

# FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 7-8, 2018  
Herndon, VA

## Performance Contracting Measuring Success

Hosted by:



# Overview

- Government-wide Findings
- Measuring for Success
- Options:
  - Government-wide Target
  - Agency self-identified targets (\$/# actions/%)
  - Percentage of utility costs
  - Percentage of ECMs or PC/Total potential investment
  - PC>Direct Appropriations
  - Others?

# FY 2017 Government-wide Results

- **Facility energy intensity (Btu/Gross Square Foot) reductions**
  - 26.7% reduction vs. 2003 – goal is 30%
  - 7.6% reduction vs. 2015
- **Renewable electricity goal of 7.5% was exceeded (10.7% of electricity use)**
- **Potable water intensity reduction: 26.1% reduction vs. 2007, 3.8% vs. 2016**
- **Industrial/Landscaping/Agricultural (non-potable) water use was reduced 33.7% vs. 2010**
- **Efficiency investment in Federal facilities (\$1.5B total in FY 2017) decreased 14% from 2016**
  - Direct funding investment: \$355 million in FY 2017
  - ESPC investment: \$1,009 million
  - UESC Investment: \$158 million
- **Anticipated savings from efficiency investments since 2007: \$49 Billion by 2030**
- **Covered fleet petroleum use declined 1.0% from the prior year, but increased 1% from 2005**
- **Alternative fuel use in fleets increased 111.2% vs. 2005, but declined 10.3% from 2016 (alternative fuels are 3.8% of total fuel used)**
- **4.5% of eligible buildings and 10.4% of eligible square feet are high-performance sustainable buildings**
- **Federal Government included sustainable acquisition requirements in more than 126,000 contract actions valued at more than \$332M**
- **Scope 1&2 greenhouse gas emissions declined by 25.7% vs. 2008, about the same as 2016**

# FY 2017 OMB SCORECARD FOR EFFICIENT FEDERAL OPERATIONS/MANAGEMENT

GOAL ASSESSMENT		PERFORMANCE	OTHER PROGRESS INDICATORS	
METRICS		RATING		
FACILITY ENERGY EFFICIENCY	Change in energy intensity (Btu/GSF) compared to FY 2003:	-33%	Average cost of energy per site-delivered MBtu:	\$15.00
	Change in energy intensity (Btu/GSF) compared to FY 2015:	-12%		
EFFICIENCY MEASURES/ INVESTMENT	EISA-covered facilities evaluated for efficiency opportunities:	100%	Total \$ Value of ECMs identified for potential investment (\$M):	\$1,035.1
	Utilized performance contracting in FY 2017 to achieve energy, water, building modernization, infrastructure goals?	Yes	Direct investment in FY 2017 (\$M):	\$11.8
			ESPC and UESC Investment in FY 2017 (\$M):	\$174.1
			Annual Btu saved per \$1 of investment in 2017:	3,206
RENEWABLE ENERGY USE	Renewable electricity used (as a percentage of total electricity use):	27.6%	Renewable electricity + non-electric renewable energy used (as a percentage of total electricity use):	30.9%
WATER EFFICIENCY	Change in potable water intensity compared to FY 2007:	-34%	Cost of potable water per thousand gallons:	\$6.02
	Change in potable water intensity from prior year:	-6%		
HIGH PERFORMANCE SUSTAINABLE BUILDINGS	Percent of owned buildings (less excess) meeting sustainability metrics:	26%	Change from prior year:	2.0%
	Percent of owned GSF meeting the sustainability metrics:	42%	Total Eligible Buildings:	2,532
			Change from prior year:	2.6%
			Total Eligible GSF (thou.):	137,882
TRANSPORTATION/ FLEET MANAGEMENT	Change in petroleum fuel use in covered fleet compared to FY 2005:	-9.8%	Alternative fuel use as a percentage of total covered fleet fuel use:	11.6%
	Change in petroleum fuel use in covered fleet compared to prior year:	-14.9%	Percentage of covered AFV acquisitions (w/bonus credits):	122%
SUSTAINABLE ACQUISITION	Change in percentage of sustainable contract actions from prior year percentage:	0.0%	Number of applicable contract actions containing sustainable clauses:	7,690
	Change in percentage value of contracts with sustainable clauses from prior year percentage:	-0.8%	Value of applicable contract actions containing sustainable clauses:	\$881M
			Biobased Product Purchase Targets (# of actions): FY18: 671; FY19: 684	

