



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Federal Progress Toward Energy/ Sustainability Goals

June 10, 2014



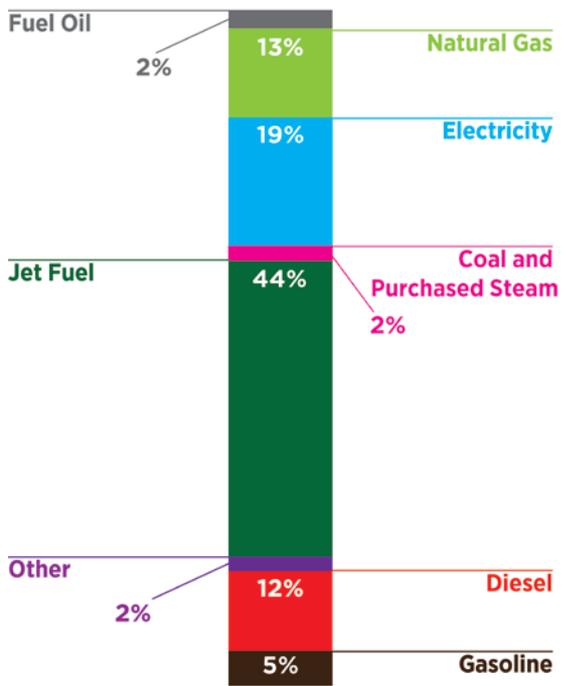
Chris Tremper

Program Analyst, Federal Energy
Management Program
U.S. Department of Energy

Overall Federal Energy Consumption and GHG Breakdown

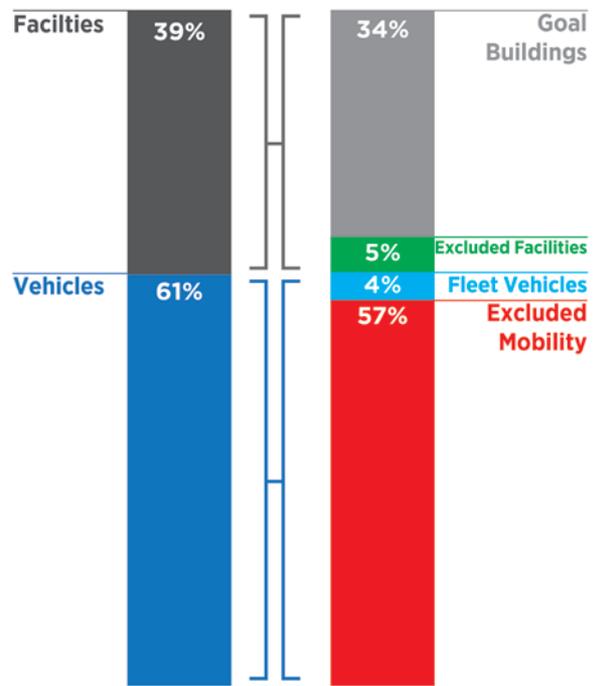
**FY 2014 Overall Federal Energy Consumption and GHG Emissions:
0.94 Quadrillion Site-Delivered Btu, \$23 Billion; 82 MMTCO₂e**

Consumption By Fuel Type



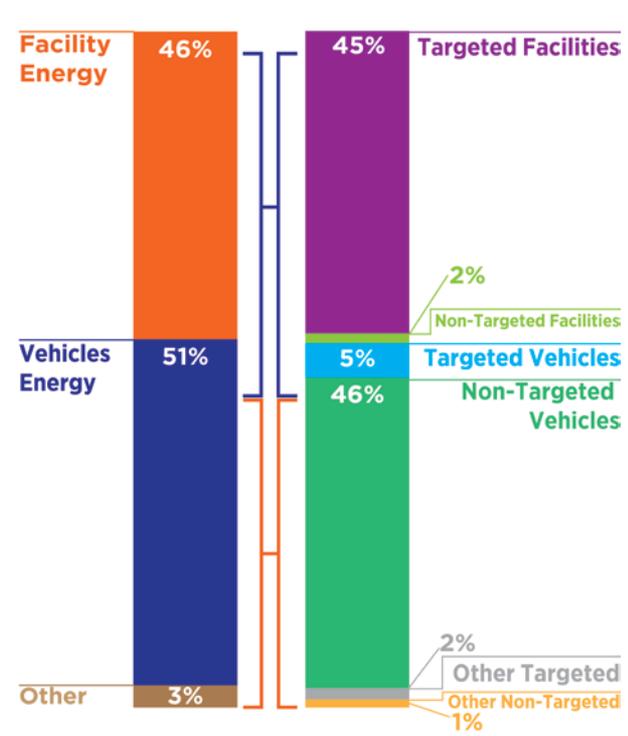
Total: 941.5 Trillion Btu

End-Use Sector



**Total: 941.5 Trillion Btu
Goal-Subject: 357.5 Trillion Btu**

Scope 1 & 2 GHG Emissions



**Total: 81.9 Million MTCO₂e
Targeted: 42.4 Million MTCO₂e**

Key Findings for FY 2014

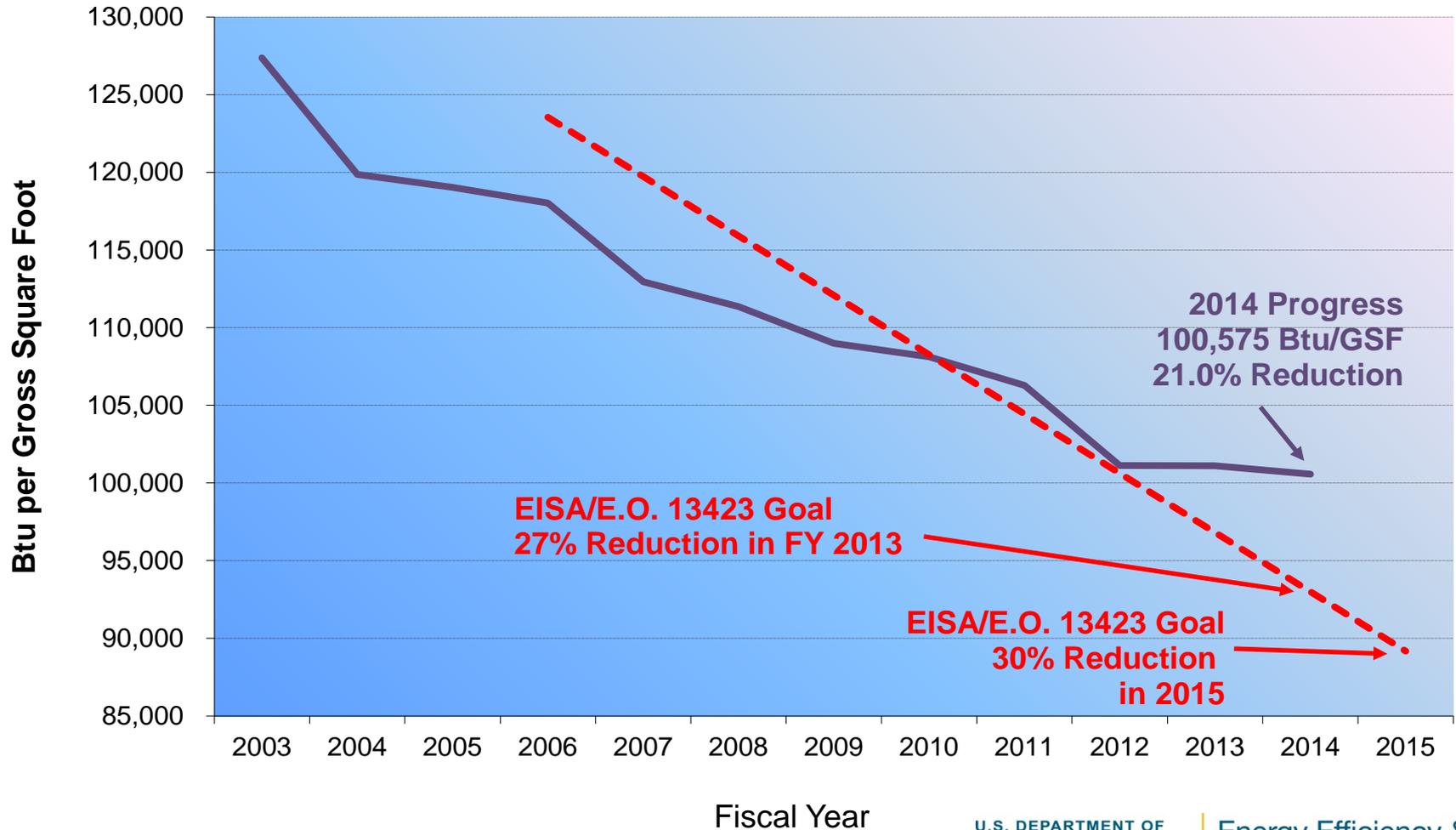
- Facility energy intensity fell short of the 27% goal with a 21% reduction from FY03; Btu/Sqft reduced slightly from prior year
- Renewable energy goal of 7.5% was exceeded (8.8% of electricity use)
- Potable water reduction goal of 14% was exceeded (21% reduction)
- Goal of 13% of Federal buildings meeting Sustainability Guiding Principles not met; 3.7% of Federal buildings and 8.3% of Sq ft
- Scope 1&2 GHG emissions declined 17.4% from FY08
- Scope 3 indirect GHG emissions decreased 17.5% from FY08
- Petroleum use in the Federal fleet decreased 3.3% from FY05 (18% reduction goal)
- Alternative fuel use increased 199% from FY05 (FY14 goal: 136%) (4.7% of total fleet fuel consumption)
- Efficiency investment in Federal facilities increased 25.5%
 - Direct funding investment: \$901 million
 - ESPC investment: \$701 million in FY14
 - UESC Investment: \$105 million in FY14

