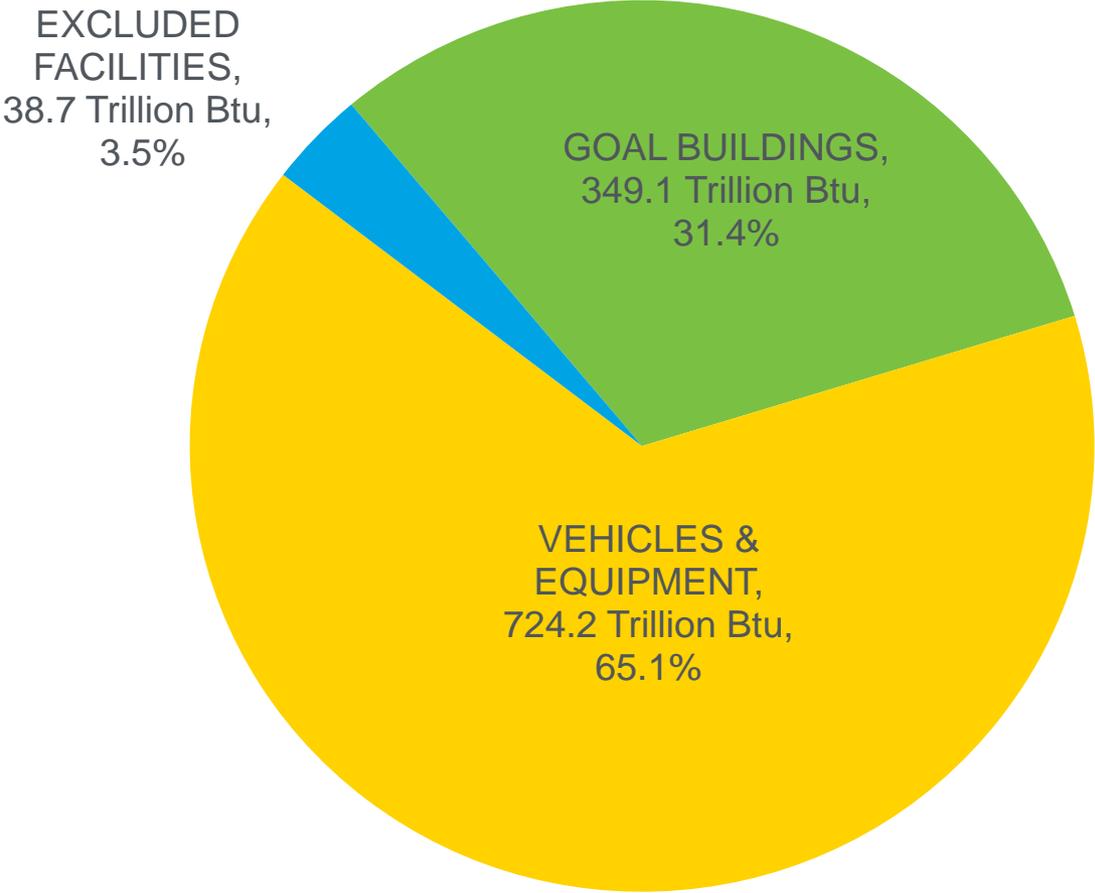
All of Hong  
Kong

All of New  
Zealand



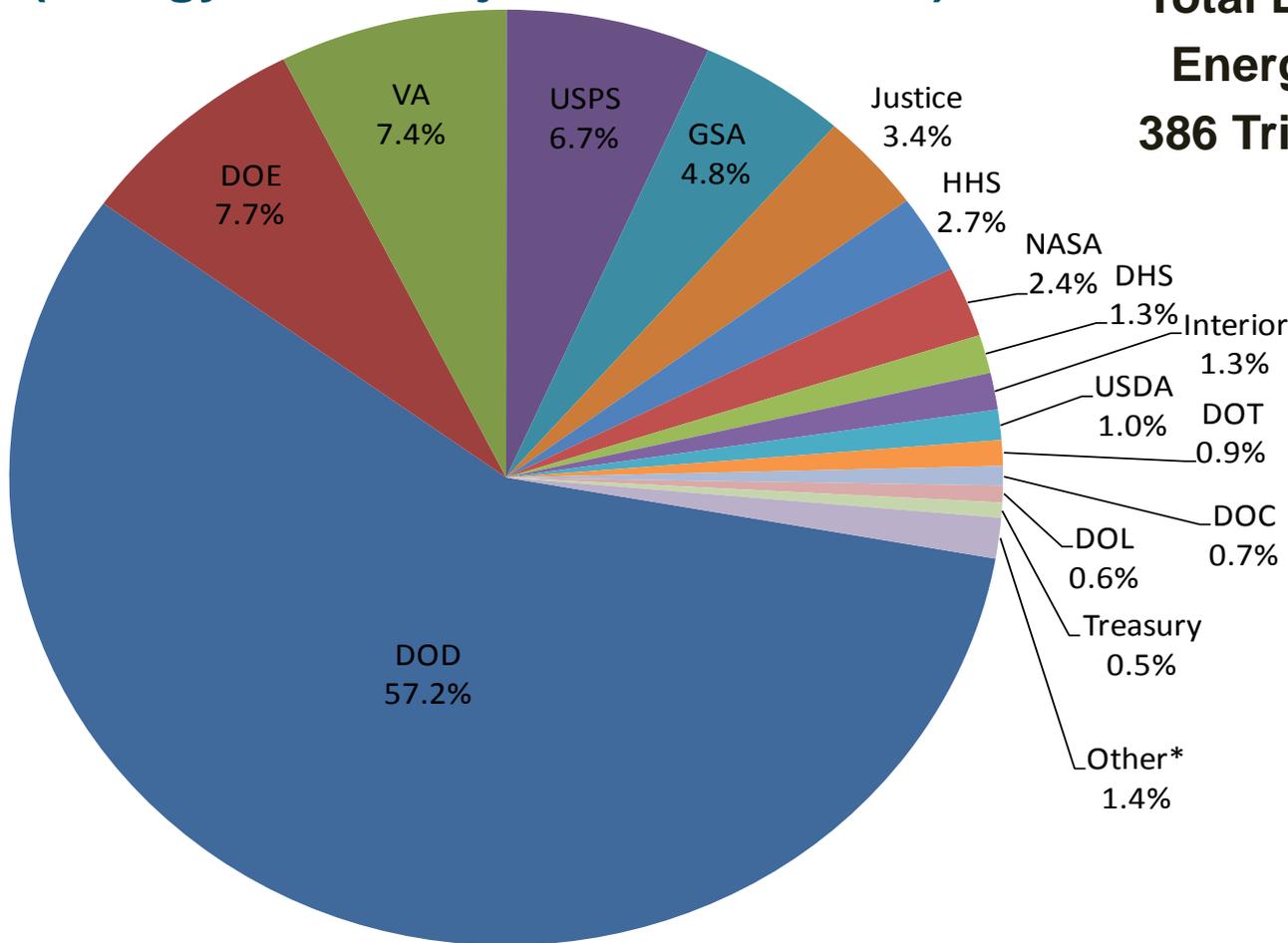
\* Preliminary Data

## Federal Energy Use by End-Use Sector: 1.11 quads



## Total Federal Building Energy Use (Energy Goal Subject and Excluded)

**Total Building Energy Use:  
386 Trillion Btu**