**Reduction in Agency Scope 1 and 2 GHG emissions from 2008: 23.3%**

Sources: Agency submitted data from Annual Energy Data Report, EISA 432 Compliance Tracking System, Federal Real Property Profile, Federal Automotive Statistical Tool, FPDS

Btu = British thermal units  
 GSF = Gross square foot  
 MBtu = Million Btu  
 ESPC = Energy Savings Performance Contracts  
 UESC = Utility Energy Savings Contracts

ECM= efficiency/conservation measure  
 AFV = alternative fuel vehicle  
 FPDS = Federal Procurement Data System  
 GHG = greenhouse gas

**Facility Energy Efficiency:** Agencies are assessed on progress made to meet and exceed the statutory goal of a 30% reduction in Btu/GSF by 2015 from a 2003 baseline. OMB will also track agency's average cost of all facility energy.

<i>Agency achieved ≥30% reduction since 2003 AND achieved an incremental reduction from 2015.</i>	<i>Agency achieved ≥30% reduction since 2003 OR made an incremental reduction in energy intensity from 2015.</i>	<i>Agency has not yet achieved a 30% reduction in energy intensity since 2003 AND has not achieved progress from 2015.</i>
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**Identification of Efficiency Measures/Investment\*:** Agencies are assessed on EISA 432 facility evaluations, identifying ECMs, and whether performance contracting was utilized in FY 2017. OMB will also track investment levels and annual Btu saved per \$1 of investment.

<i>≥90% of facility evaluations completed/updated within last 4 years AND agency awarded performance contracts in FY 2017.</i>	<i>≥75% of facility evaluations completed/updated within last 4 years OR agency awarded performance contracts in FY 2017.</i>	<i>&lt;75% of facility evaluations completed/updated within last 4 years &amp; agency did not award any performance contracts in FY 2017.</i>
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**Renewable Energy:** Agencies are assessed on meeting or exceeding 7.5% renewable electricity use annually. OMB will also track non-electric RE use.

<i>Renewable electricity comprised ≥7.5% of total electricity use.</i>	<i>Renewable electricity combined with non-electric renewable energy sources (thermal + mechanical) comprised ≥7.5% of total electricity use.</i>	<i>Renewable electricity combined with non-electric renewable energy sources (thermal + mechanical) comprised &lt;7.5% of total electricity use.</i>
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**Water Efficiency:** Agencies are assessed on continued reductions in potable water use intensity and a 20% reduction from its 2007 baseline. OMB will track agency average cost of water and non-potable water use reduction as well.

<i>Agency achieved a 20% reduction in potable water use intensity from 2007 AND reduced its potable water use from prior year.</i>	<i>Agency achieved ≥20% reduction since 2007 OR achieved a reduction in potable water intensity from prior year.</i>	<i>Agency has not achieved a 20% reduction since 2007 AND did not reduce potable water use from prior year.</i>
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**High-Performance Sustainable Buildings:** Agencies are assessed on the number and percentage of owned federal buildings that meet high performance building guiding principles (GP) and are tracked in the Federal Real Property Profile (FRPP).

<i>At least 15% of agency owned buildings or GSF meet GP/equivalent standard &amp; this represents an increase from prior year level.</i>	<i>At least 15% of agency owned buildings or GSF meet GP/equivalent standard OR agency increased percentage of buildings or GSF from prior year</i>	<i>Less than 15% of agency's inventory meets GP and it did not increase its percentage of buildings or GSF meeting GP/equivalent standards from prior year.</i>
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**Fleet Management:** Agencies are assessed on meeting or exceeding a 20% reduction in petroleum use since 2005. OMB will also track other fleet measures to help agencies manage fleets and meet statutory requirements.

<i>Agency achieved ≥20% reduction in petroleum since 2005 AND achieved a reduction in petroleum use from prior year.</i>	<i>Agency achieved at least a 20% reduction in petroleum since 2005 OR made progress in reducing its use from prior year</i>	<i>Agency has not yet achieved a 20% reduction in petroleum since 2005, nor has it made progress in reducing its use from prior year..</i>
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**Acquisition:** Agencies will be assessed on the change from prior year performance of the percentage of contract actions and dollar value of sustainable acquisitions as reported in the FPDS, to include the mandatory clauses for the purchase of biobased, energy-efficient, recycled content and/or other sustainable attributes. OMB will also track as an indicator, agencies' planned acquisitions of biobased products by number of contracts and estimated dollar value of those contracts.