Progress in Facility-Related Goals, FY 2014

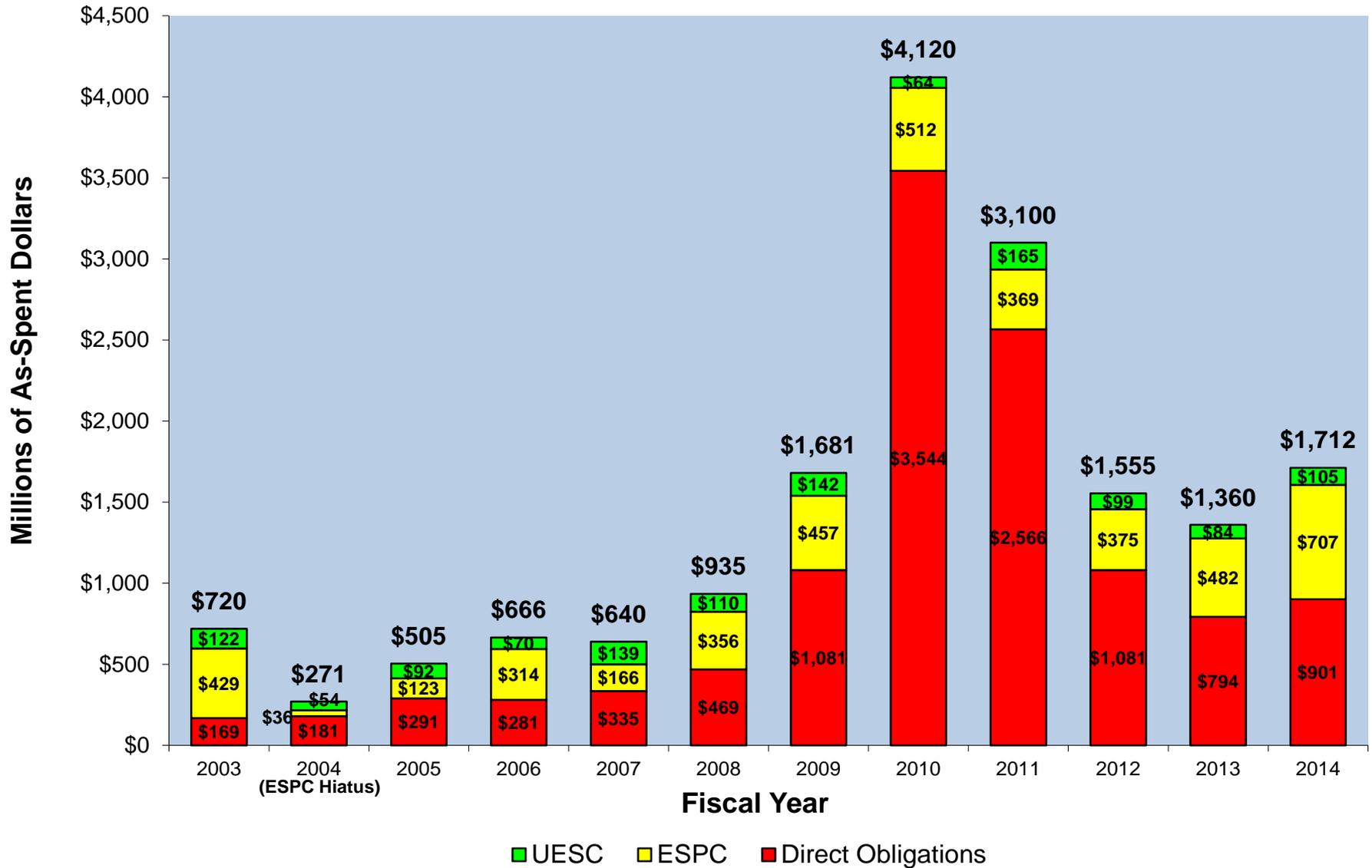
Goal/Requirement for FY 2014	FY 2014 Federal Performance
<p>E.O. 13423/EISA: Reduce energy intensity (Btu/GSF) by 27% compared to 2003; 30% reduction required in FY 2015.</p>	<p>Government decreased energy intensity by 21.0% in FY 2014 relative to FY 2003</p> <p>12 of 24 Scorecard agencies achieved the goal.</p>
<p>EPACT 2005/E.O. 13423: Use renewable electric energy equivalent to at least 7.5% of total electricity use; at least half of which must come from sources developed after January 1, 1999.</p>	<p>Government purchased or produced renewable energy in FY 2014 equivalent to 8.8% of total electricity use.</p> <p>20 of 24 Scorecard agencies achieved the goal.</p>
<p>E.O. 13423/13514: Reduce water consumption intensity (Gal/GSF) by 14% relative to 2007 baseline; 16% by the end of FY 2015; 26% by FY 2020.</p>	<p>Government reduced water consumption intensity by 20.7% in FY 2014 relative to FY 2007.</p> <p>22 of 24 Scorecard agencies achieved the goal.</p>
<p>E.O. 13514: Reduce Government-wide scope 1 and 2 greenhouse gas emissions from targeted sources by 28% in FY 2020 compared to FY 2008</p>	<p>Government reduced scope 1 and 2 GHG emissions by 17.4% in FY 2014 relative to FY 2008</p> <p>20 of 25 Scorecard agencies are on-track to meet their targets.</p>
<p>Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings: At least 15% of new, existing, and leased buildings >5,000 square feet meet the Guiding Principles by 2015 (FY14 interim target = 13%)</p>	<p>3.7% of eligible Government buildings meet Guiding Principles; 8.3% in terms of the buildings' square footage.</p> <p>3 of 20 Scorecard agencies met the interim target of 13%</p>

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

Overall Government Progress Toward Facility Energy Efficiency Goals,
FY 2003 - FY 2014



Federal Facilities: Investment in Resource Efficiency Projects

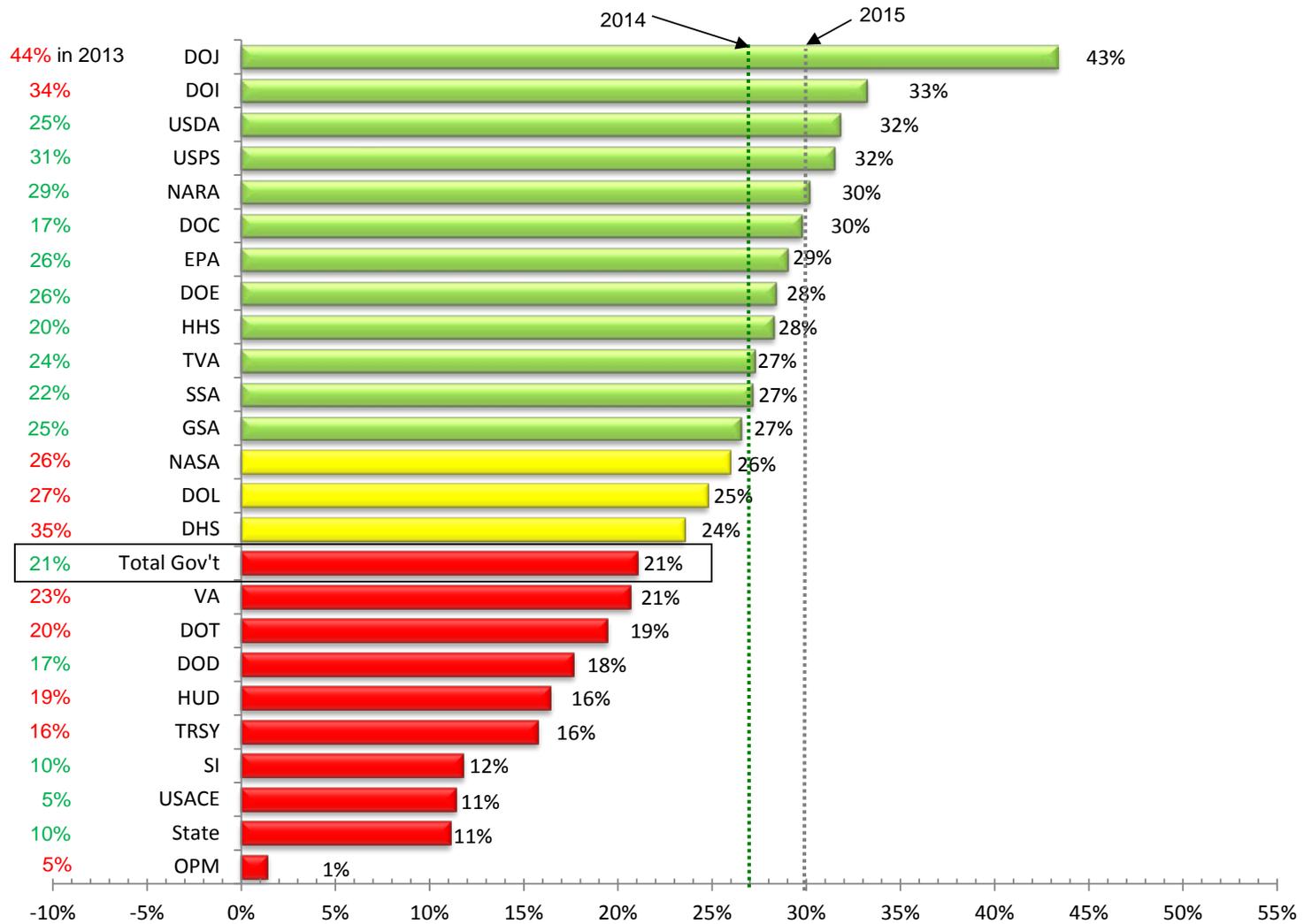


Federal Facilities: Efficiency Project Investment in FY 2014

Investment in Energy Efficiency and Renewable Energy in FY 2014 (By source of Funding)

