

# Federal Facility Efficiency Investment and Progress toward Sustainability Goals

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Federal Energy Management  
Program (FEMP)

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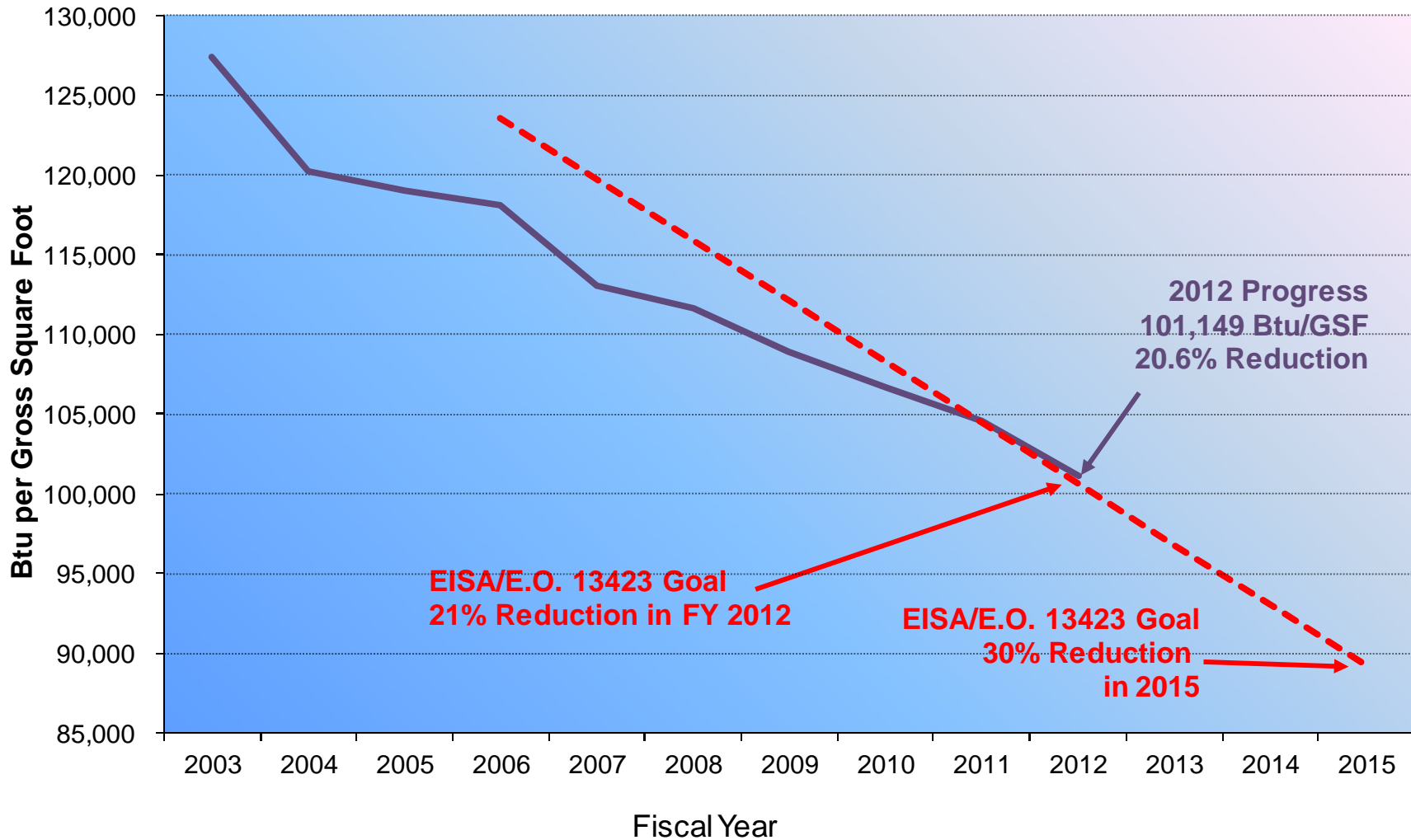
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# Overall Facility Goal Progress, FY 2012

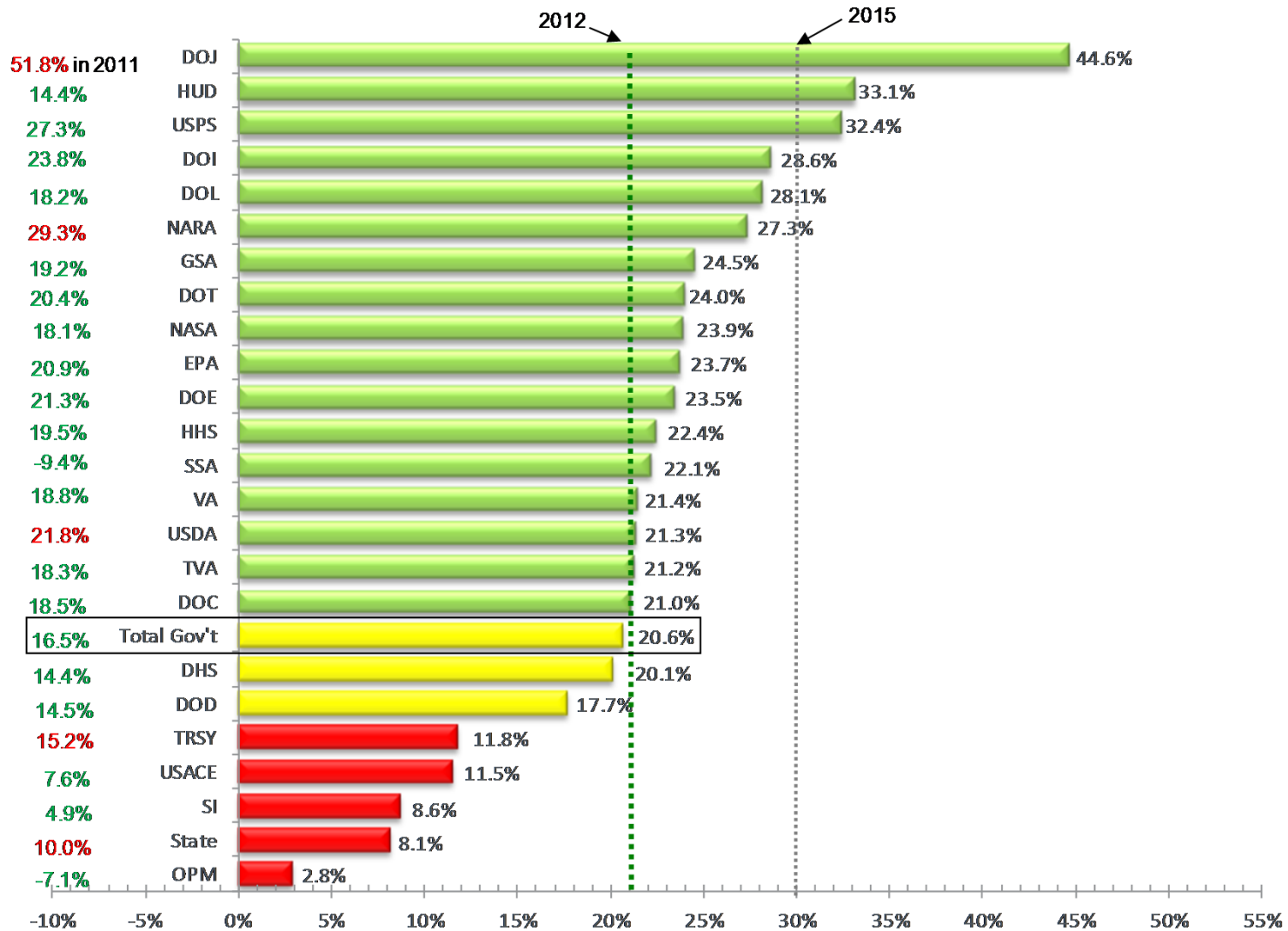
Goal/Requirement for FY 2012	FY 2012 Federal Performance
<b>E.O. 13423/EISA:</b> Reduce energy intensity (Btu/GSF) by <b>21%</b> compared to 2003; 30% reduction required in FY 2015.	Government decreased energy intensity by <b>20.6%</b> in FY 2012 relative to FY 2003  17 of 24 Scorecard agencies achieved the goal.
<b>EPACT 2005/E.O. 13423:</b> Use renewable electric energy equivalent to at least <b>5%</b> of total electricity use; at least half of which must come from sources developed after January 1, 1999.	Government purchased or produced renewable energy in FY 2012 equivalent to <b>7.1%</b> of total electricity use.  21 of 23 Scorecard agencies achieved the goal.
<b>E.O. 13423/13514:</b> Reduce water consumption intensity (Gal/GSF) by <b>10%</b> relative to 2007 baseline; 16% by the end of FY 2015; 26% by FY 2020.	Government reduced water consumption intensity by <b>16.6%</b> in FY 2012 relative to FY 2007.  18 of 24 Scorecard agencies achieved the goal.
<b>E.O. 13514:</b> Reduce Government-wide scope 1 and 2 greenhouse gas emissions from targeted sources by <b>28% in FY 2020</b> compared to FY 2008	Government reduced scope 1 and 2 GHG emissions by <b>15.1% in FY 2012</b> relative to FY 2008  20 of 25 Scorecard agencies attained their interim targets.
<b>Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings:</b> At least <b>15%</b> of new, existing, and leased buildings >5,000 square feet meet the Guiding Principles by 2015 (FY12 interim target = 9%)	<b>2.25%</b> of eligible Government buildings meet Guiding Principles; 5.68% in terms of the buildings' square footage.  6 of 21 Scorecard agencies met the interim target.