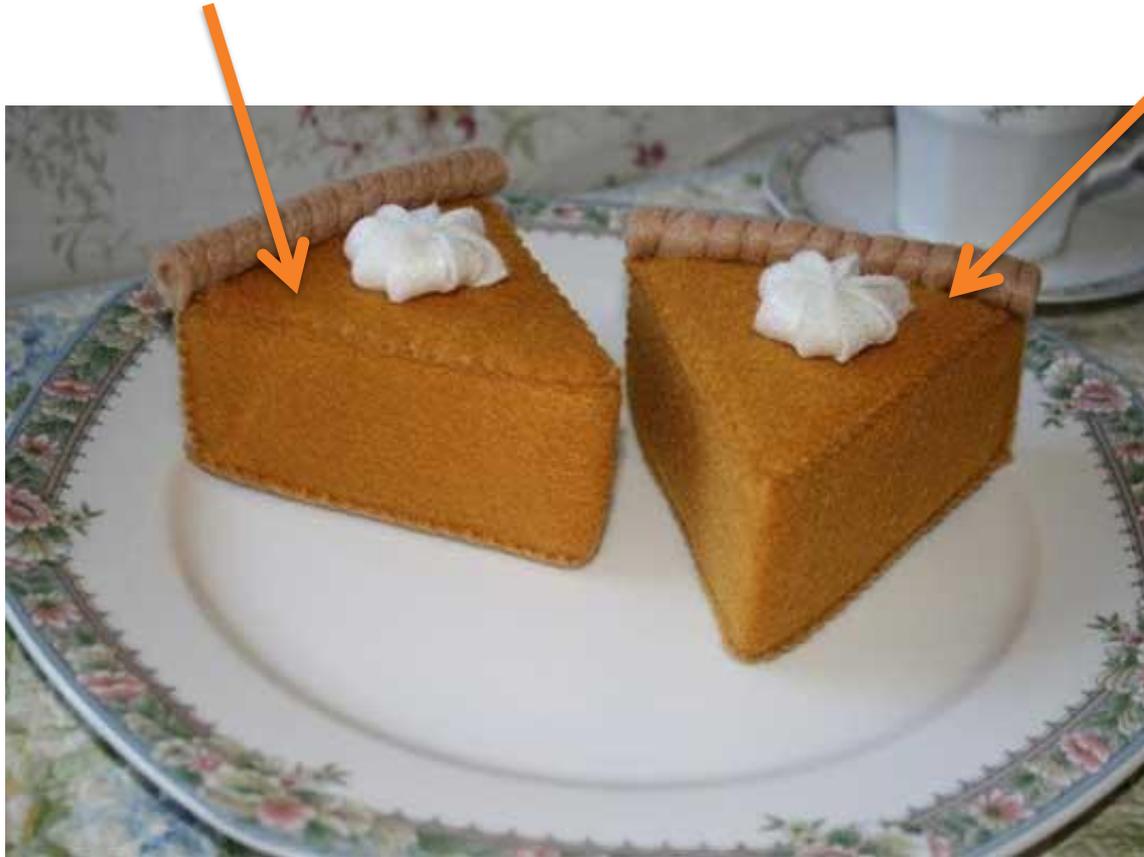


\*Other includes:

- EPA
- TVA
- SSA
- Archives
- State
- HUD
- NRC
- RRB

## Energy Efficient Product Sales

## Project Funding



# **Project Funding - Business Opportunities**

- What is project funding?
- How big is the market?
- How can you get involved?
- What is FEMP's role?