Agency	Funding Mechanism			Total Investment (Thou. \$)
	Direct Obligations	ESPC	UESC	
DOD	\$508,931	\$335,970	\$37,730	\$882,631
VA	\$225,796	\$79,886	\$3,666	\$309,348
DOE	\$27,609	\$22,800	\$12,739	\$63,148
GSA	\$12,785	\$119,481	\$0	\$132,266
DOJ	\$844	\$52,433	\$0	\$53,277
NASA	\$8,712	\$0	\$0	\$8,712
USDA	\$3,884	\$6,220	\$1,523	\$11,626
DHS	\$4,528	\$0	\$4,443	\$8,971
HHS	\$44,028	\$17,536	\$13,377	\$74,941
SSA	\$13,026	\$0	\$0	\$13,026
USPS	\$0	\$0	\$0	\$0
DOI	\$12,337	\$40,785	\$0	\$53,122
SI	\$0	\$1,421	\$0	\$1,421
NARA	\$1,200	\$11,075	\$0	\$12,275
TVA	\$10,771	\$0	\$0	\$10,771
USACE	\$7,486	\$2,837	\$0	\$10,323
EPA	\$3,587	\$0	\$0	\$3,587
DOT	\$2,530	\$0	\$19,630	\$22,161
DOL	\$3,519	\$0	\$0	\$3,519
TRSY	\$1,354	\$10,799	\$0	\$12,153
DOC	\$6,370	\$0	\$0	\$6,370
State	\$28	\$0	\$12,135	\$12,163
OPM	\$53	\$5,398	\$0	\$5,451
HUD	\$0	\$0	\$0	\$0
Other	\$1,217	\$0	\$0	\$1,217
Total	\$900,594	\$706,640	\$105,243	\$1,712,477

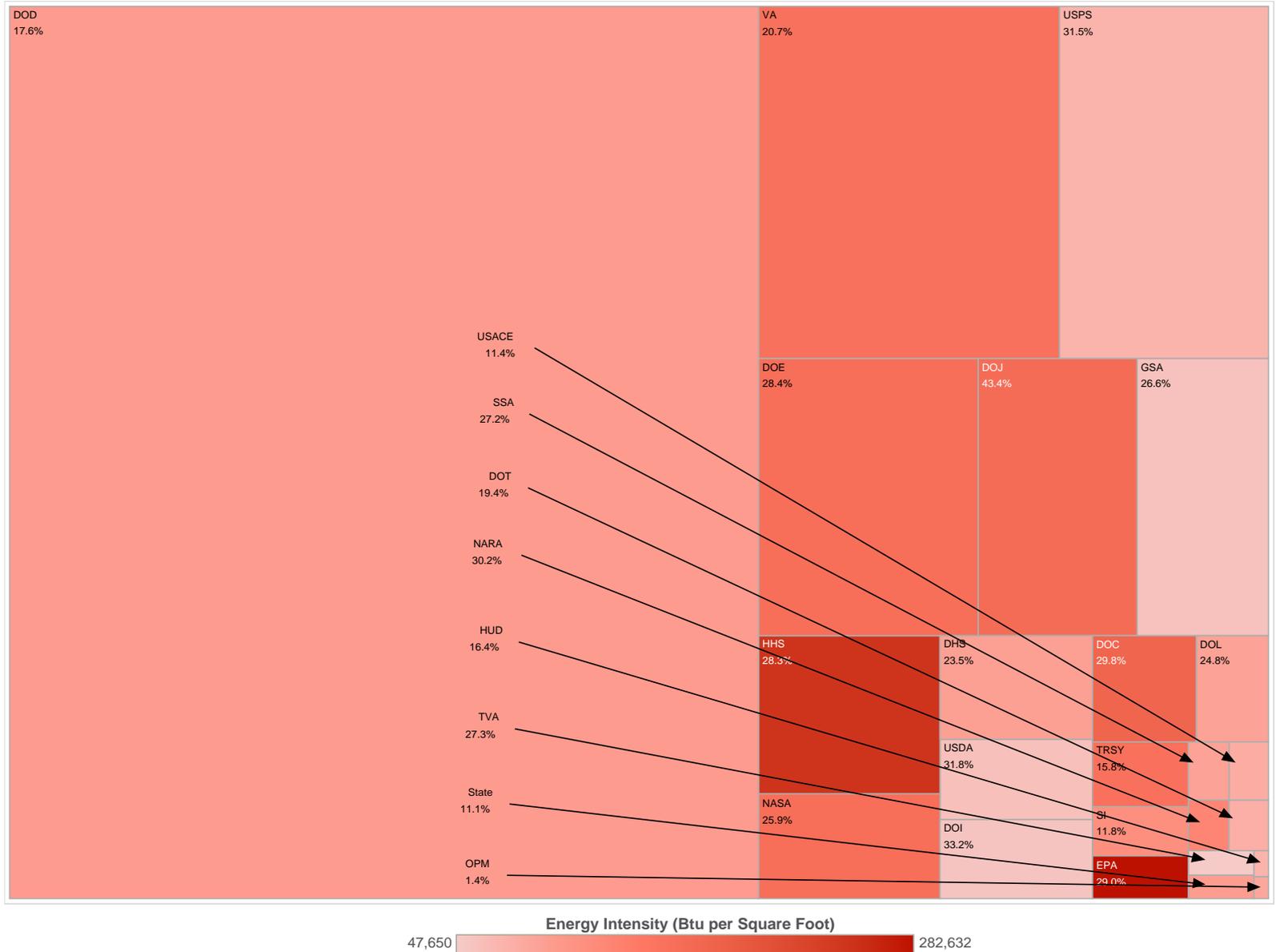
Federal Facilities: Agency Progress Toward Energy Reduction Goal



Percent Reduction in Btu/Gross Square Foot, 2003-2014

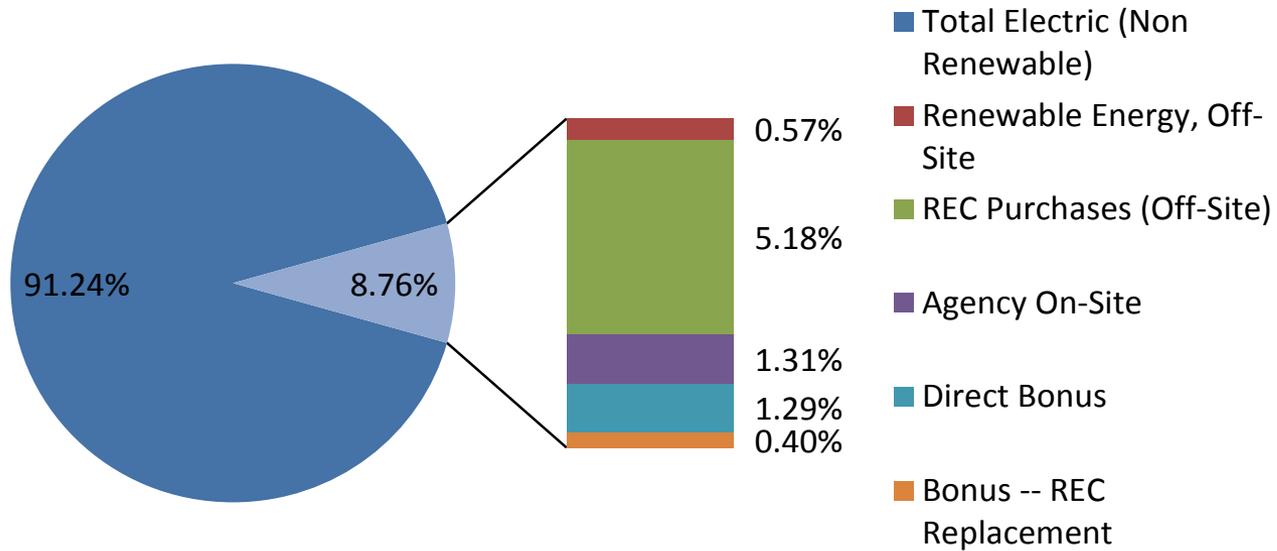
Federal Facilities: Agency Progress Toward Energy Reduction Goal