# Federal Facilities: Energy Intensity (Btu/GSF) Reduction Goal

Overall Government Progress toward Facility Energy Efficiency Goals,  
FY 2003- FY 2012

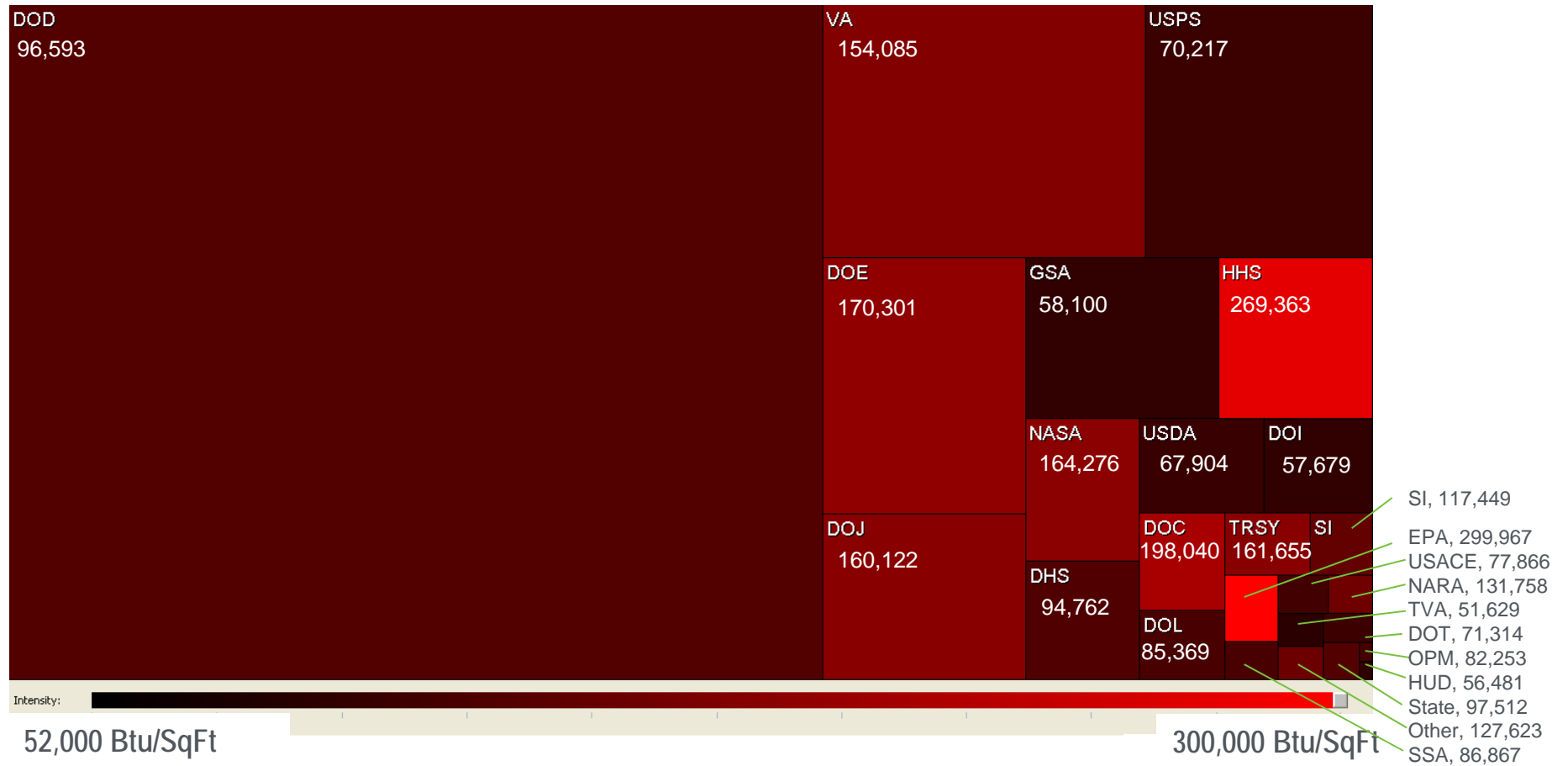


# Federal Facilities: Agency Progress Toward Energy Reduction Goal



Percent Reduction in Btu/Gross Square Foot, 2003-2012

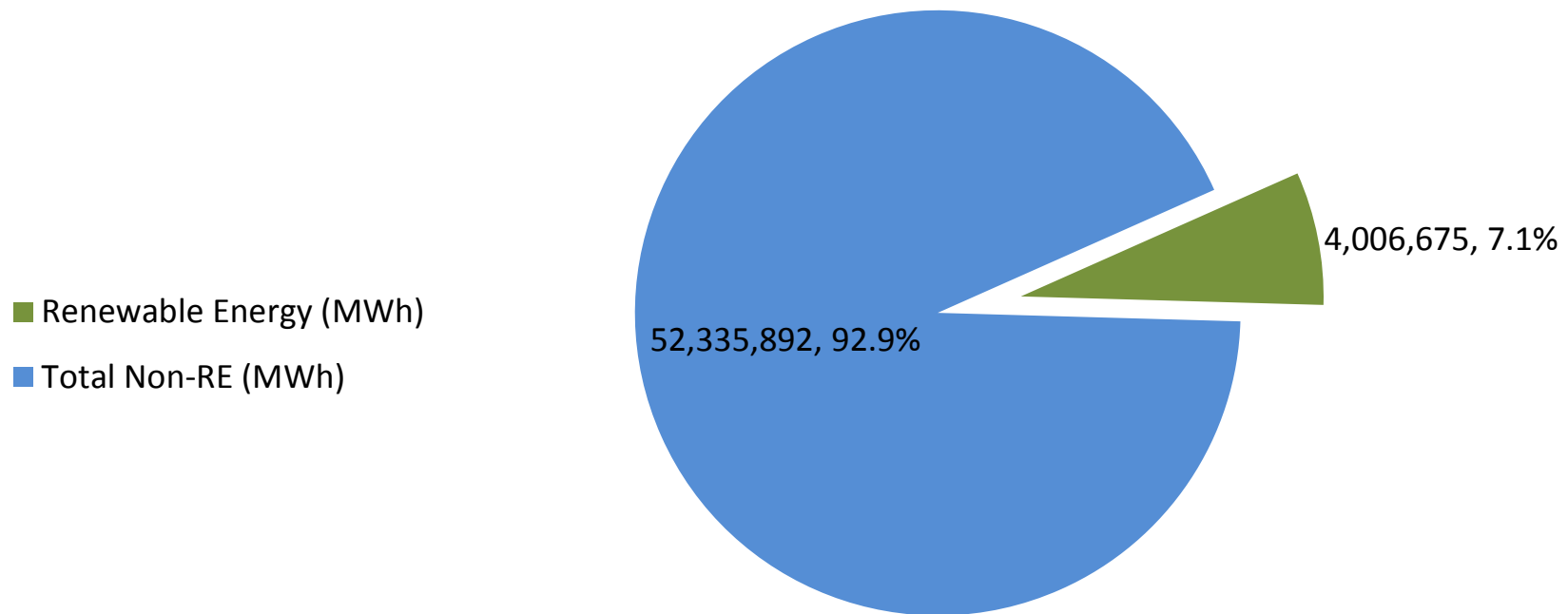
# FY 2012 Federal Facility Energy Consumption (306.7 Trillion Btu) and Intensity (101,139 Btu/Sqft)