<i>Agency increased percentage of sustainable acquisitions of total actions (both number of actions &amp; dollar value) from prior year percentage levels.</i>	<i>Agency increased percentage of sustainable acquisitions of total actions (either number of actions or dollar value) from prior year percentage levels.</i>	<i>Agency's percentage of sustainable acquisitions from total actions (number of actions &amp; dollar value) remained the same or decreased from prior year.</i>
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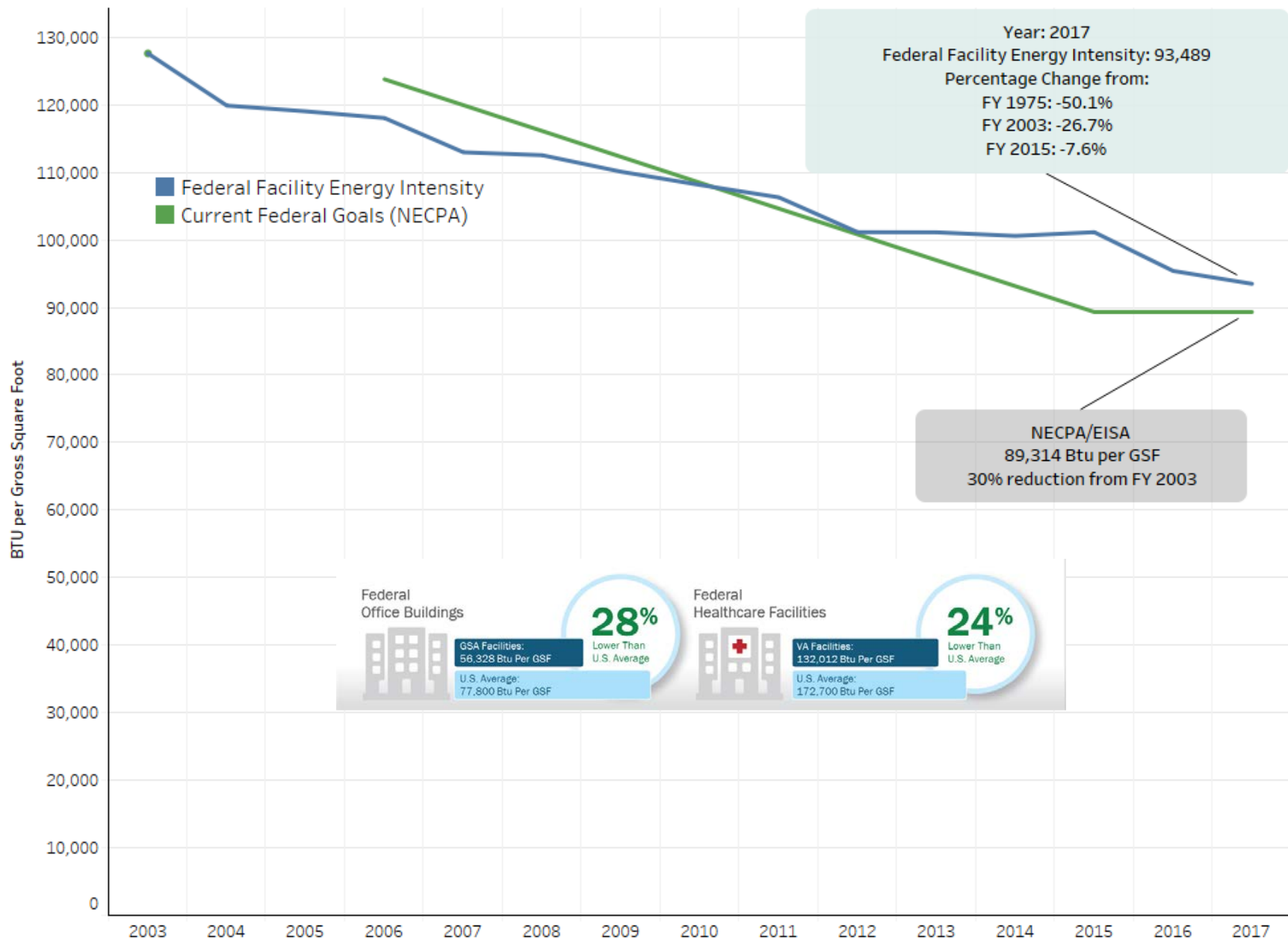
**Greenhouse Gas Emissions:** Agencies' GHG emission reductions compared to FY 2008 base year will be determined from its annual data report and tracked and reported as an indicator on the Scorecard.