Goal Building Energy Use, Intensity and Reduction Progress 2014 vs 2003



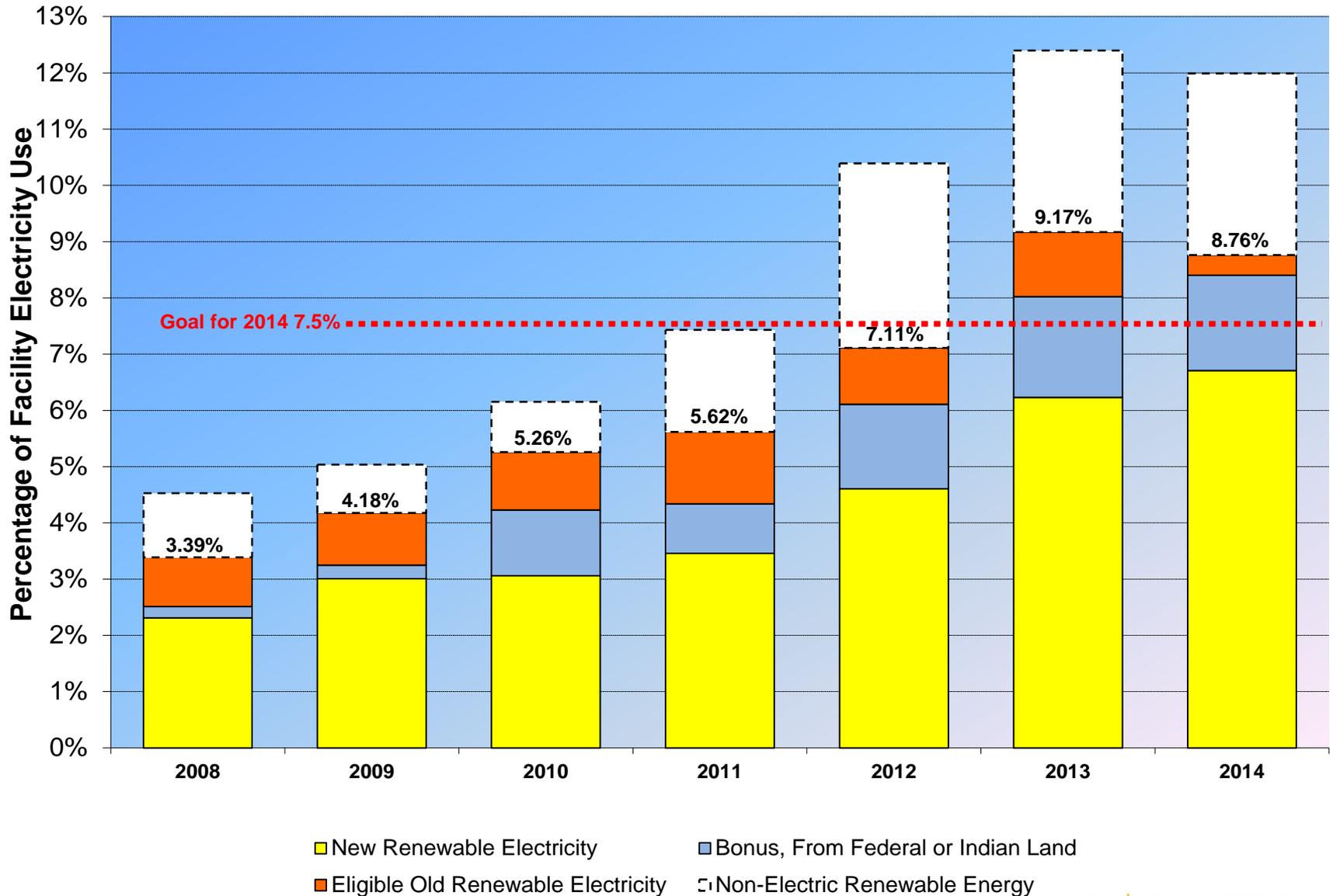
Renewable Electric Energy Use, FY 2014

FY14 Federal Agency Renewable Electricity as Percentage of Facility Electricity Use



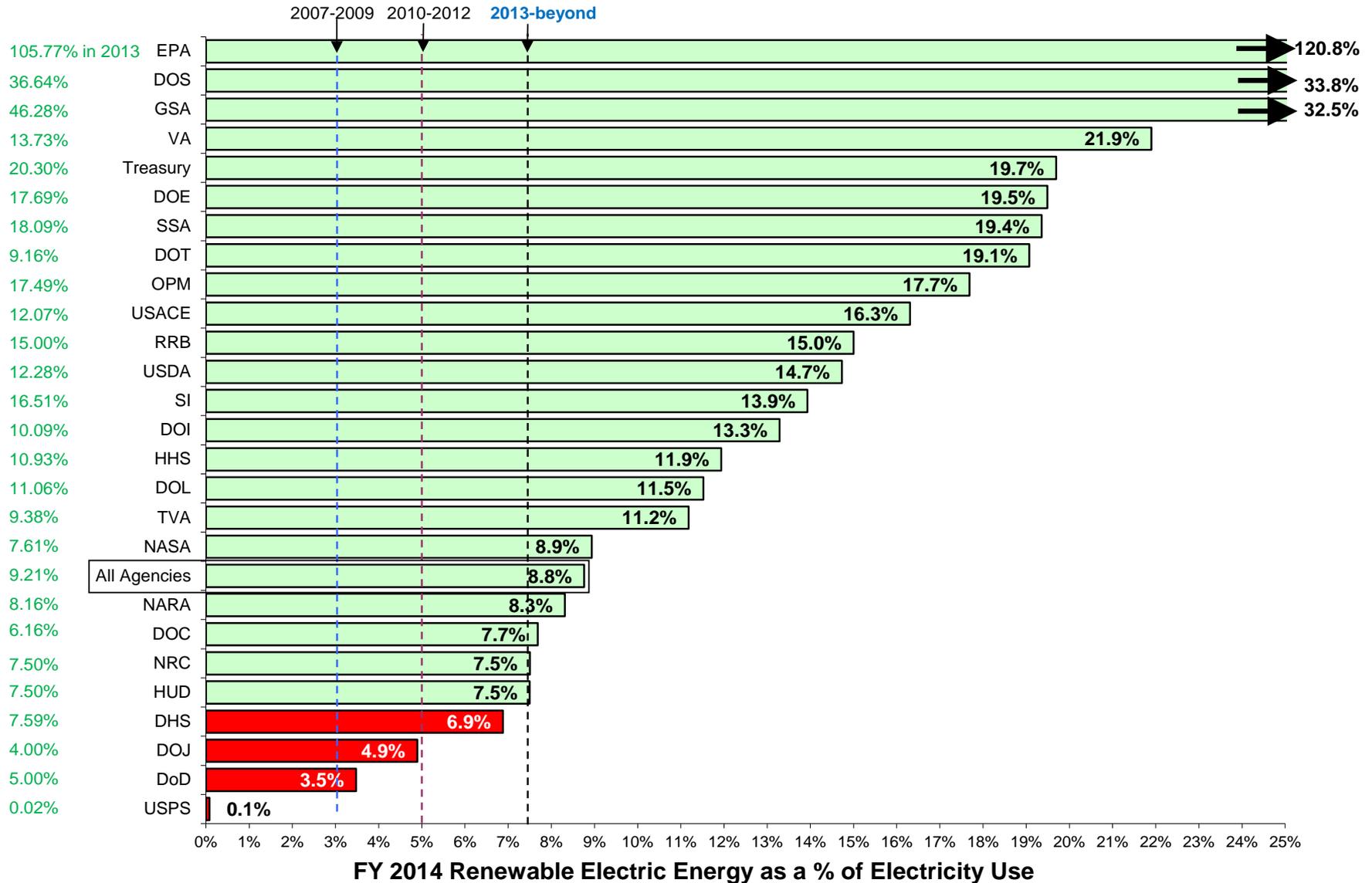
	MWH
Total Electric	54,748,471
Total Electric (Non Renewable)	49,952,322
Renewable Energy, Off-Site	312,384
REC Purchases (Off-Site)	2,837,789
Agency On-Site	716,955
Direct Bonus	708,832
Bonus -- REC Replacement	220,189