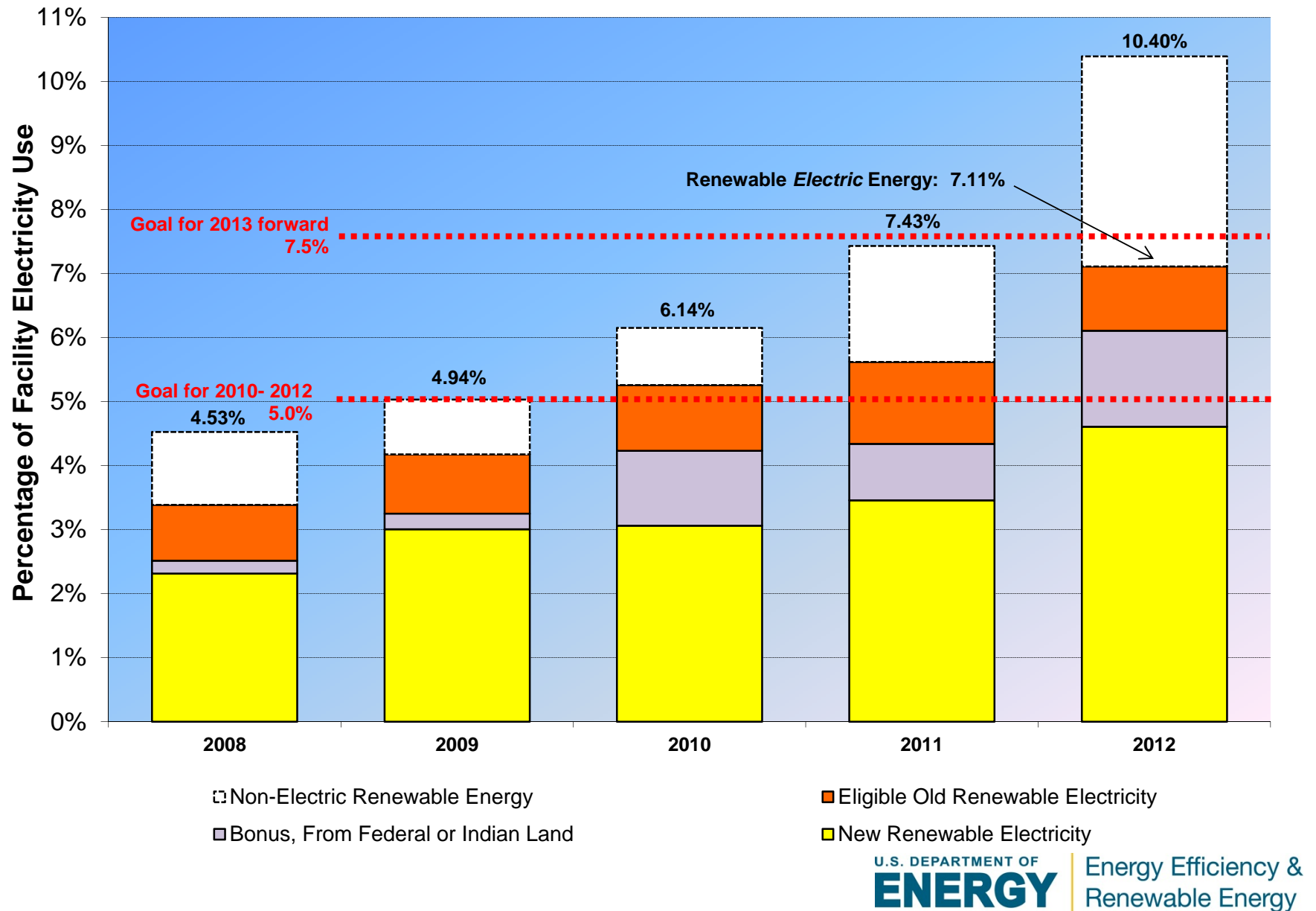
# Renewable Energy Use, FY 2012

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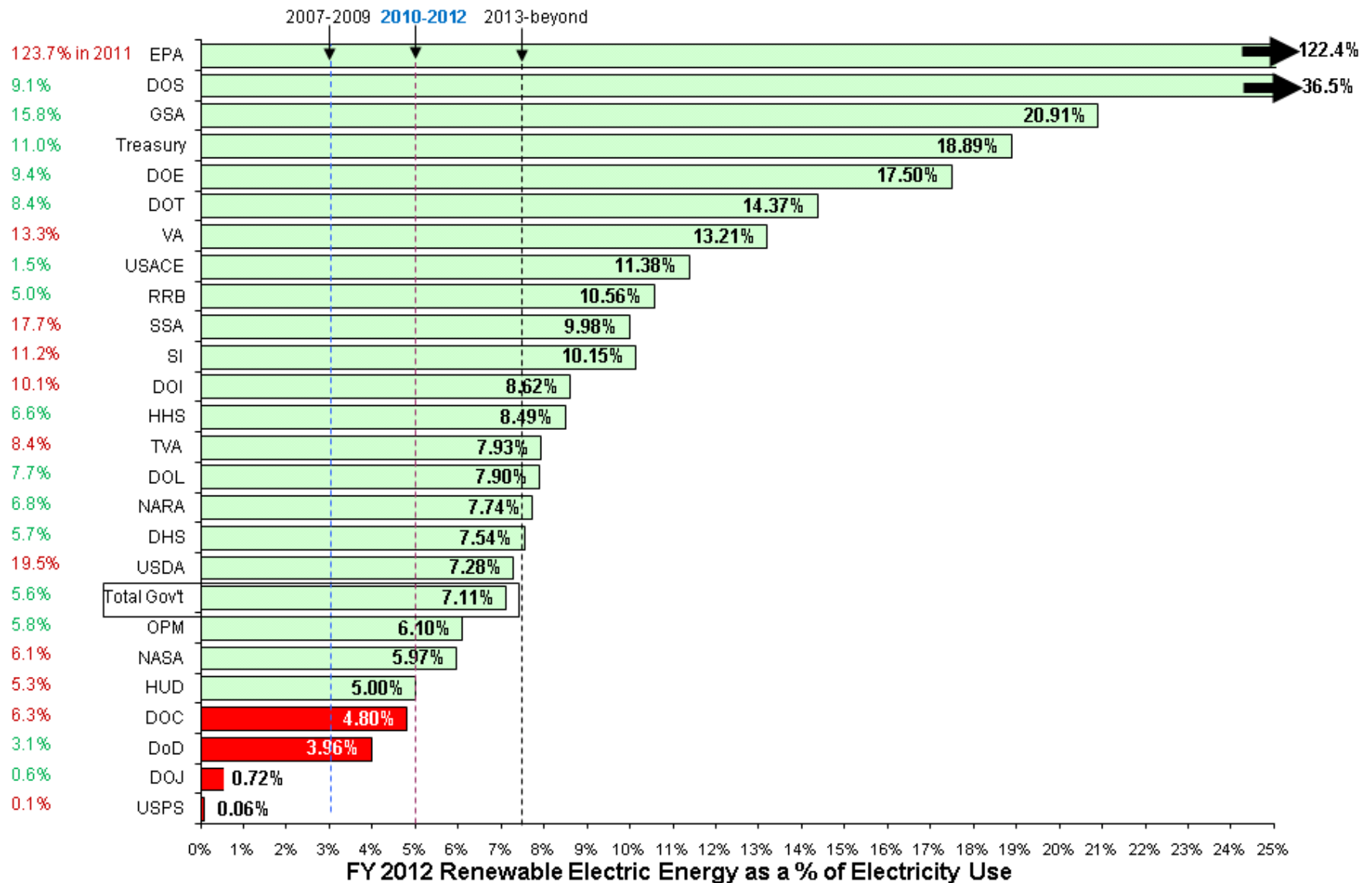
**Federal Agency Use of Renewable Energy as a Percentage of Electricity Use  
(FY 2012 Goal 5.0%, FY 2013, 7.5%)**



# Comprehensive Renewable Energy Use, FY 2008 through FY 2012



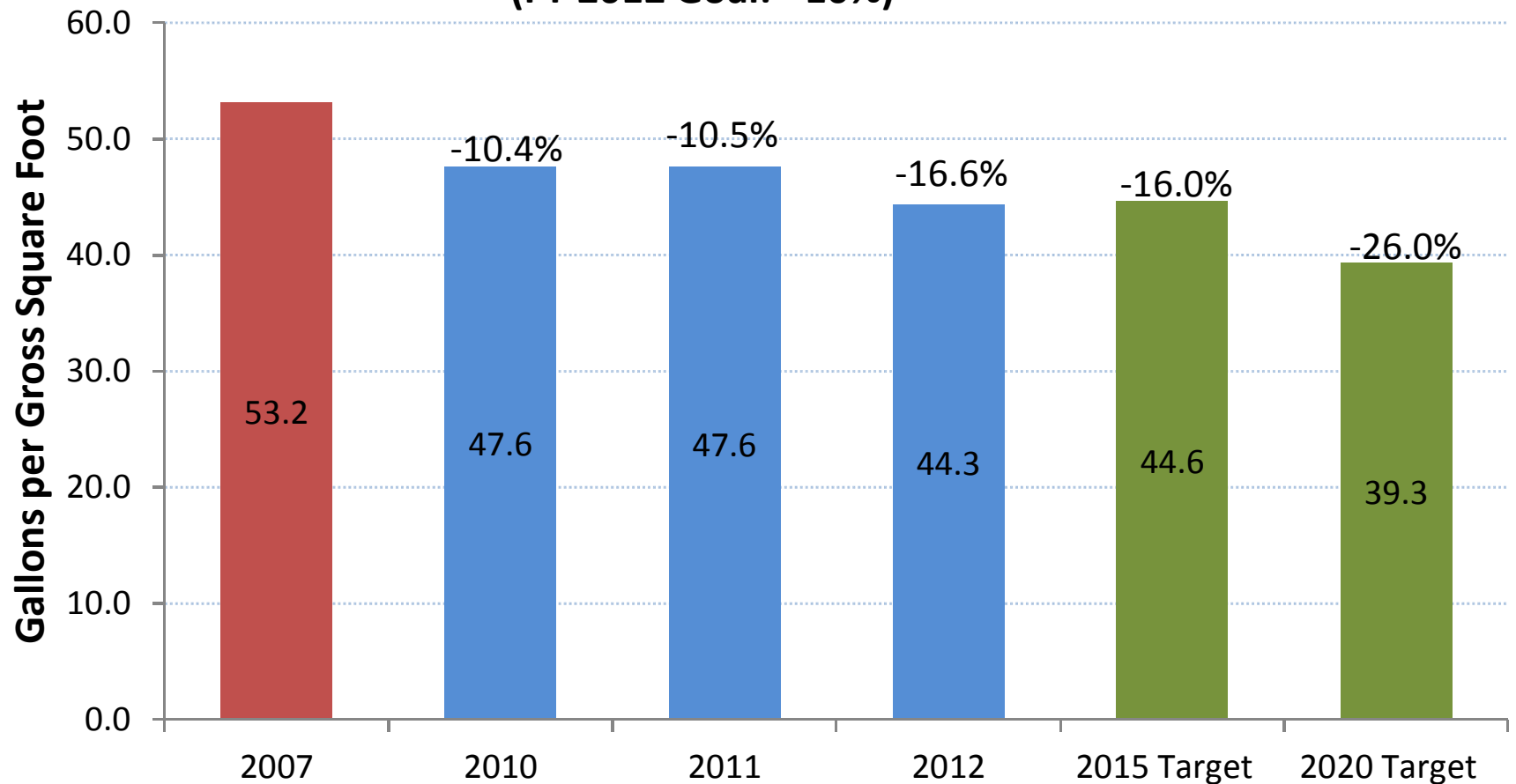
# Federal Facilities: Progress Toward Renewable Energy Goal