- Appropriations
- Private financing of energy efficiency and renewable energy, e.g.,
  - Energy Savings Performance Contracts (ESPCs)
  - Utility Energy Service Contracts (UESCs)

## What are ESPCs?

ESPCs are contracts that allow Federal agencies to procure facility improvements with no up-front capital cost or special appropriations from Congress.

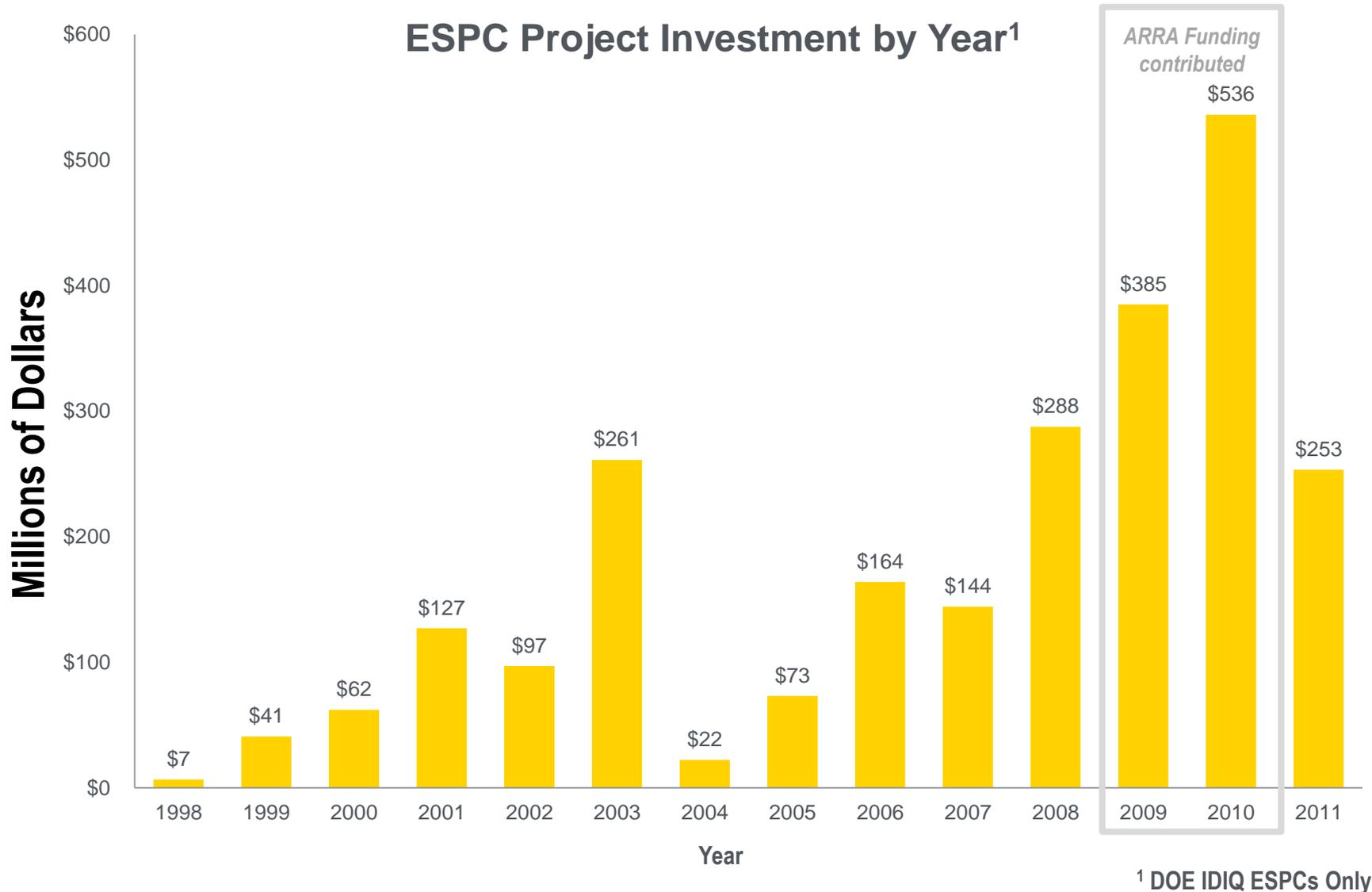
### ESCO

- Incurs cost for implementing project
- Guarantees cost savings, equipment performance, standards of service