Renewable Energy Use, FY 2008 to FY 2014

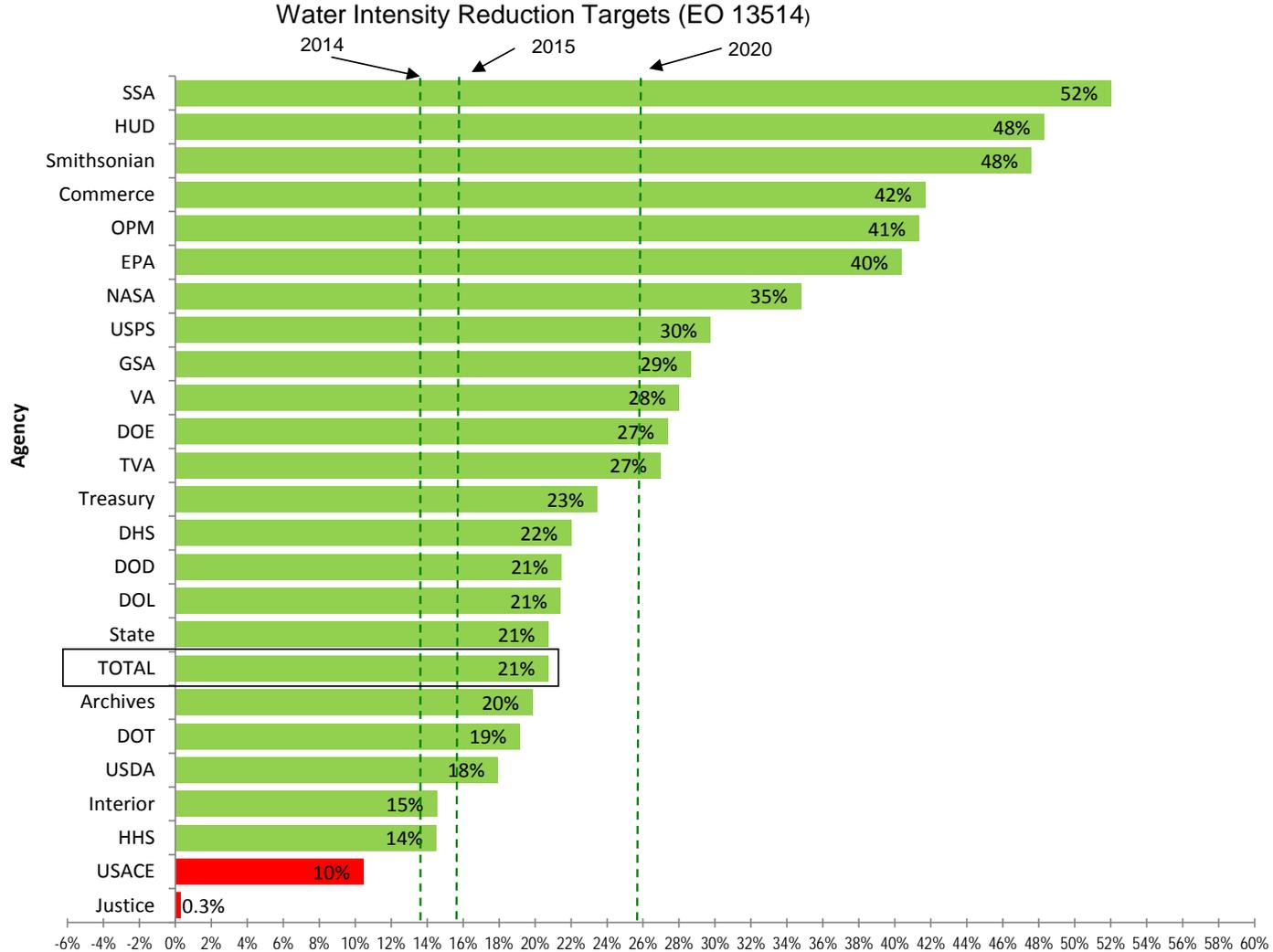


- New Renewable Electricity
- Bonus, From Federal or Indian Land
- Eligible Old Renewable Electricity
- Non-Electric Renewable Energy

Federal Facilities: Progress Toward Renewable Energy Goal



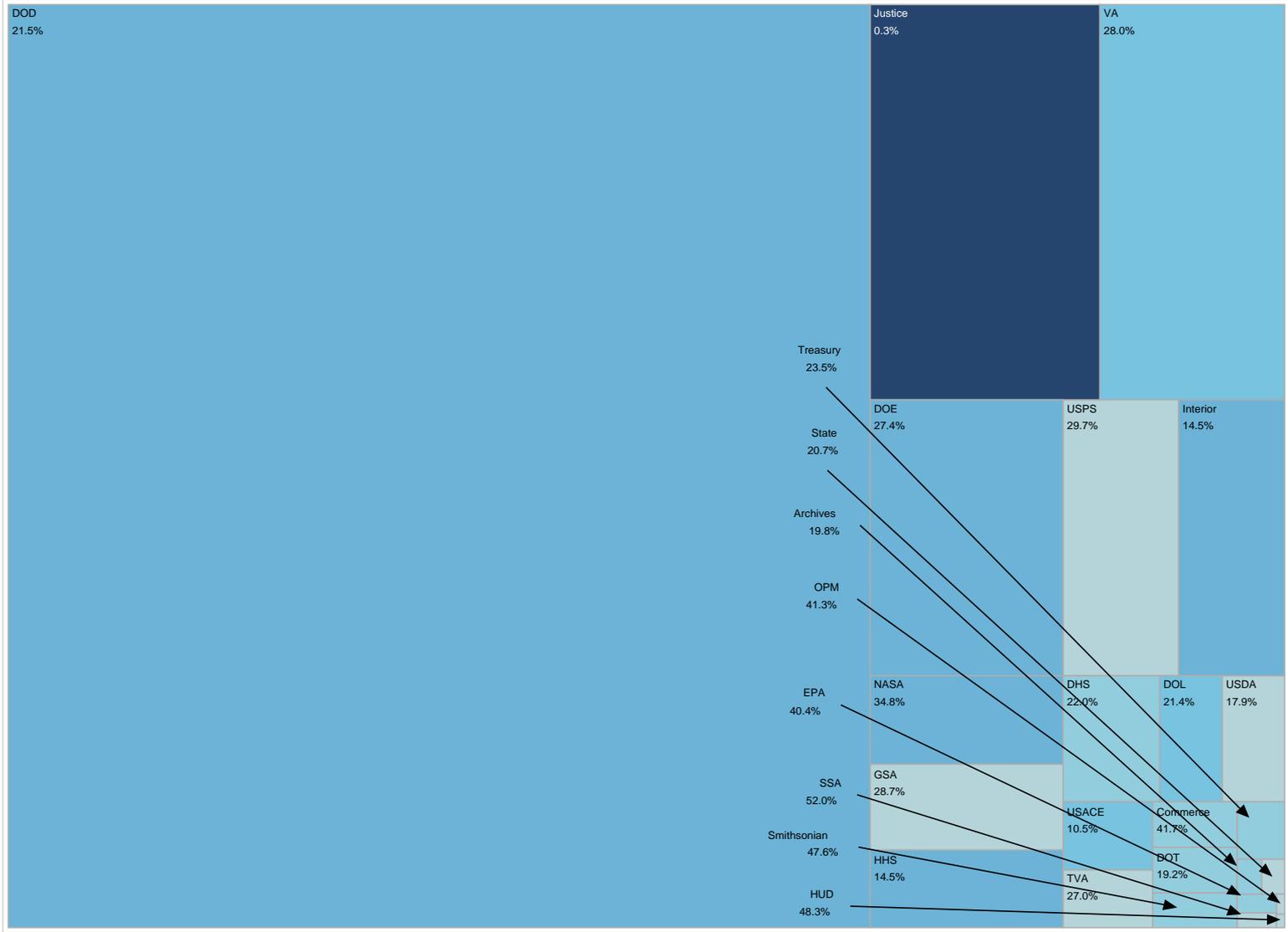
Federal Facilities: Performance Toward Water Reduction Goal



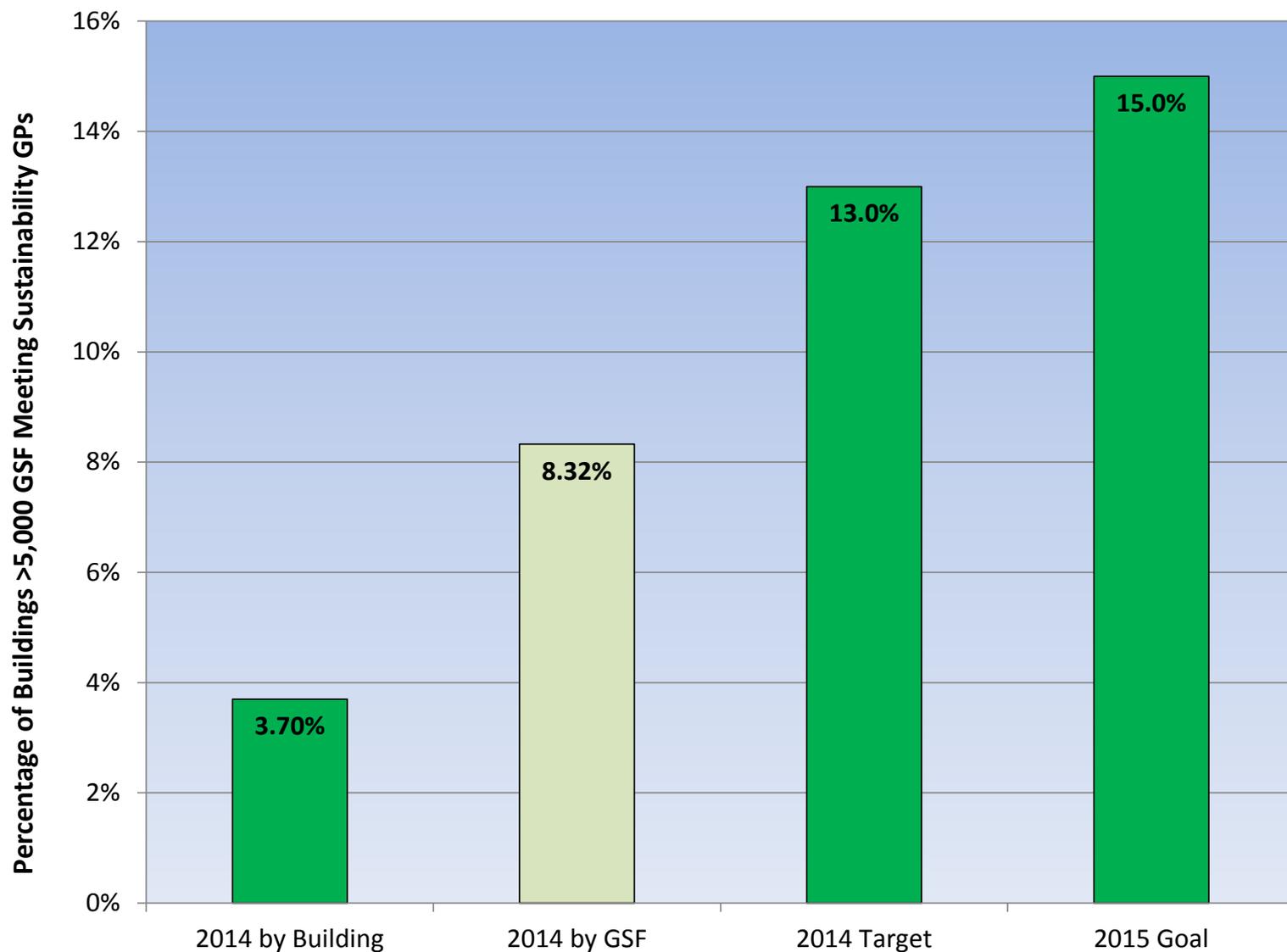
FY 2014 Reductions in Gallons per Square Foot from FY 2007