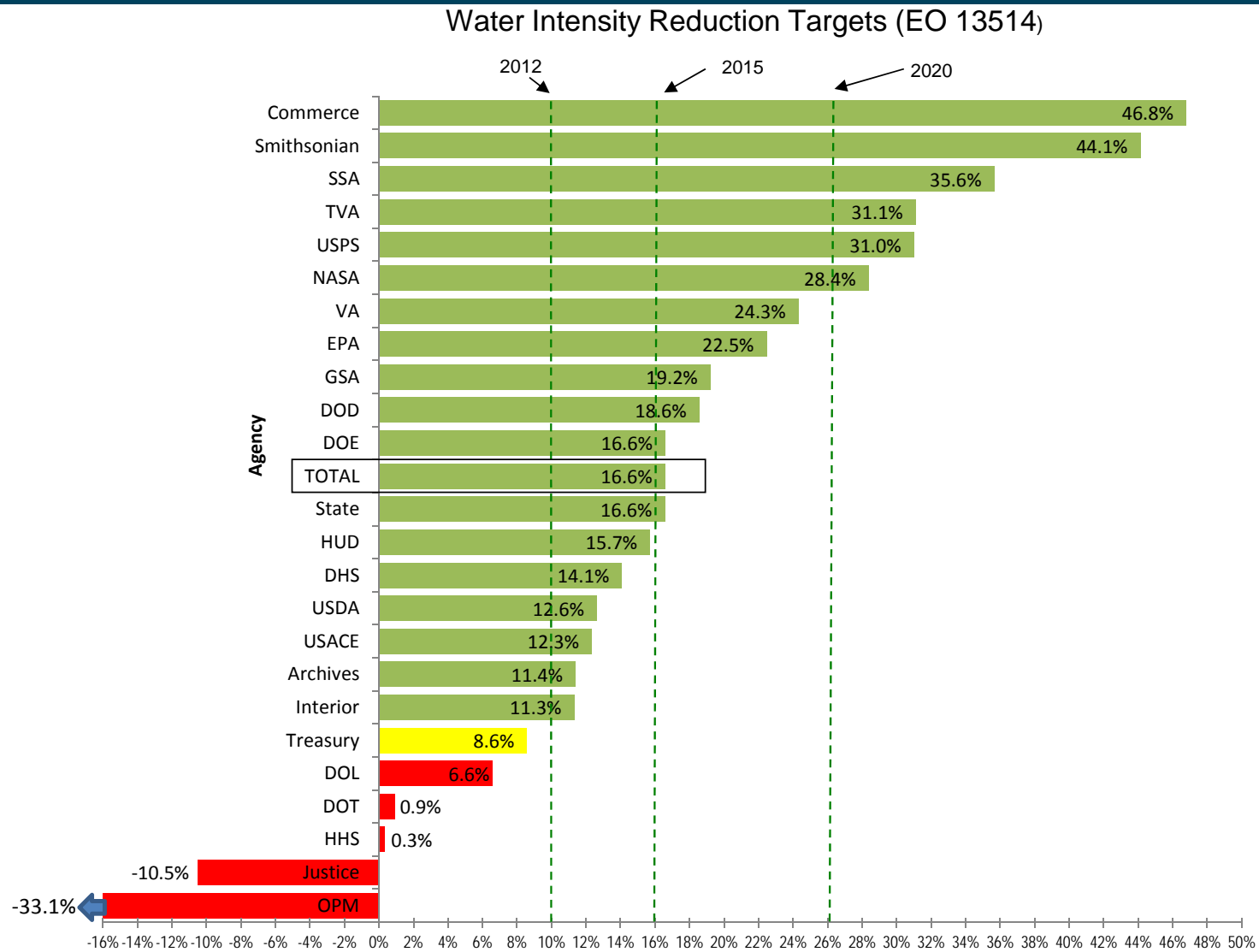


# Federal Facilities: Performance Toward Water Reduction Goal

**Federal Agency Progress toward Potable Water Intensity Reduction Goals  
(FY 2012 Goal: -10%)**



# Federal Facilities: Performance Toward Water Reduction Goal



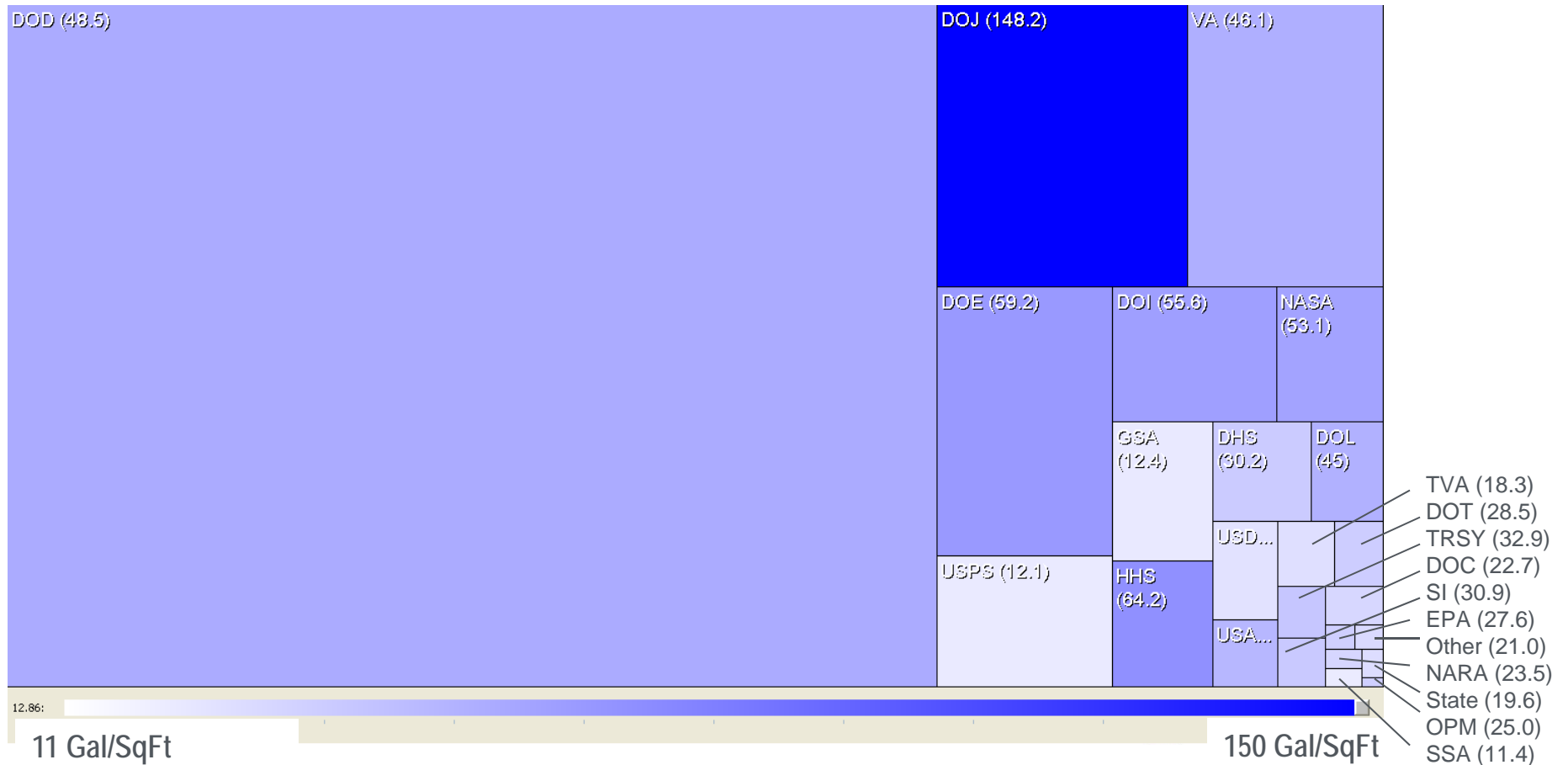
PRELIMINARY DATA

FY 2012 Reductions in Gallons per Square Foot from FY 2007