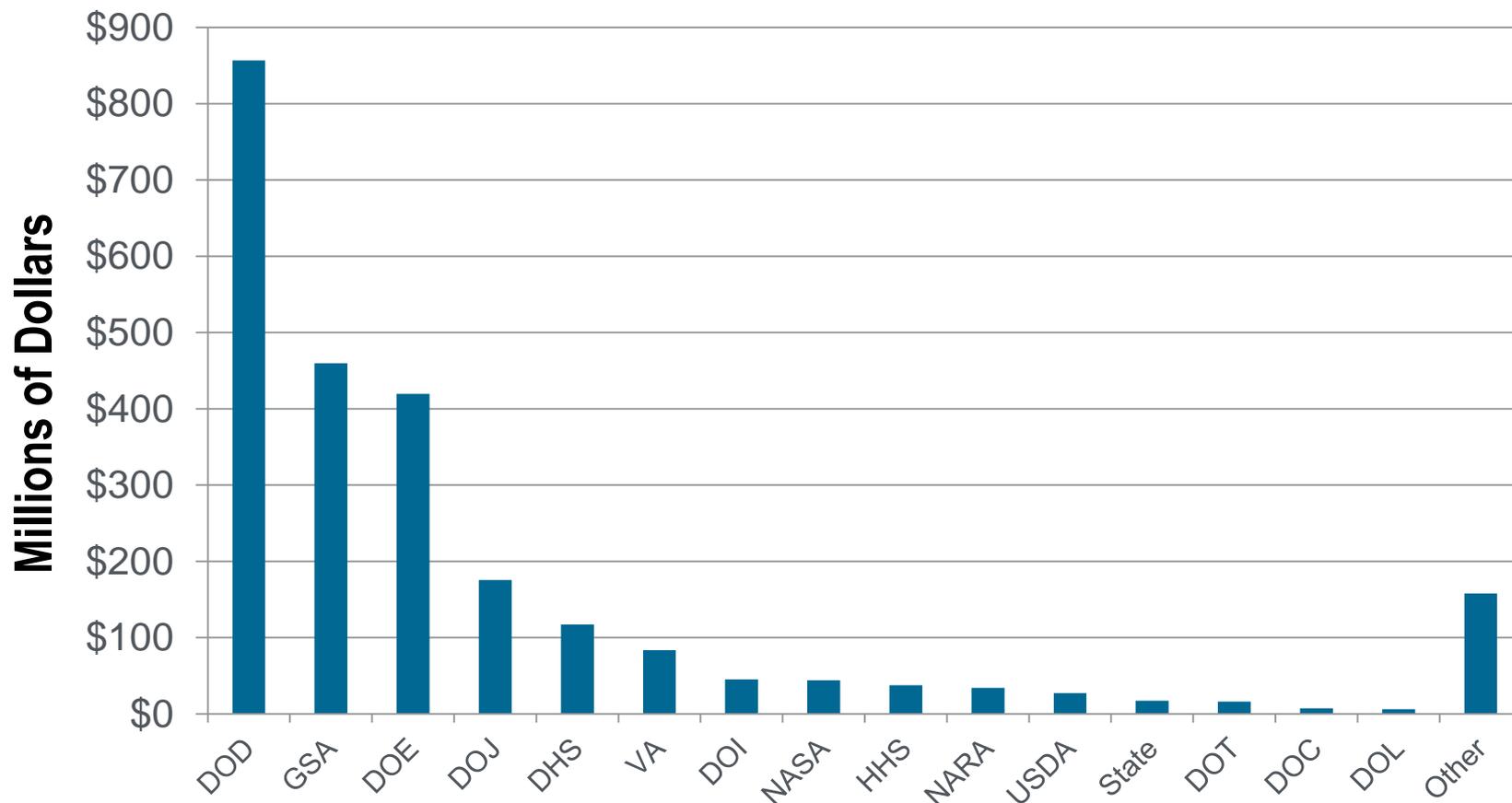
### Agency

- Pays ESCO over term of contract out of cost savings

# ESPC Savings Realized & Examples



## ESPC Project Investment by Agency<sup>2</sup> 1998-2011



<sup>2</sup> DOE IDIQ ESPCs Only

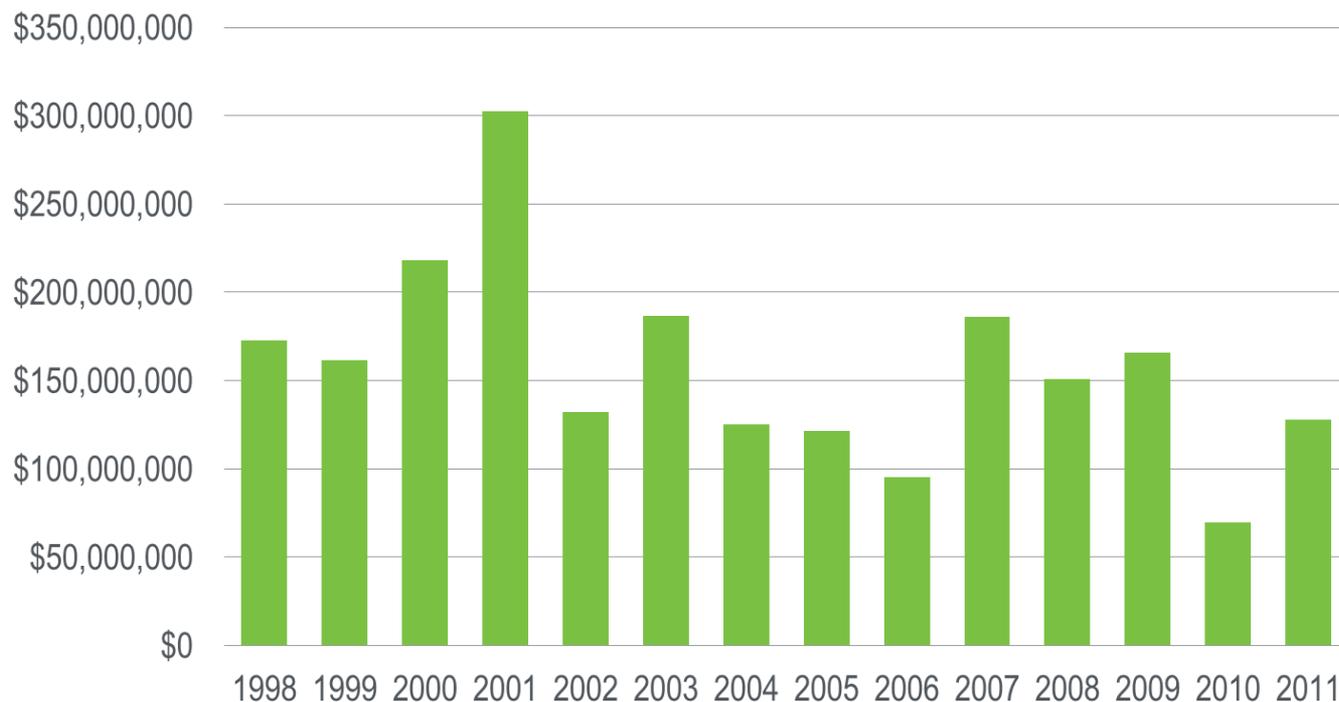
Defense investment would be higher if include Army ESPC IDIQ.