Federal Facilities: Performance Toward Water Reduction Goal

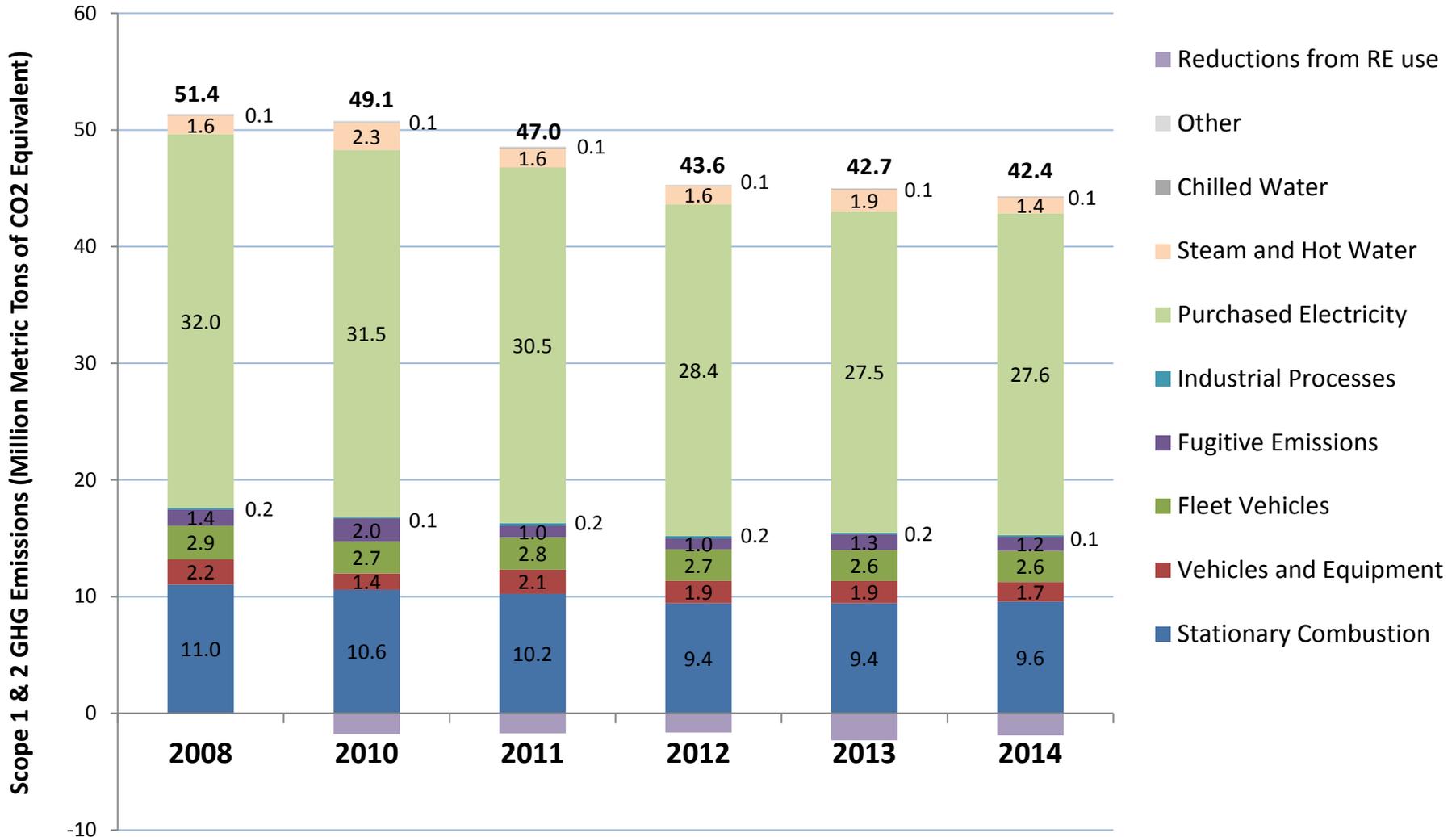
Potable Water Use, Intensity, and Reduction Progress 2014 vs. 2007



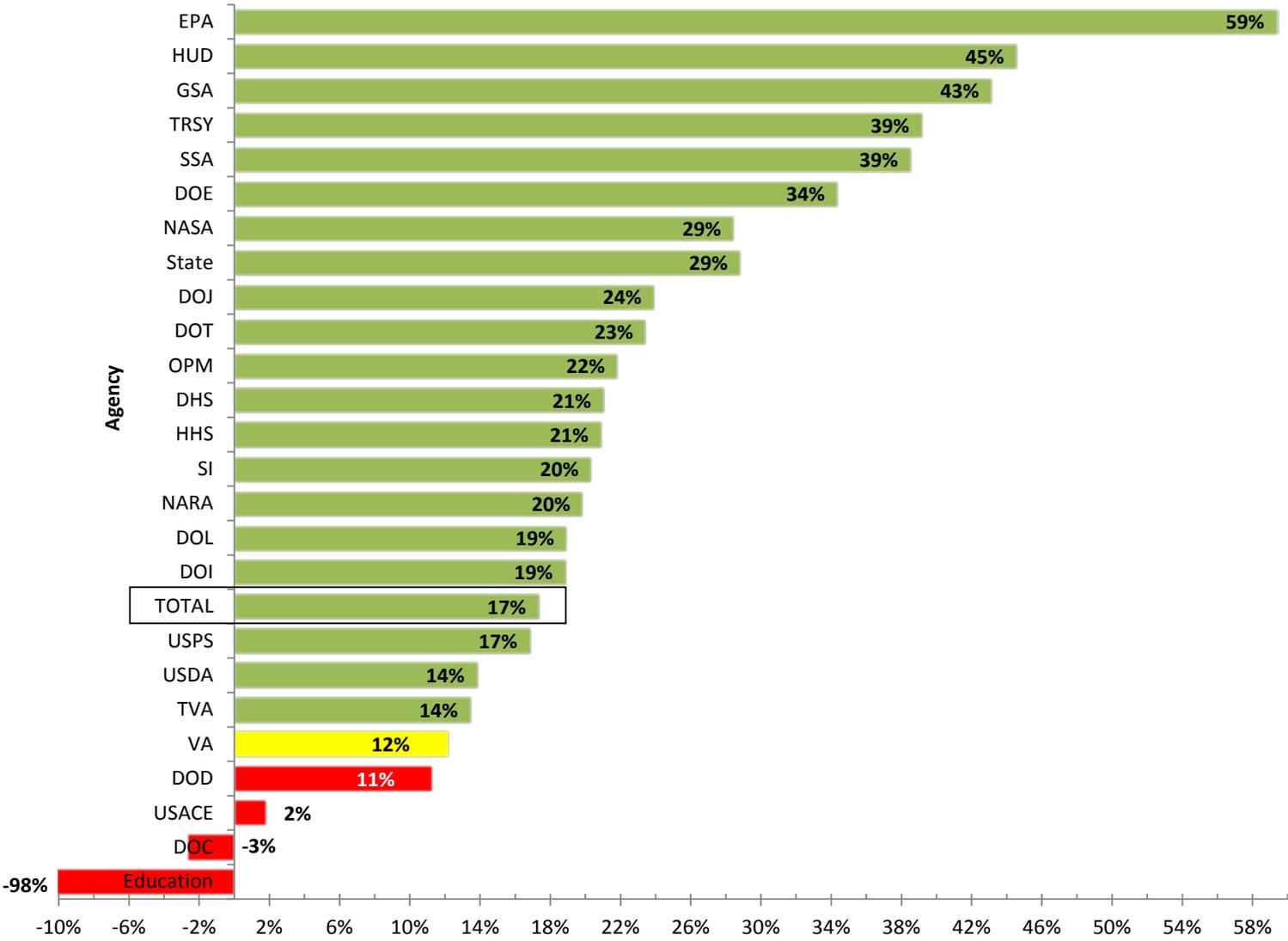
Federal Facilities: Gov't-Wide Progress Toward Meeting Sustainability Guiding Principles