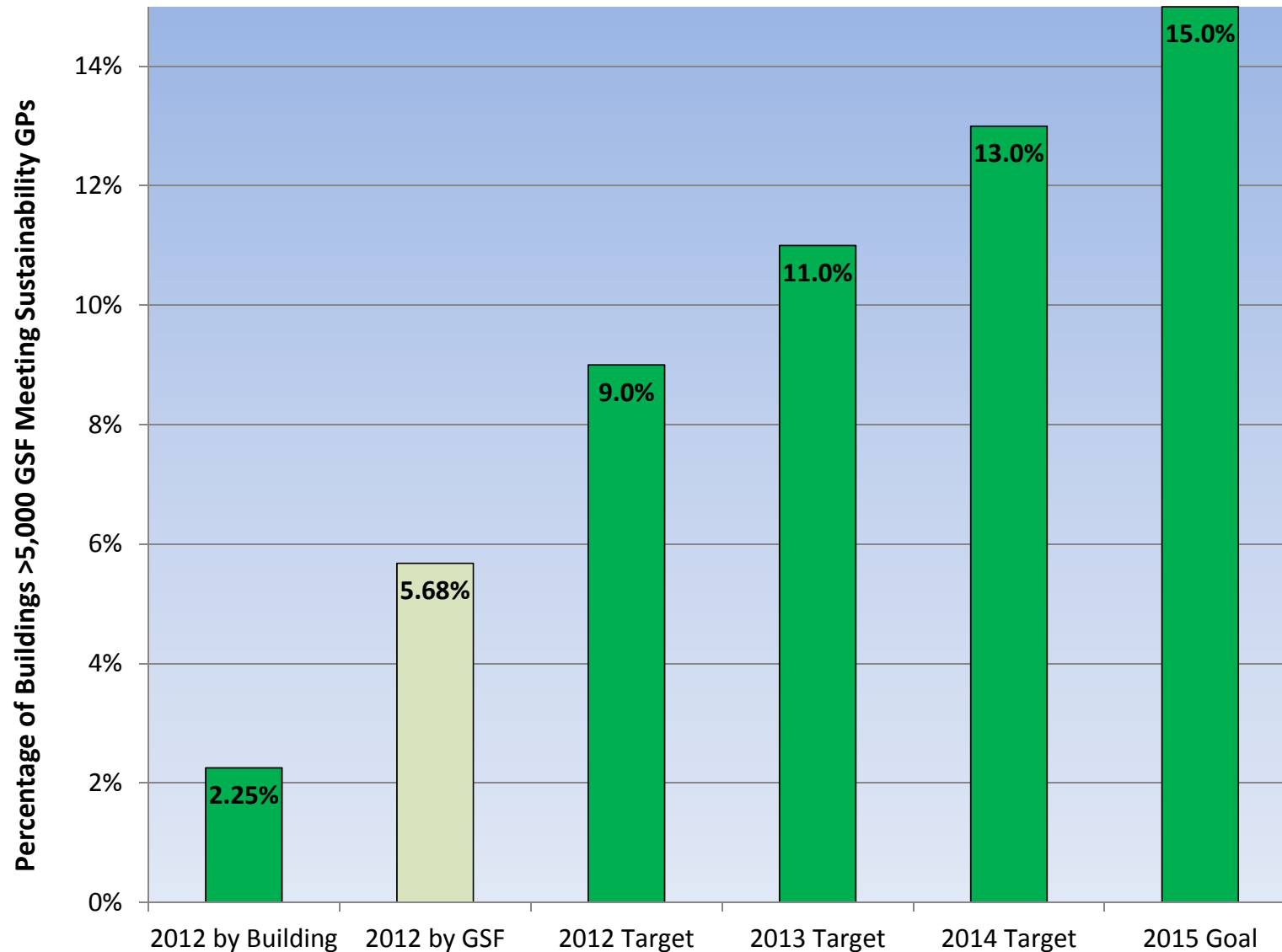


Energy Efficiency & Renewable Energy

# FY 2012 Potable Water Consumption (138.4 Billion Gal) and Intensity (44.4 Gal/SqFt)



# Federal Facilities: Gov't-Wide Progress Toward Meeting Sustainability Guiding Principles



PRELIMINARY DATA

# Federal Gov't Comprehensive GHG Inventory, FY 2012

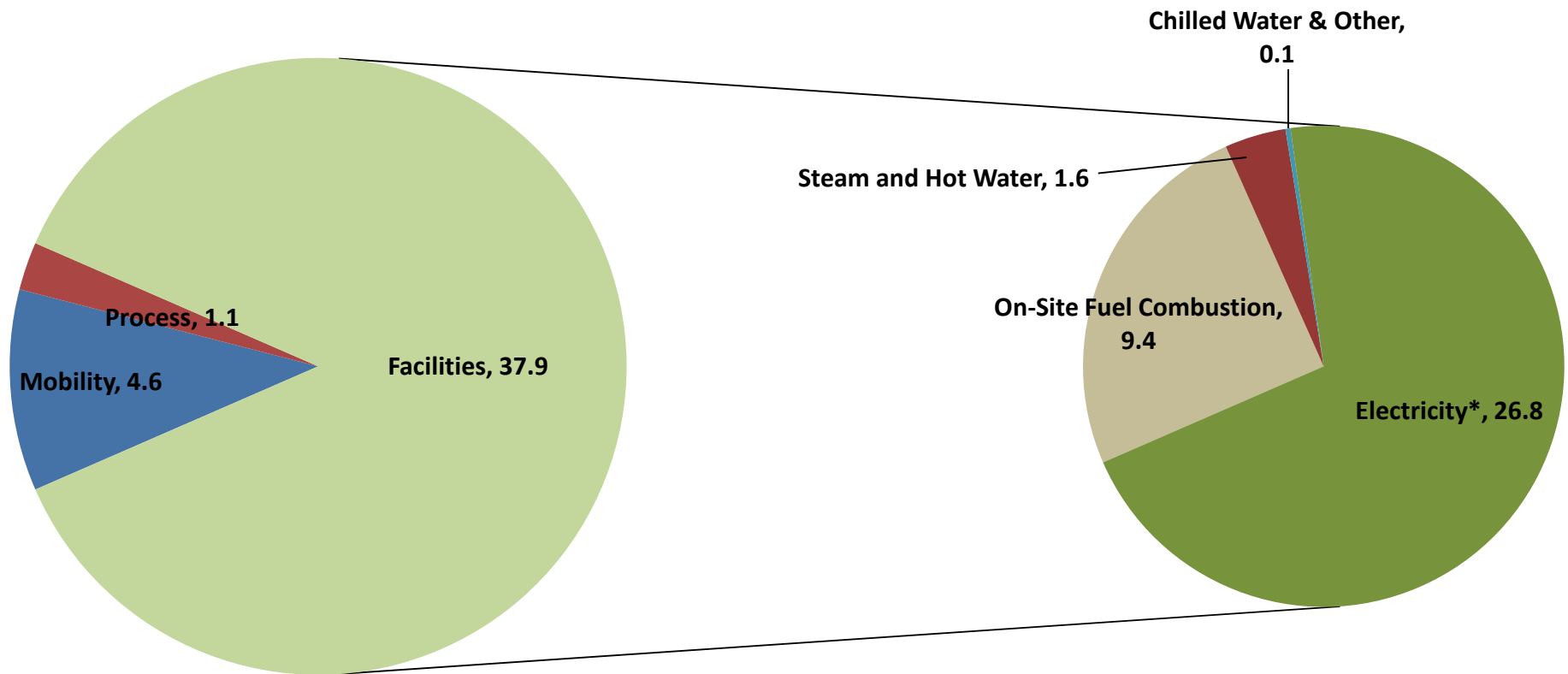
## FY 2012 Greenhouse Gas Inventory: Government Totals