\*To be consistent with 42 USC 8253 (d)(1)(C), this metric will be revised for FY2018 to ensure efficient utilization of performance contracting to achieve goals.

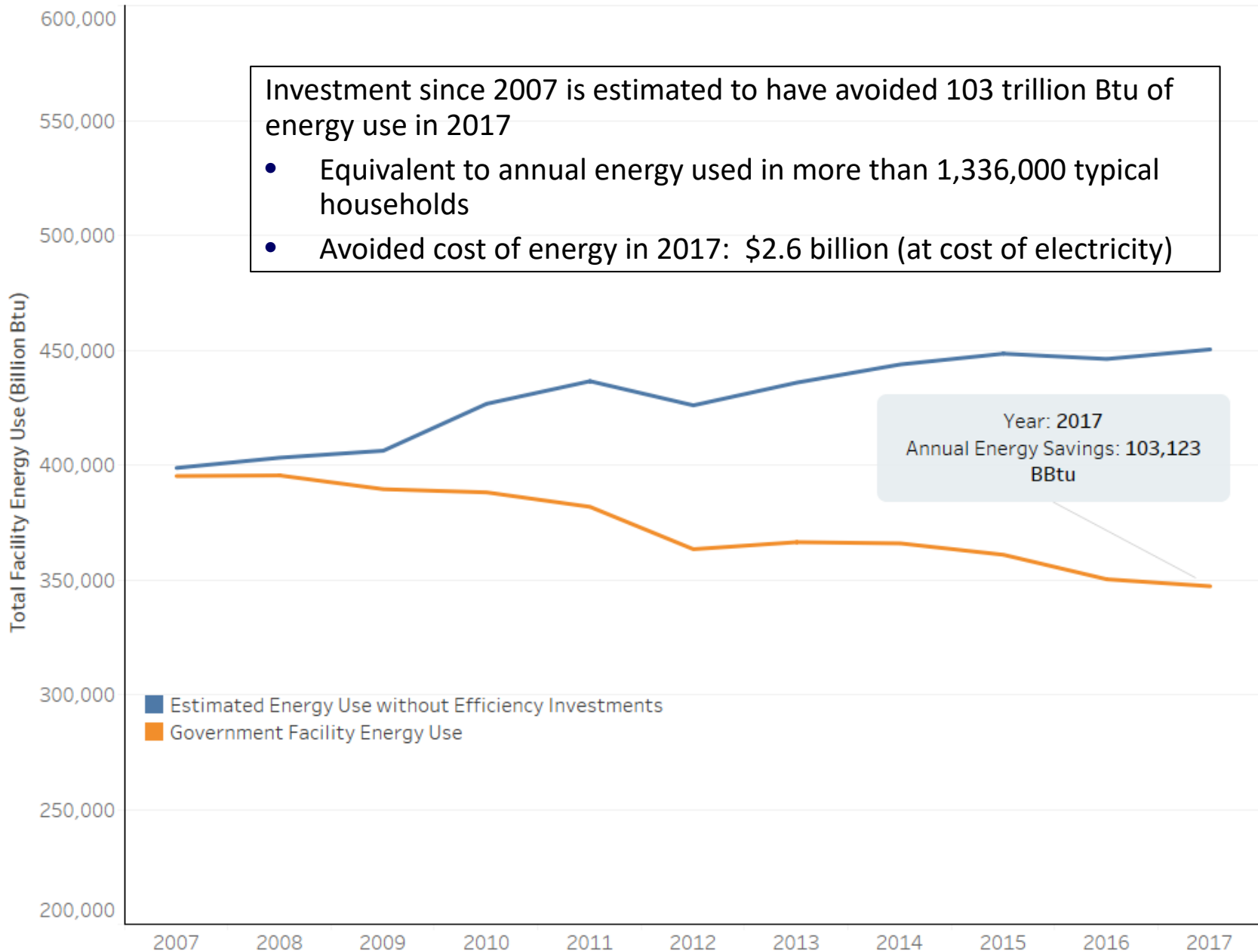
Agency	FACILITY ENERGY EFFICIENCY	EFFICIENCY MEASURES/INVESTMENT	RENEWABLE ENERGY USE	WATER EFFICIENCY	HIGH PERFORMANCE SUSTAINABLE BUILDINGS	TRANSPORTATION/ FLEET MANAGEMENT	SUSTAINABLE ACQUISITION
GSA	●	●	●	●	●	●	●
DOE	●	▲	●	●	▲	●	●
DOL	●	●	●	●	▲	●	◆
VA	●	●	●	●	●	▲	◆
NASA	●	▲	●	▲	●	●	▲
EPA	●	▲	●	▲	▲	●	●
NARA	●	▲	●	▲	●	●	◆
TVA	●	▲	●	▲	◆	●	●
HHS	●	●	●	◆	▲	▲	●
DHS	●	●	●	●	▲	◆	▲
USDA	●	●	●	▲	●	▲	◆
DOI	●	▲	●	●	◆	▲	●
USACE	●	●	●	◆	◆	●	N/A
STATE	▲	▲	●	●	▲	●	▲
SSA	●	▲	●	▲	N/A	●	◆
HUD	●	▲	●	◆	N/A	▲	●
DOC	●	▲	●	◆	▲	●	▲
DOT	●	▲	●	◆	▲	●	▲
SI	▲	◆	●	●	▲	▲	●
DOJ	●	▲	●	▲	▲	●	◆
OPM	▲	▲	●	●	N/A	◆	▲
TRSY	▲	▲	●	◆	◆	●	▲
DoD	▲	▲	◆	●	◆	▲	●
USPS	●	◆	N/A	▲	N/A	▲	TBD
ED	N/A	N/A	N/A	N/A	N/A	▲	◆