# Utility Energy Service Contracts (UESCs)

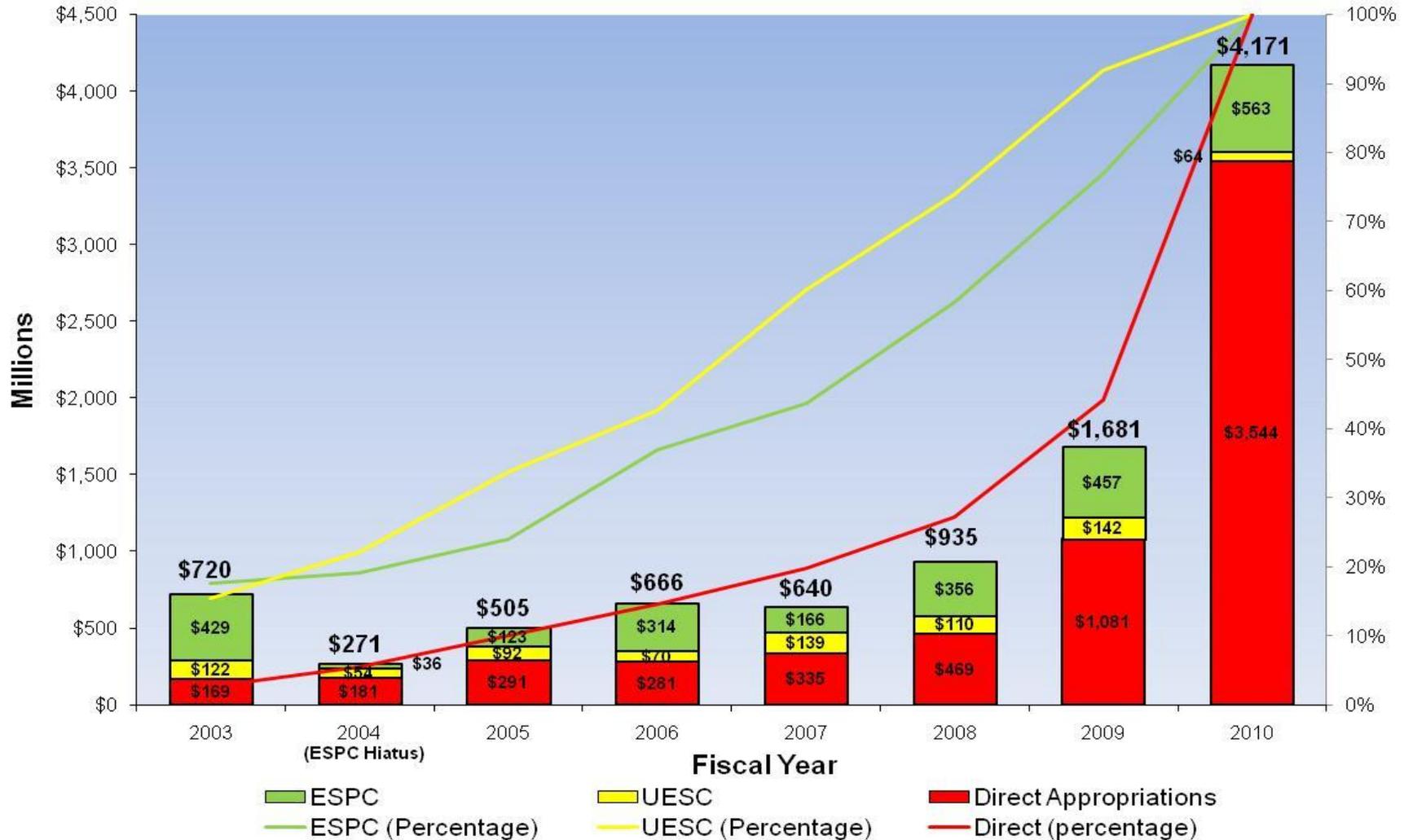
The utility performs assessment of cost effective energy and water conservation opportunities. The utility pays for the assessment, design, construction, performance testing, and other optional services like O&M, commissioning, and M&V.