Data as of: 14-Jun-2013

Scope and Category	GHG Emissions Covered by Reduction Targets (MT CO2e)	GHG Emissions Not Covered by Reduction Targets (Military Operations, Law Enforcement, and Other) (MT CO2e)	Total Quantity Emitted Biogenic (MT CO2)
Scope 1: On-Site Fuel Consumption at Federal Facilities	9,431,049.3	55,219.6	629,679.2
Scope 1: Mobile Emissions--Vehicles, Aircraft, Ships, and Equipment	1,934,121.6	43,669,847.5	11,293.0
Scope 1: Mobile Emissions--Passenger Fleet Vehicles	2,670,007.5	740,868.3	90,943.8
Scope 1: Fugitive Emissions--Fugitive Fluorinated Gases and Other Fugitive Emissions	666,795.2	1,159,507.6	
Scope 1: Fugitive Emissions--On-site Wastewater Treatment	11,534.2		2,398.1
Scope 1: Fugitive Emissions--On-site Landfills and Municipal Solid Waste Facilities	273,745.0		97,553.9
Scope 1: Manufacturing and Industrial Process Emissions	147,501.7	0.0	
<b>Subtotal Scope 1</b>	<b>15,134,754.5</b>	<b>45,625,443.0</b>	<b>831,868.0</b>
Scope 2: Purchased Electricity	28,441,368.0	853,656.1	0.0
Scope 2: Purchased Biomass Energy	30,588.4		1,958,744.0
Scope 2: Purchased Steam and Hot Water	1,563,343.9	33,464.8	350.0
Scope 2: Purchased Chilled Water	69,434.9	0.0	0.0
Scope 2: Purchased Combined Heat and Power Electricity, Steam & Hot Water	11,434.0	0.0	0.0
<b>Subtotal Scope 2</b>	<b>30,116,169.3</b>	<b>887,120.9</b>	<b>1,959,094.0</b>
Scope 2: Reductions from Renewable Energy Use	-1,642,844.7		0.0
<b>Subtotal Scope 1 &amp; 2</b>	<b>43,608,079.1</b>	<b>46,512,564.0</b>	<b>2,790,962.1</b>
Scope 3: Transmission and Distribution (T&D) Losses	1,771,366.7	52,683.6	0.0
Scope 3: Federal Employee Business Air Travel	2,902,372.7		
Scope 3: Federal Employee Business Ground Travel	403,778.9		
Scope 3: Federal Employee Commuting	10,419,481.7		
Scope 3: Contracted Wastewater Treatment	16,518.9		9,845.4
Scope 3: Contracted Municipal Solid Waste Disposal	1,000,223.2		316,215.9
<b>Subtotal Scope 3</b>	<b>16,513,742.1</b>	<b>52,683.6</b>	<b>326,061.3</b>

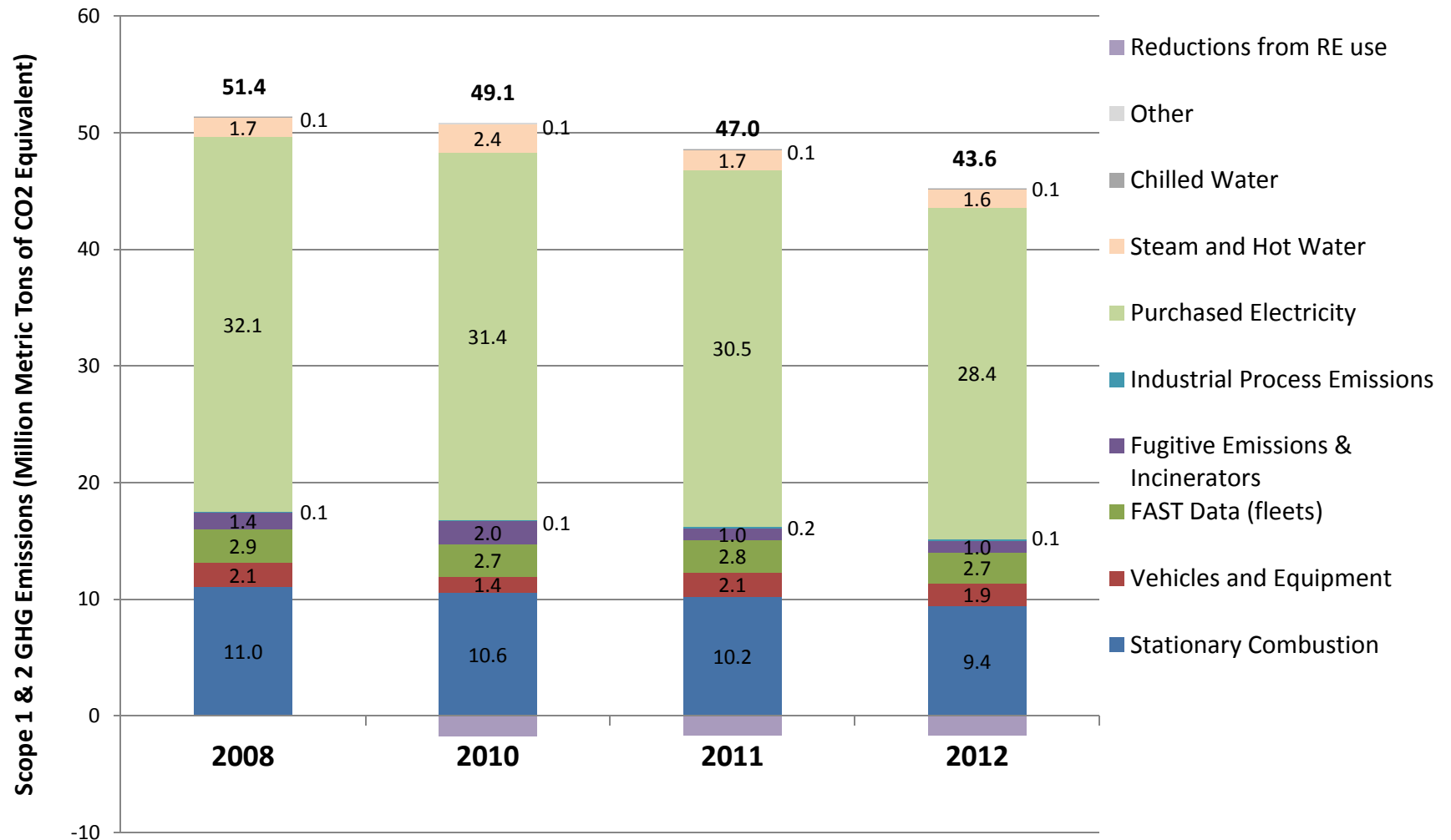
# Targeted Scope 1&2 GHG Emissions, FY 2012

FY 2012 Federal Government Scopes 1 & 2 GHG Emissions Covered by Reduction Target (43.6 MMTCO<sub>2</sub>e)