N/A= Goal does not apply to the agency as it does not own, control, or report on its buildings.

# Federal Government Progress Toward Facility Energy Efficiency Goals FY 2003 - FY 2017

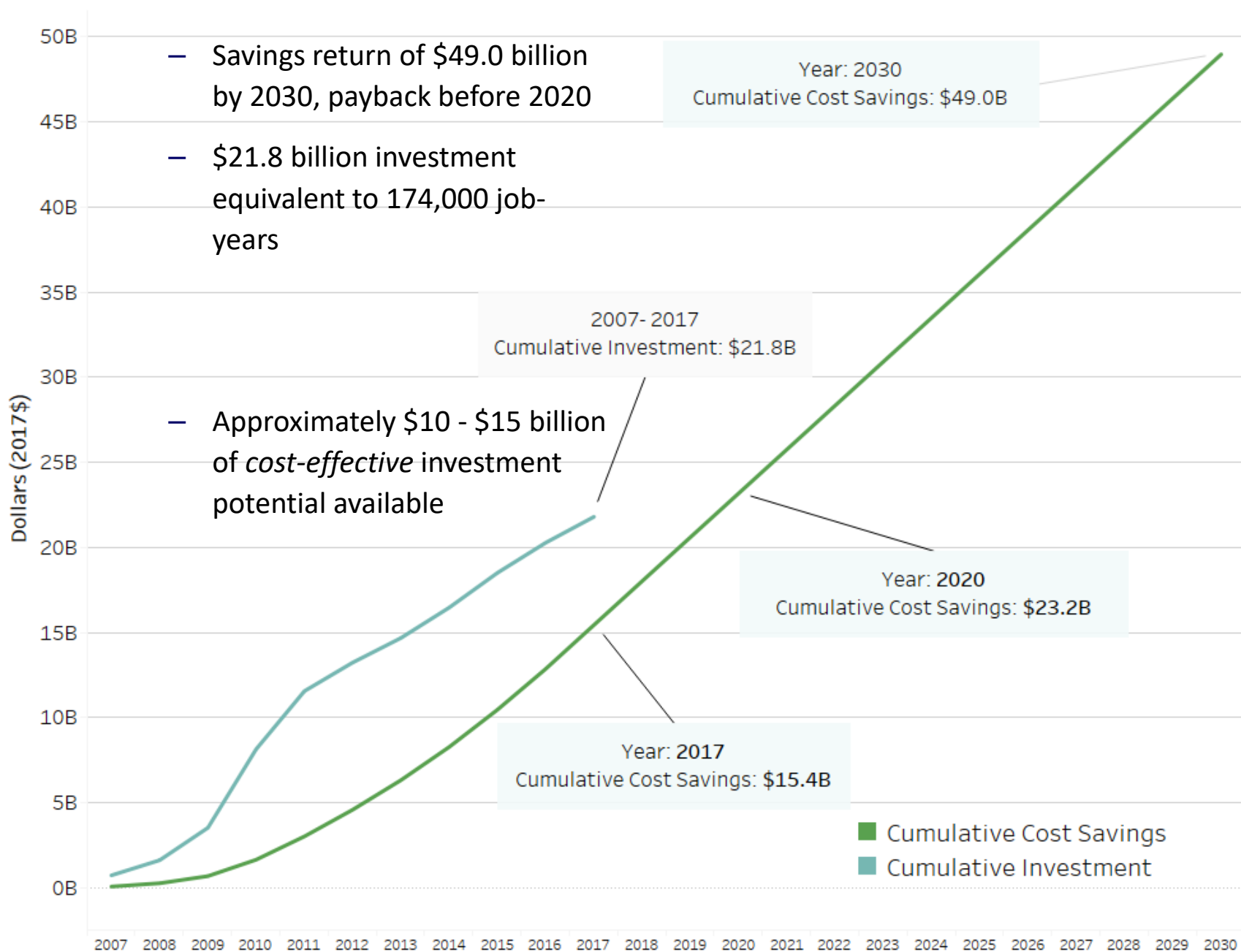


## Impact of Federal Facility Energy Efficiency Investments on Energy Use





## Savings Return on Federal Facility Energy Efficiency Investment of \$21.8 Billion (from FY 2007-2017)



# Measuring for Success

## Option 1: Gov't-wide Target

- Dictate Government-wide/agency-specific targets
- Challenge to meet within specified timeframe
- Presidential Challenge

### PROS:

- Provides direction
- Pushes performance
- Transparent goals

### CONS:

- No flexibility for aligning need to performance
- Requires top level management and across-the-board buy in