- Not as widely used as ESPCs, but another method of improvement without appropriations.

**UESC Project Investment (\$) by Year**



## Federal Facilities: Investment in Energy Efficiency Projects



- >\$300 million a year (in reported projects)
- Work with the 16 ESCOs on DOE contract, DOE-qualified ESCOs, and utilities
- Look for subcontract work, or opportunities to sell to these companies

## New Requirements coming from the Memo

- The Federal Government will enter into a minimum of \$2 billion in performance-based contracts in Federal building energy efficiency within 24 months (*Section 1b*)
  - *ESPCs awarded by December 2, 2013*
- Agencies are encouraged to enter into installation-wide and portfolio-wide performance contracts and undertake comprehensive projects that include short-term and long-term ECMs (*Section 1c*)
  - *ECMs across multiple facilities or sites for maximum energy efficiency*
  - *Bundle ECMs with short and long payback periods to create comprehensive projects*
- Beginning in 2012, agencies will incorporate the planned implementation schedule into their annual SSPPs (*Section 1f*)

## Existing Requirement emphasized in the Memo

- Identify implemented ECMs in the Department of Energy's Compliance Tracking System (CTS) (*Section 2a*)
- Complete all energy and water evaluations and report the ECMs and associated cost saving opportunities to CTS (*Section 2b*)
- Continue metering requirements with FEMP support and report progress to FEMP (*Section 3 a&b*)

FEMP will mobilize personnel and programs to support \$2 billion of private sector investment into the Federal Government.

- A track record of 270 ESPCs across 19 Agencies with over 1,500 installations of advanced energy savings technologies and \$2.5 billion of private sector investment.
- NDAA streamlined process.
- DOE has the capacity now to handle 40-60 performance-based projects.
- DOE has access to National Laboratory expertise to support projects beyond this number.
- Improvements are being made to streamline the financing pathways and consolidating purchasing abilities (i.e. GSA Project management system)

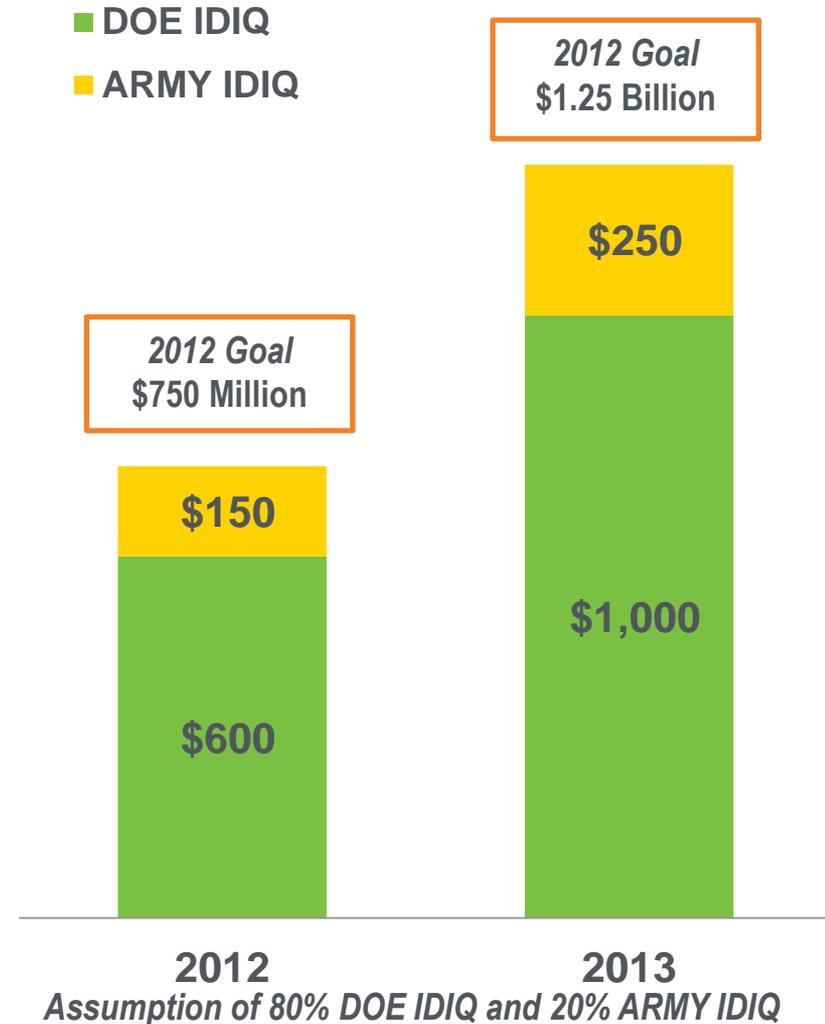
## How is FEMP preparing?