Targeted Scope 1&2 GHG Emissions, FY 2008 - FY 2014



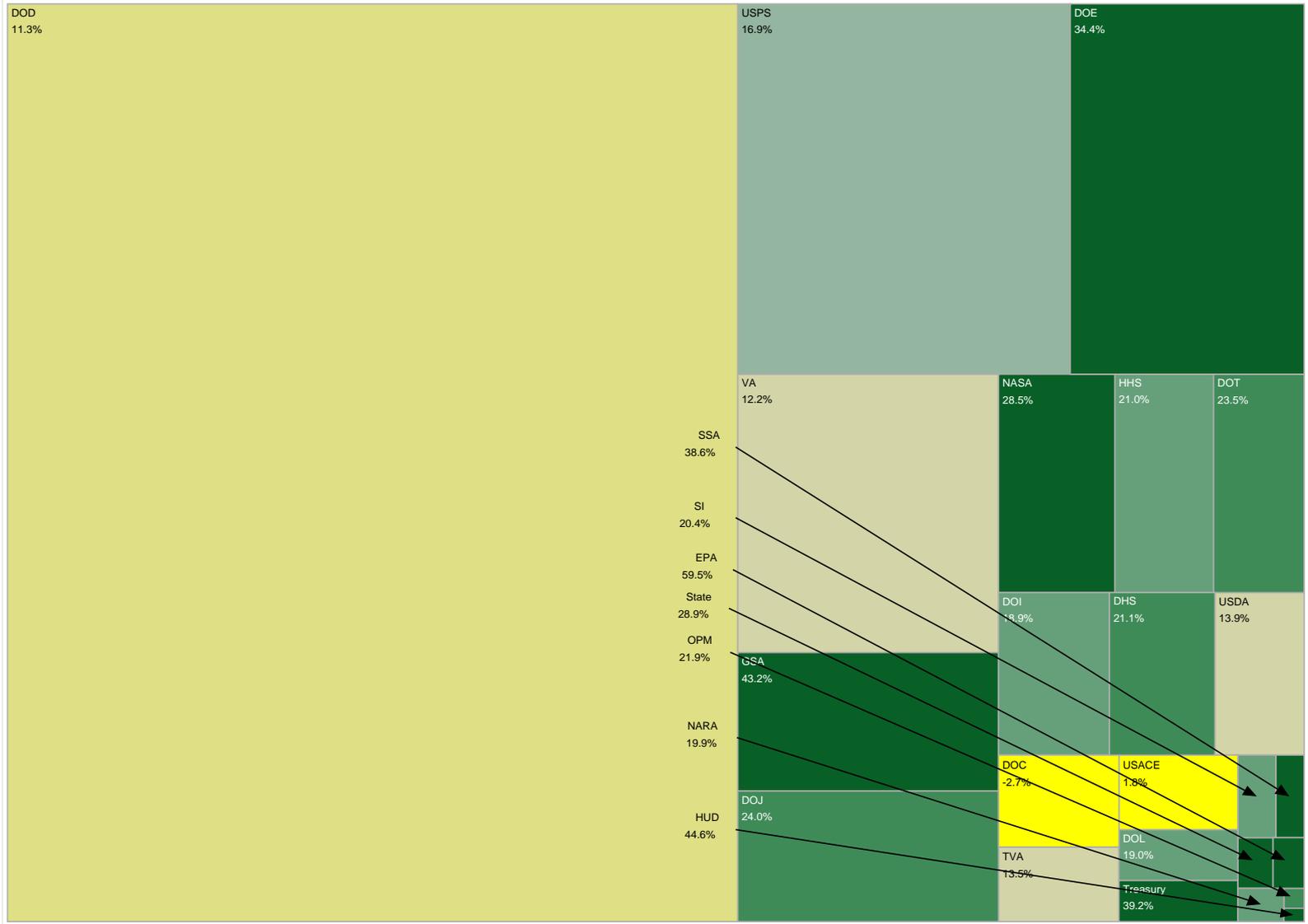
Agency Performance Toward Scope 1&2 Greenhouse Gas Reduction Goals



Percentage Reduction in Targeted Scope 1&2 GHG Emissions, FY 2008-2014

Agency Performance Toward Scope 1&2 Greenhouse Gas Reduction Goals

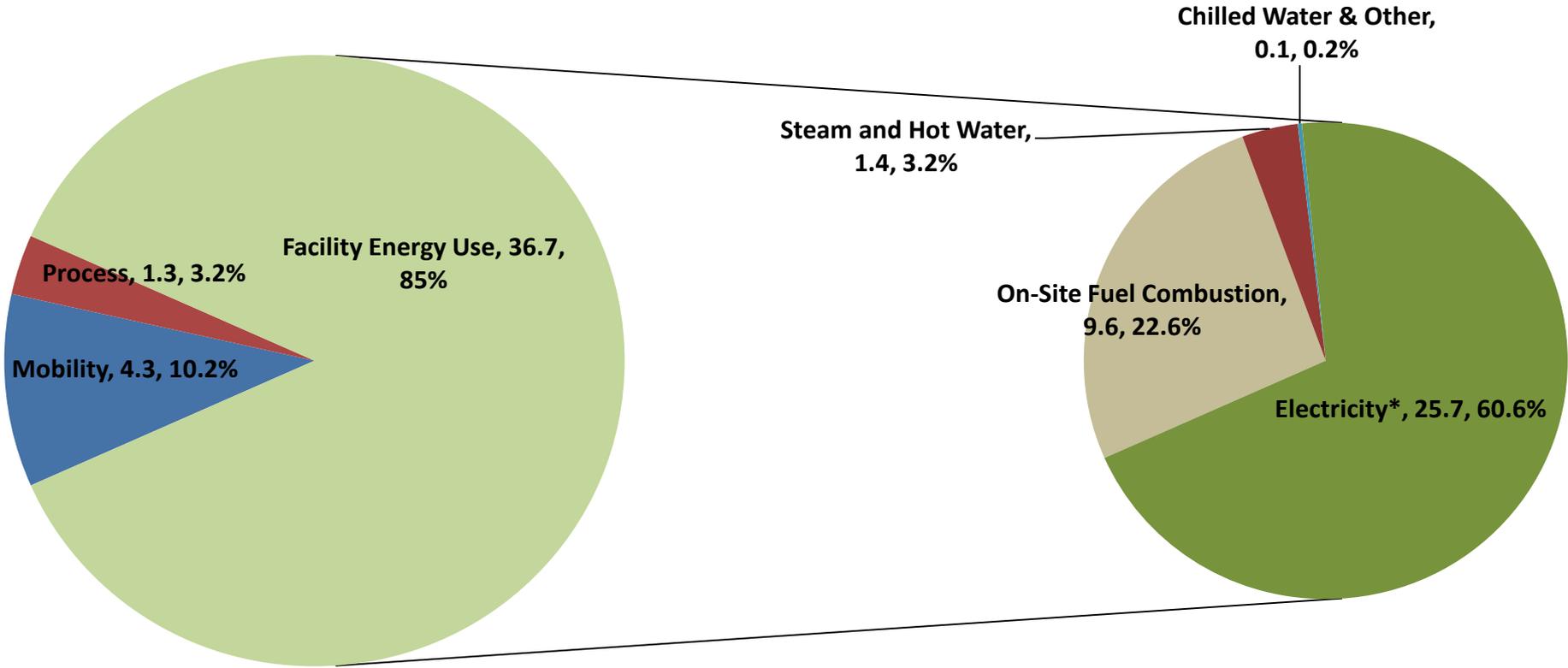
Goal-Subject GHG Reductions (FY 2008-FY 2014)



Percent Reduction in Scope 1 & 2 Target GHG Emissions
 0.0% 30.0%

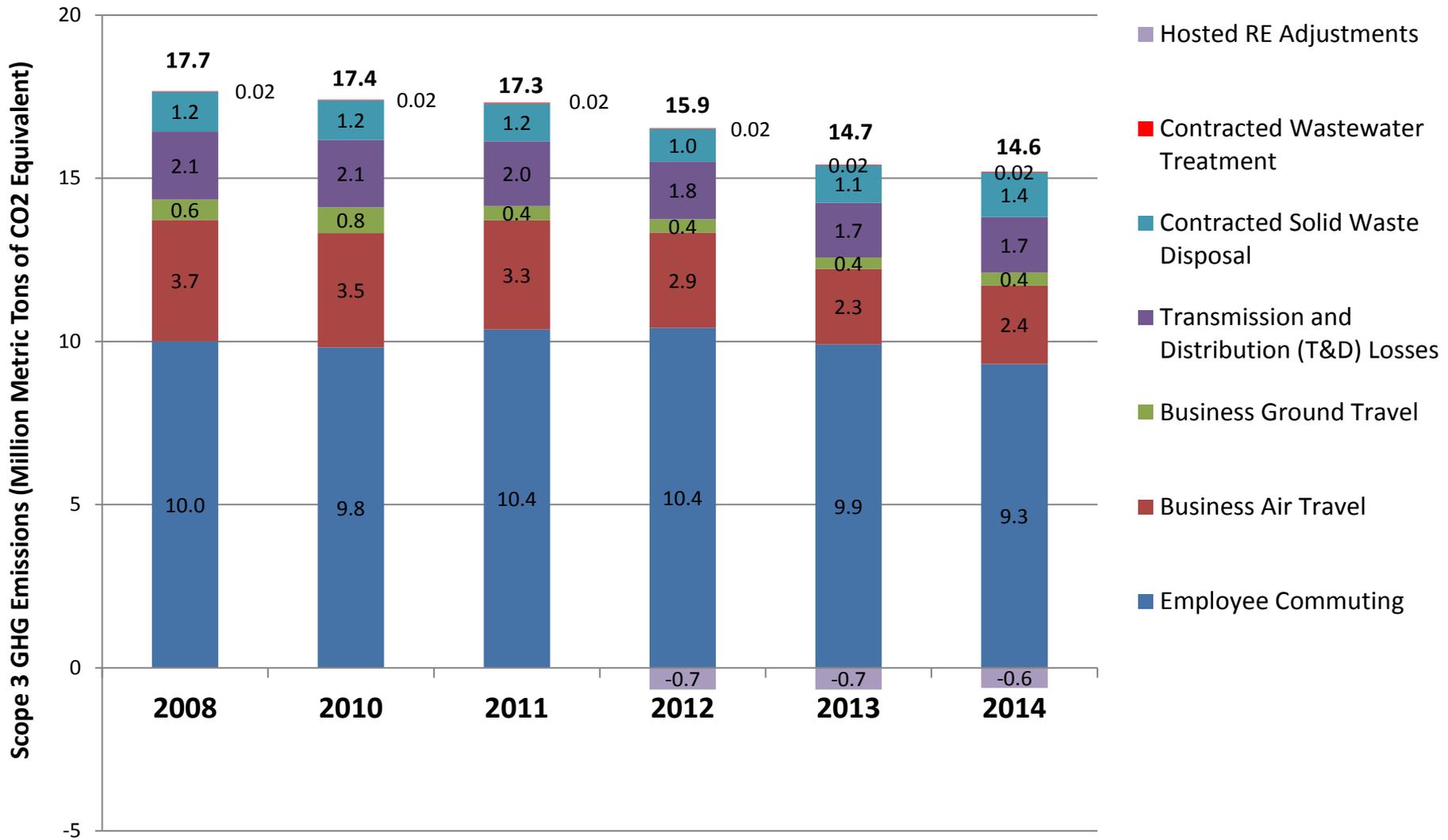
Sources of Scope 1&2 Greenhouse Gas Emissions