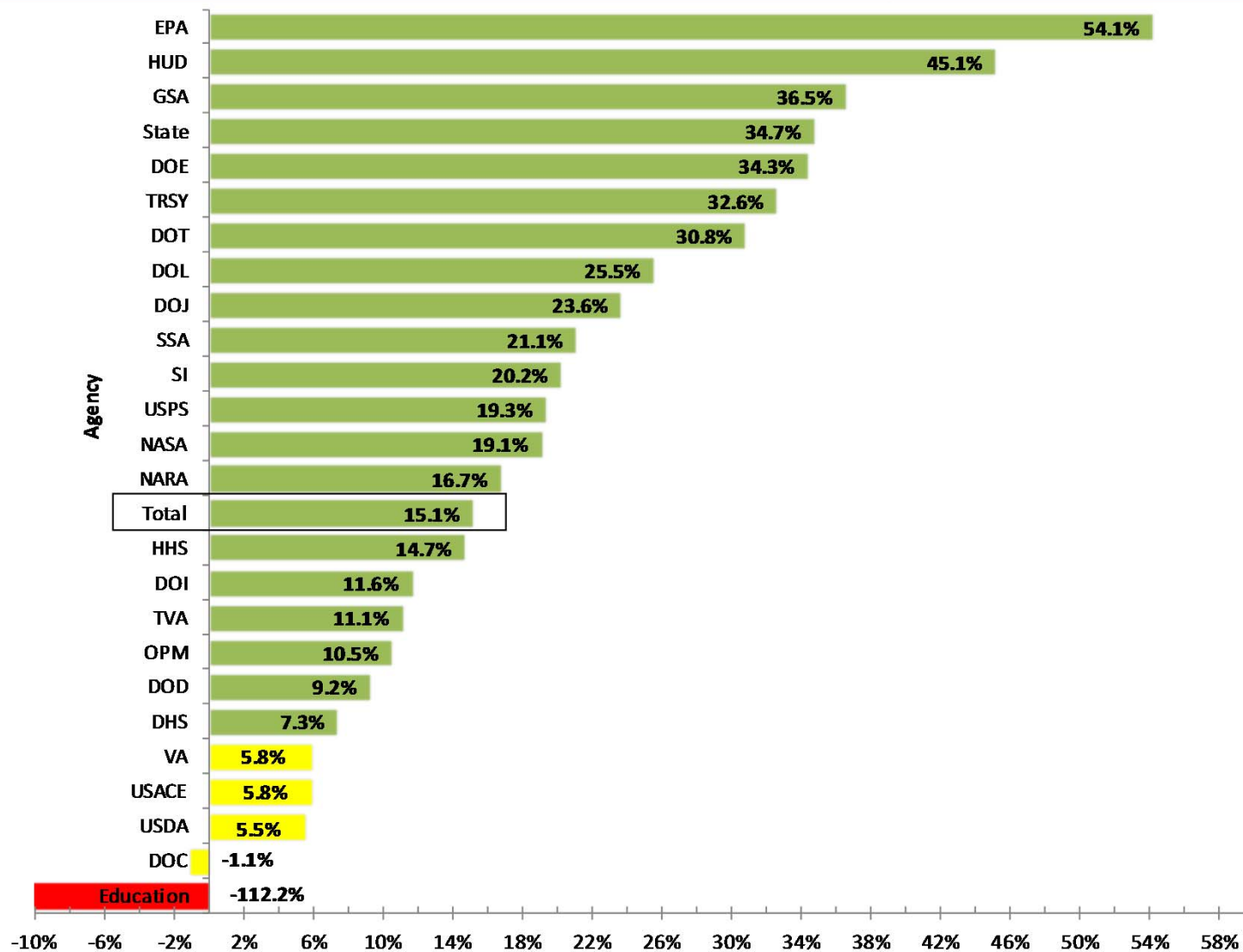


\*includes reductions from purchases of renewable energy attributes

# Targeted Scope 1&2 GHG Emissions, FY 2008 - FY 2012



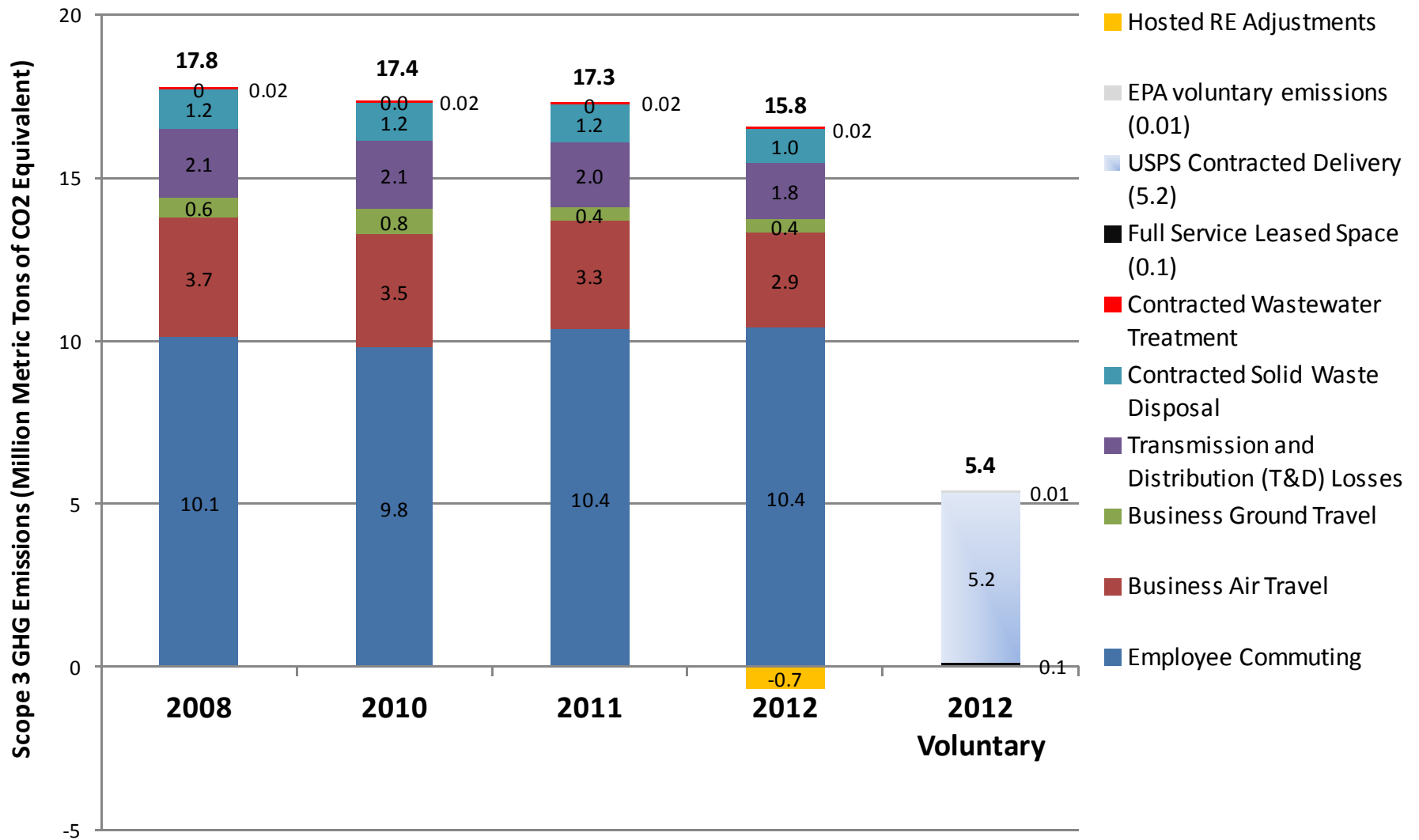
# Agency Performance Toward Scope 1&2 Greenhouse Gas Reduction Goals



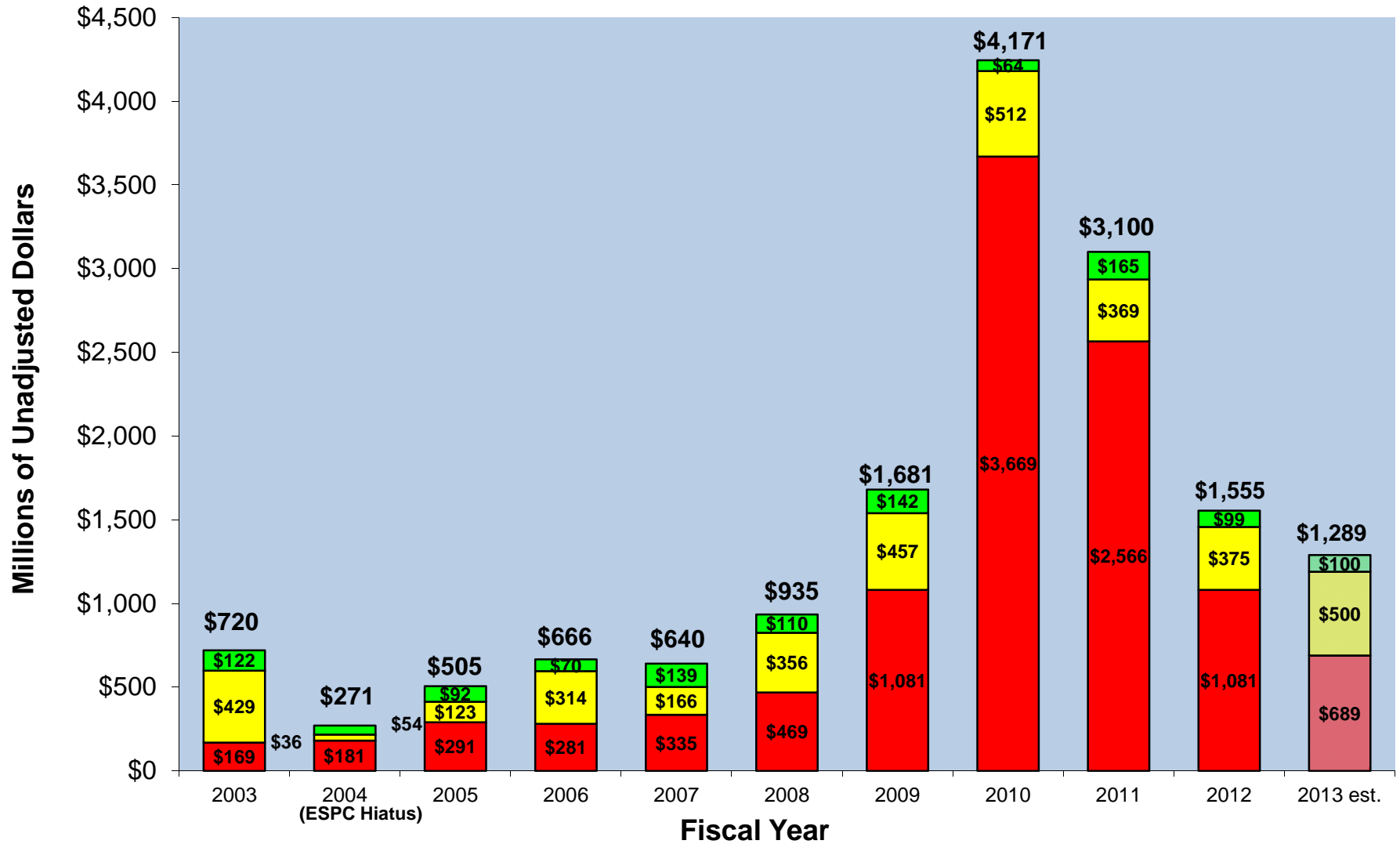
Percentage Reduction in Scope 1&2 GHG Emissions, FY 2008-2012