- May be hard to achieve on continual basis (>\$4 billion in 5 years)

# Measuring for Success

## Option 2: Agency-Specified Target

- Require agencies to establish plans for use of performance contracting
- Allow agencies to set annual targets
- Hold agencies accountable for achieving annual targets

### PROS:

- Flexibility
- Transparency
- Independence

### CONS:

- May not result in performance (Goals of zero)
- Does not allow for tempo changes (annual vs. multi-year)
- Difficult to keep steady tempo for supporting services

# Measuring for Success

## Option 3: Percent of Utility Costs

- Set individual agency targets by utility spend
- Hold agencies accountable to meet pre-established targets

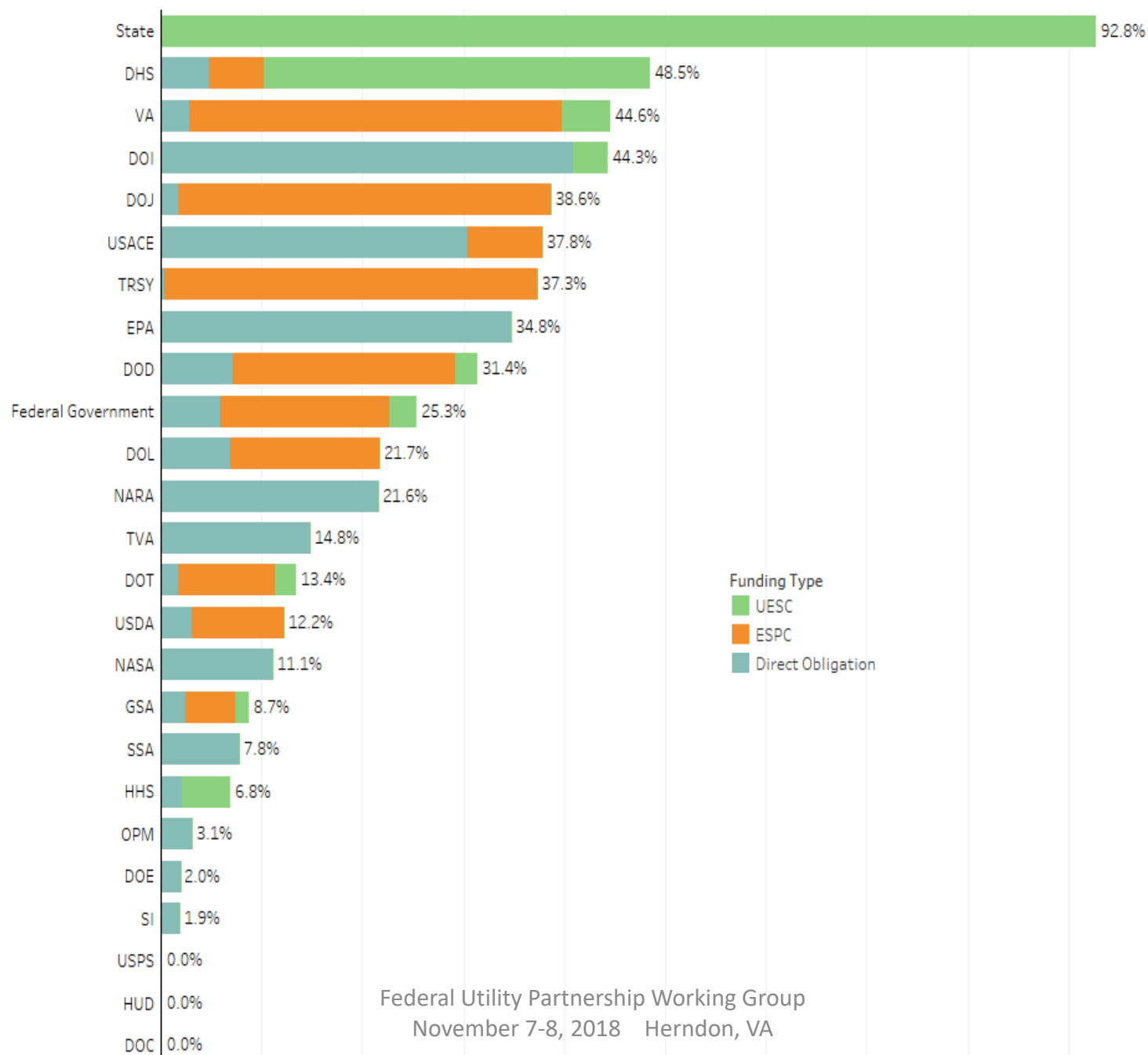
### PROS:

- Targets based on agency provided data
- Pushes performance for greatest impact
- Transparent and adjustable as utility costs decline

### CONS:

- May not be best measure for investment need
- May not have agency buy-in, impacting results
- May be outside agency's control

# FY 2017 Investment in Energy Efficiency and Renewable Energy as a Percentage of Facility Energy Costs



# Measuring for Success

## Option 4: Tie Targets to Identified ECMs

- Set targets based on \$ value of ECMs identified
- Rank agencies according to investment targets  
(several potential approaches can be considered)

### PROS:

- Helps agencies manage process: identify—plan--implement
- Incentivizes agencies to keep CTS up-to-date for evaluations
- Incentivizes agencies to report on implemented projects
- Data is available

### CONS:

- Normalization may overrepresent potential
- Could limit agencies' ability to "Get to Green"
- May not recognize projects underway but not completed

# Reported Findings in EISA 432 Compliance Tracking System

- Public data site: <http://ctsedweb.ee.doe.gov/CTSDDataAnalysis/ComplianceOverview.aspx>
- 8,318 Covered Facilities, 2.7 billion square feet
  - 89% of total facility energy use
- 63% of Covered Facility Sqft evaluated within the last four years (in terms of energy use)
  - \$8.6 Billion in potential ECMs identified with annual savings of \$790 million (~81,000 ECMs)
  - Simple payback period: 10.8 years
  - Potential annual savings of 34 trillion Btu (10% of total) and 10 billion gallons of water (8%)
- \$4.6 billion in implemented projects (2,826) reported
  - 14.7 trillion Btu in annual savings (4% of total) and 7 billion gallons of water (5%)
  - ~14,000 ECMs
- 28% of metered buildings benchmarked at least once
  - 13,694 of 48,768 individually-metered buildings
  - 6,573 (13.5%) buildings benchmarked in FY 2017

(Data as of 08/10/2018)

# Potential Approaches

- Total value of PC  
Total potential (normalized)
- Total annual investment (direct + PC)  
Total potential (normalized)
- Score by tiering (25/50/25)
- Score by statutory requirement  
25% per year, implemented in 2 years, leads to  
12.5% per year for green



# Measuring for Success

## Option 5: Performance Contracts > Direct Total

- Agencies demonstrate PC is greater than amount invested through direct appropriations annually
- Red or green—no yellow unless equal