FEMP will improve on best annual performance:

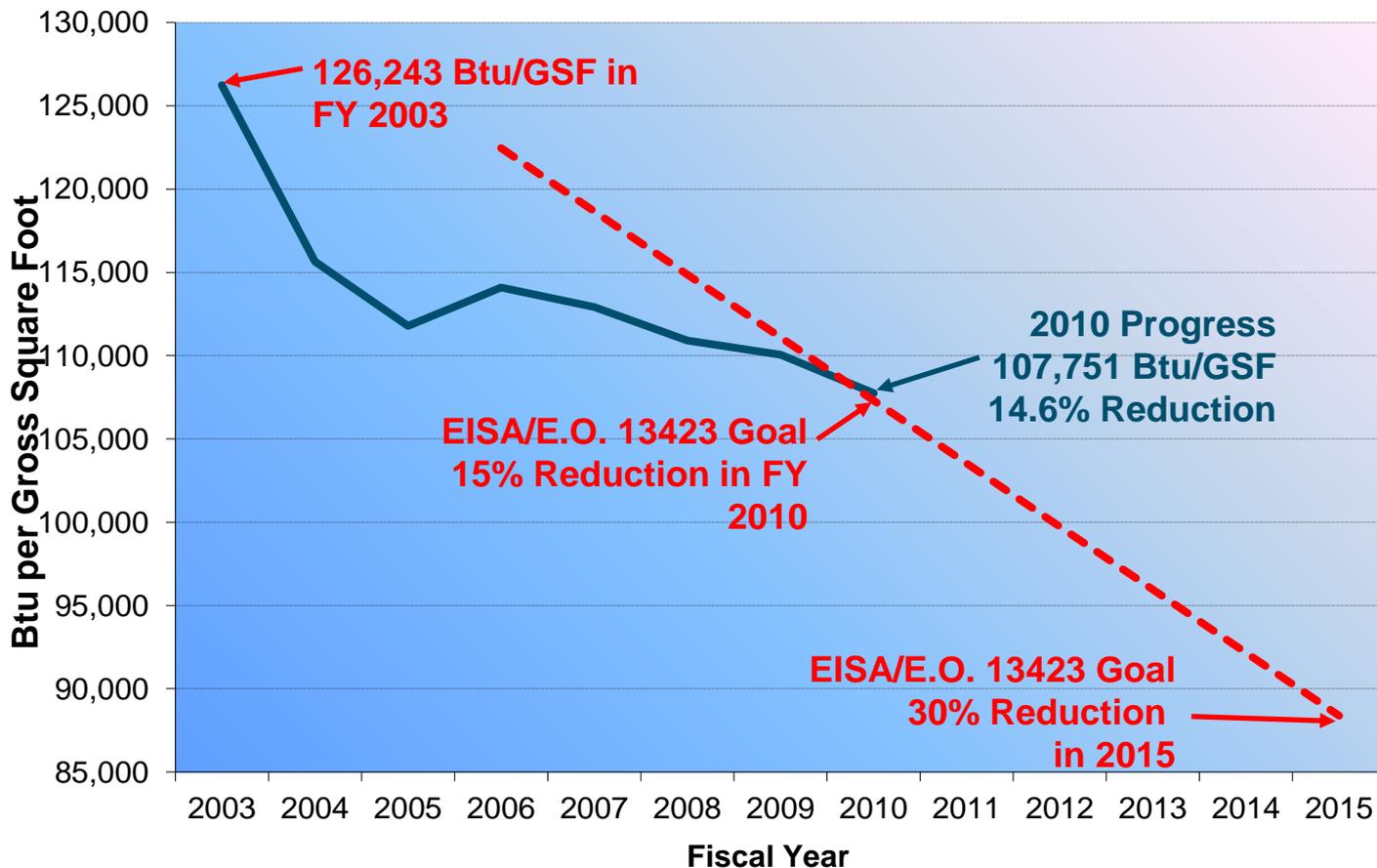
- \$536 million in DOE IDIQ ESPCs awarded in 2010
- To meet ~\$1 billion annually, 87% increase needed
- 39 ESPC projects were awarded in 2003
- To meet ~67<sup>1</sup> projects annually, 72% increase needed

<sup>1</sup> Average project value is \$15 million

## IDIQ Goals (\$MM)



**Government Building Energy Intensity  
FY 2003 - FY 2010**



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

- ~500,000 buildings
- ~ covering 3.1 billion square feet
- ~ 17,771,128 Mbtu ESPC Annual Energy Savings
- ~ 5,923.7 Btu per sq.ft.

# Energy Efficient Product Procurement

- Federal purchases of energy-consuming products **MUST:**
  - Be ENERGY STAR-qualified,
  - Meet FEMP-Designated Efficiency Requirements, and/or
  - Meet FEMP Low Standby Power Requirements
- Federal contracts **MUST:**
  - Include FAR clause 52.223-15
- Are you fulfilling the FAR clause 52.223-15 portion of your contracts?
- Is your competition?