# Targeted Scope 3 GHG Emissions FY 2008 - FY 2012



# Federal Facilities: Investment in Resource Efficiency Projects



■ UESC ■ ESPC ■ Direct Appropriations



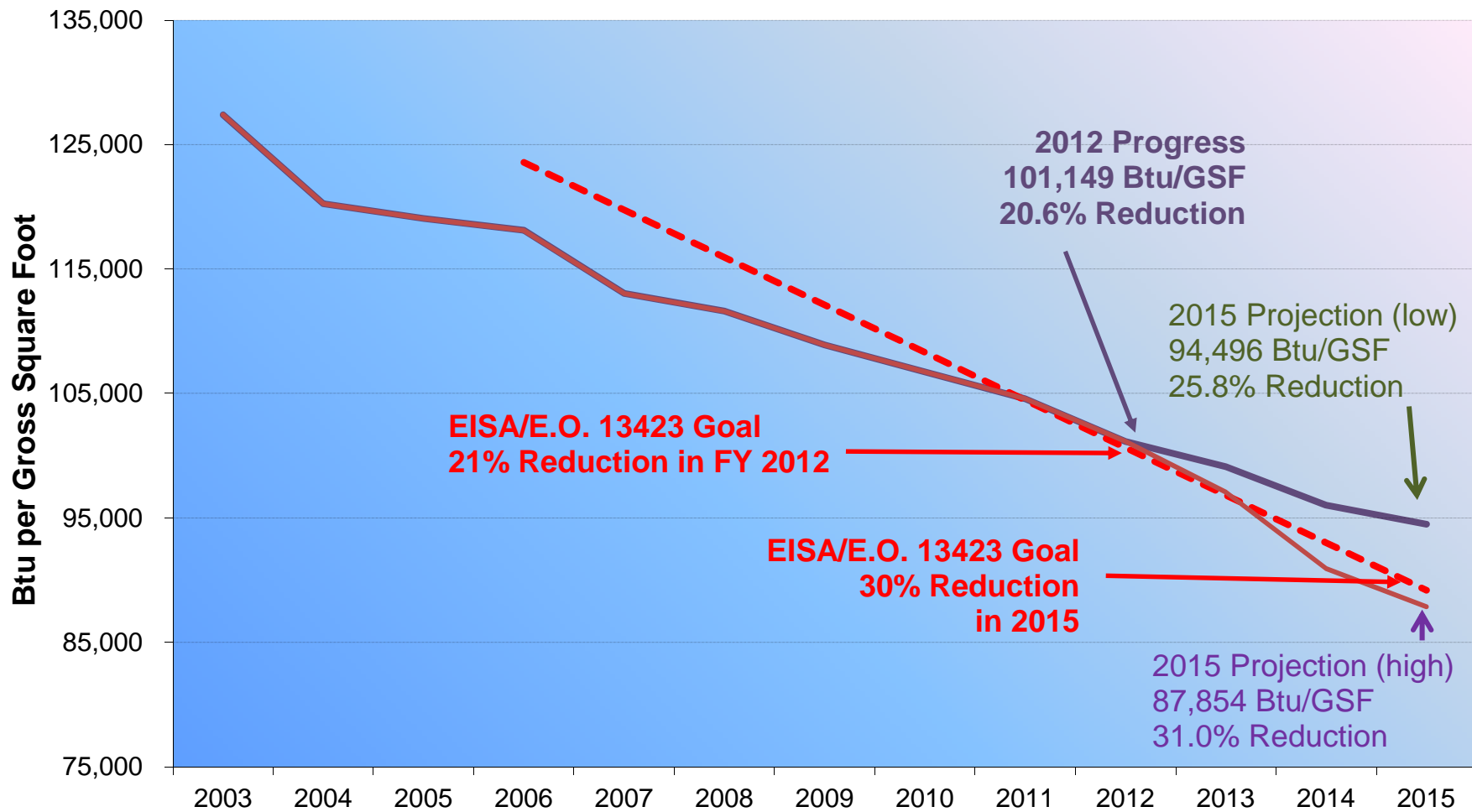
Energy Efficiency & Renewable Energy

# Federal Facilities: Efficiency Project Investment in FY 2012

Investment in Energy Efficiency and Renewable Energy in FY 2012 (By source of Funding)				
Agency	Funding Mechanism			Total Investment (Thou. \$)
	Direct Obligations	ESPC	UESC	
DOD	\$711,178	\$299,343	\$63,584	\$1,074,105
VA	\$254,863	\$15,100	\$9,734	\$279,697
DHS	\$3,979	\$36,136	\$0	\$40,115
DOE	\$28,989	\$0	\$0	\$28,989
NASA	\$11,432	\$11,900	\$3,466	\$26,798
TRSY	\$3,756	\$0	\$8,500	\$12,256
HHS	\$10,122	\$0	\$2,000	\$12,122
DOJ	\$30	\$0	\$10,477	\$10,507
GSA	\$9,186	\$0	\$0	\$9,186
TVA	\$8,997	\$0	\$0	\$8,997
USDA	\$8,859	\$0	\$0	\$8,859
DOT	\$417	\$8,200	\$0	\$8,617
DOI	\$6,420	\$969	\$953	\$8,341
EPA	\$8,216	\$0	\$0	\$8,216
SSA	\$6,935	\$0	\$0	\$6,935
State	\$0	\$3,833	\$0	\$3,833
DOL	\$3,541	\$0	\$0	\$3,541
NARA	\$2,000	\$0	\$0	\$2,000
USPS	\$935	\$0	\$0	\$935
DOC	\$446	\$0	\$0	\$446
OPM	\$415	\$0	\$0	\$415
SI	\$65	\$0	\$0	\$65
HUD	\$0	\$0	\$0	\$0
USACE	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,080,781</b>	<b>\$375,482</b>	<b>\$98,713</b>	<b>\$1,554,976</b>

# Projected Impact of Investment through FY 2013 on Energy Intensity Goal

Government Progress toward Facility Energy Efficiency Goals,  
FY 2003-FY 2012 (with projections to 2015)

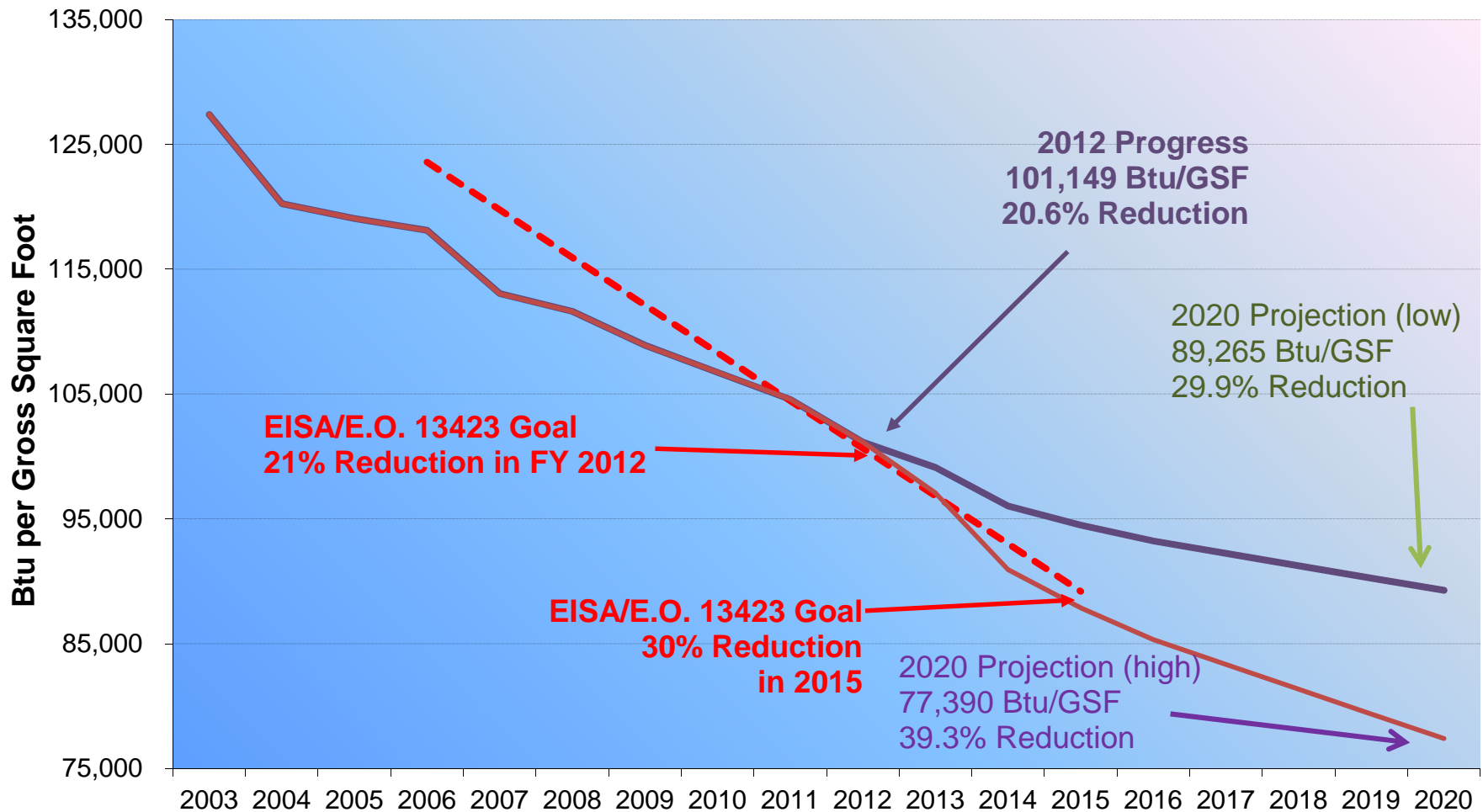


High: 6,000 Btu saved annually/\$1 investment  
Low: 3,000 Btu saved annually/\$1 investment

Fiscal Year

# Projected Impact of Investment through FY 2018 on Energy Intensity Goal (at \$1B investment/year)

Government Progress toward Facility Energy Efficiency Goals,  
FY 2003-FY 2012 (with projections to 2020)



High: 6,000 Btu saved annually/\$1 investment  
Low: 3,000 Btu saved annually/\$1 investment

Fiscal Year