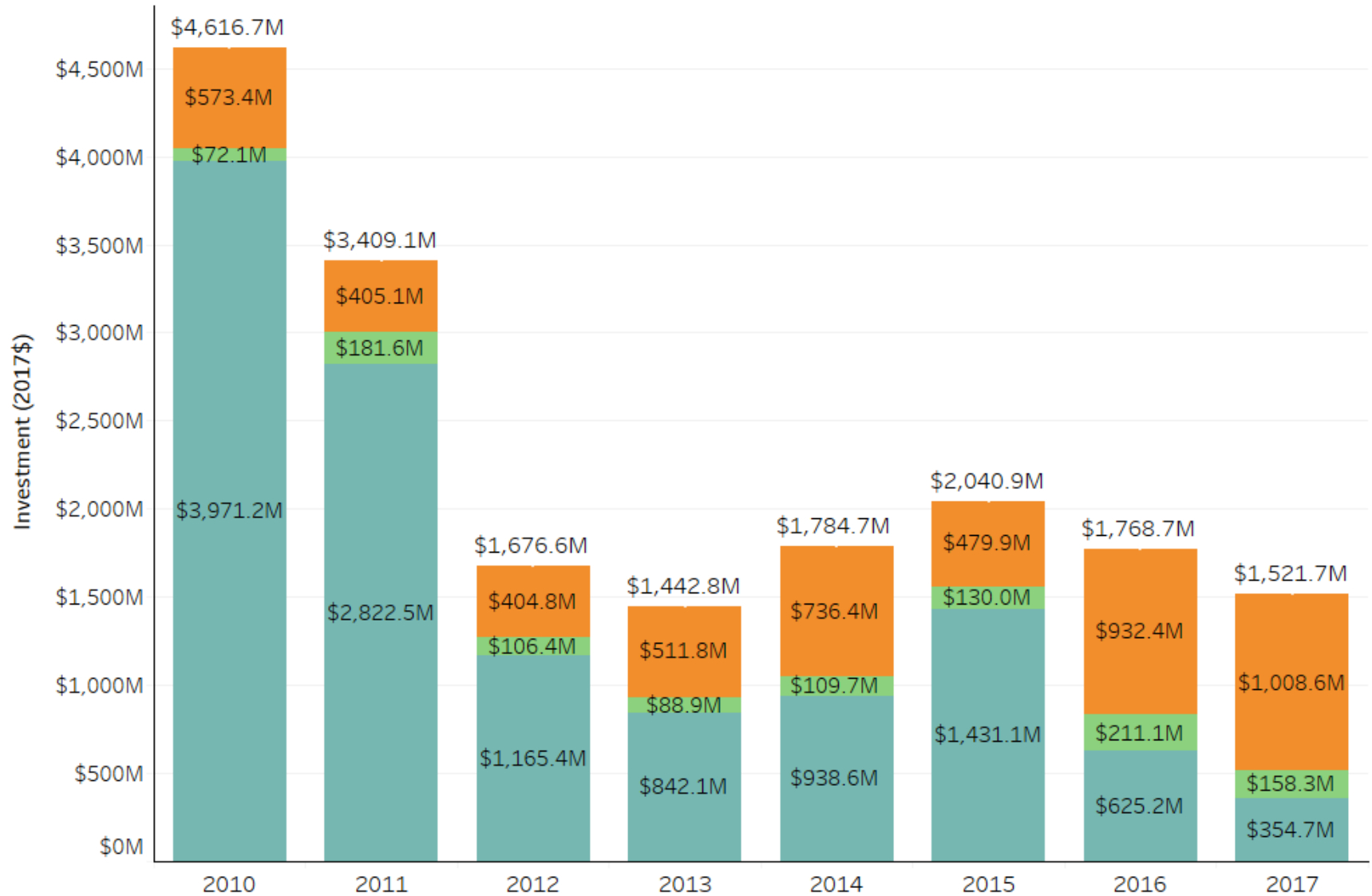
### PROS:

- Demonstrates maximum use of PC
- Encourages leveraging of appropriations w/PC
- Easy to measure
- Doesn't penalize agencies that have no investments

### CONS:

- May not be fair if sufficient appropriated funding is provided
- Doesn't take into account types of identified ECMs

## Federal Government Investment in Facility Efficiency Improvements



### Funding Type

Energy Savings Performance Contracts

Utility Energy Service Contracts

Direct Obligations

# Contact and Links

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- <http://energy.gov/eere/femp/federal-facility-annual-energy-reports-and-performance>  
Link to current published data set (FY 2016)
- <http://ctsedweb.ee.doe.gov/Annual/2017/Report/Report.aspx>  
Direct link and archive for FY 2017 data (when published)
- <http://energy.gov/eere/femp/eisa-federal-covered-facility-management-and-benchmarking-data>
- <https://www.sustainability.gov/scorecards.html>