## 1. What applies?

Visit [femp.energy.gov/coveredproducts](http://femp.energy.gov/coveredproducts)

## 2. What products are compliant?

ENERGY STAR qualified products list

FEMP standby power data center

Review FEMP-designated efficiency requirements (linked to from above site)

## 3. Provide only compliant products

## 4. Require and collect justification (not available or not life-cycle cost effective) for any Federal purchases of inefficient products



- Administered by FEMP
- 10 product categories
- Categories not covered by ENERGY STAR®
- Target audience: Federal sector

- Goal of top-25% of market
- Significant energy savings potential
- Life-cycle cost effective
- Industry recognized test standards



The U.S. Department of Energy's (DOE) Federal Energy Management Program (FEMP) facilitates the Federal Government's implementation of sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship.

SPECIFICATIONS  
EFFICIENT PRODUCTS

## Pre-Rinse Spray Valves

### Legal Authorities

Federal agencies are required by Executive Orders 13423 and 13514 to reduce water consumption and its associated energy use in their facilities. Executive Order 13423 requires Federal agencies to acquire water-saving products labeled by the WaterSense™ Program or those designated by FEMP as being among the highest 25 percent for equivalent products.

### Performance Requirements for Federal Purchases

Type	Flow Rate <sup>a)</sup>	Cleanability <sup>a)</sup>
Pre-Rinse Spray Valves	1.25 gpm or less	26 seconds per plate or less

a) Based on ASTM F2324-03: Standard Test Method for Pre-Rinse Spray Valves.

### Buying Low Flow Pre-Rinse Spray Valves

This *Specification* applies to pre-rinse spray valves used in commercial food service facilities such as cafeterias and dining halls. Product performance must be measured in accordance with *ASTM F2324-03: Standard Test Method for Pre-Rinse Spray Valves*. Other types of spray valves (i.e., those used to fill kettles, etc.) and products not tested in accordance with *ASTM F2324-03* are excluded.

The Federal supply sources for pre-rinse spray valves are the U.S. General Services Administration (GSA) and Defense Logistics Agency (DLA). GSA sells pre-rinse spray valves through its Multiple Awards Schedule program and online shopping network *GSA Advantage!* DLA offers them through its Defense Supply Center Philadelphia and online through DOD EMall. When buying from Federal or commercial sources, specify or select products that meet the *Performance Requirements* shown above.

These requirements apply to all forms of procurements, including guide and project specifications; construction, renovation, repair, energy service, operation and maintenance (O&M) contracts; lease agreements; and solicitations for offers. Energy performance requirements should be included in all evaluations of solicitation responses. Buyers shall insert the standard clause from FAR section 52.223-15 into contracts and solicitations that deliver, acquire, furnish, or specify energy-consuming products for use in Federal facilities. Agencies can claim an exception to these requirements through a written finding that no ENERGY STAR qualified or FEMP designated product is life cycle cost-effective for a specific application.

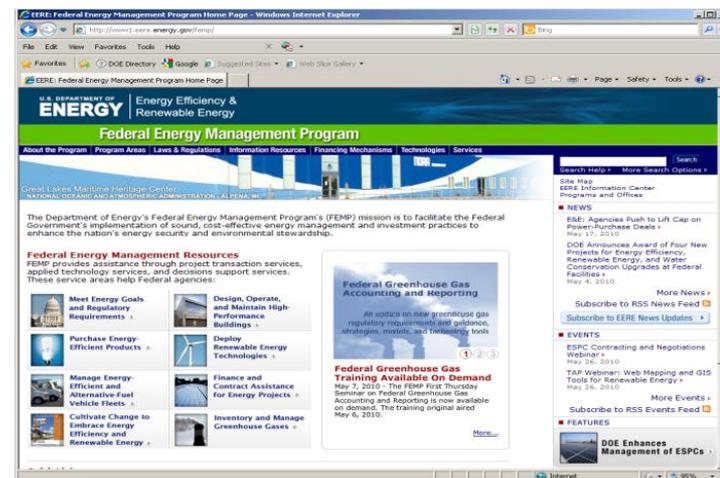
### Buyer Tips

There is substantial difference in the performance of pre-rinse spray valves, even among models with the same flow rate, due to variations in product design and spray patterns. Products with high velocity spray patterns show substantially better cleaning performance than those that simply

# **Communications, Outreach, and Recognition**

*FEMP communications deliver state-of-the-art strategies, tools, training, technologies, and guidance that our Federal agency customers need to meet their energy mandates.*

- FEMP Web site provides a single, central source for Federal energy management resources for all agencies and personnel levels
  - Revised with Federal agency feedback
  - Receives >100,000 visits each quarter
  - More than 1,150 visits a day
- Transitioning Federal-wide outreach campaigns from “awareness” to “action” focused
- Incorporated institutional change concepts into Federal Awards



<http://www.femp.energy.gov>

## 2011 Training: FEMP First Thursday Seminars

*First Thursday Seminars* provide training for Federal energy and environmental professionals. Leading experts address timely topics in 90-minute sessions, offered live via satellite or through streaming video on the computer.

### Evaluation Data

#### 2010

- 92% agreed they were provided with new/useful information
- 84% felt they had incorporated seminar content into their work

#### 2011

- 91% expressed overall seminar satisfaction as Good or Excellent
- 99% indicated they would attend future FEMP seminars
- Overall average rating was 4.17 on a 5.0 scale

## Thank you!

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