FY 2014 Federal Government Scopes 1 & 2 GHG Emissions Covered by Reduction Target (42.4 MMTCO₂e)



*includes reductions from purchases of renewable energy attributes

Targeted Scope 3 GHG Emissions FY 2008 - FY 2014

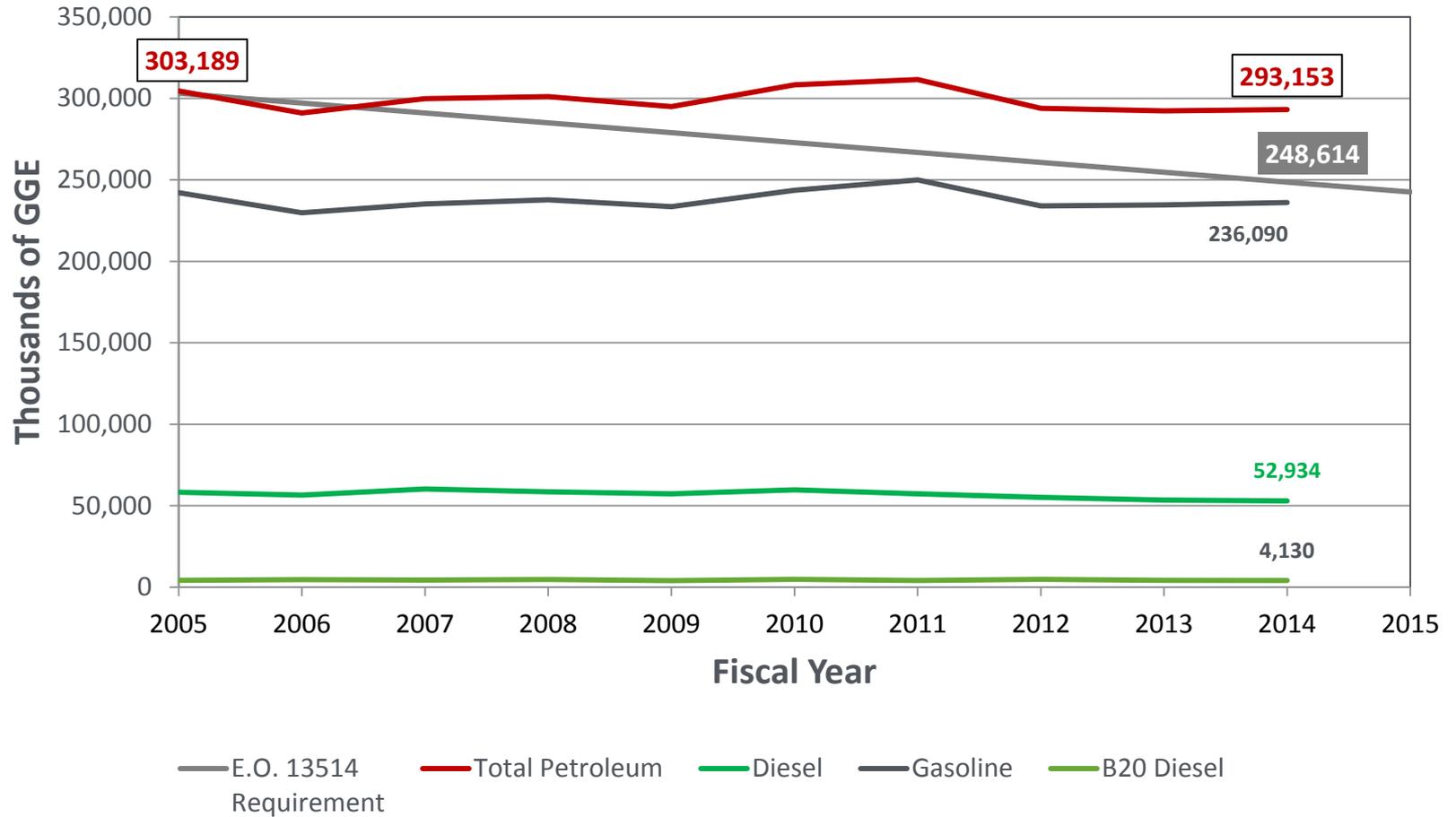


FY14 FEDERAL FLEET REGULATORY COMPLIANCE STATUS

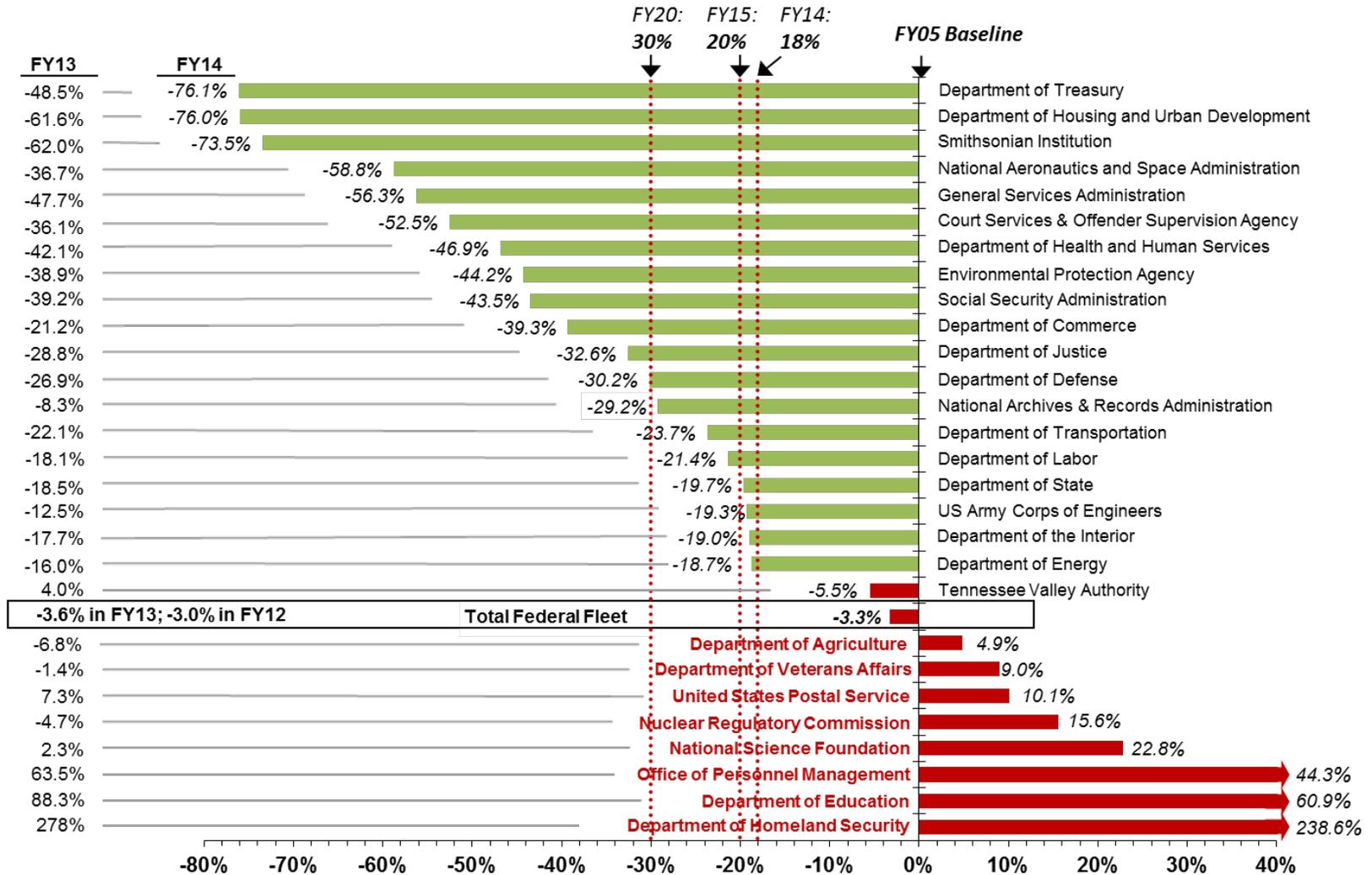
	EO 13423 (Total Petrol. Use)	EO 13423 (Total AF Use)	EPAct 92 (Acquisitions)	EPAct 05 § 701 (AF Use in AFVs)
REQUIREMENT	<ul style="list-style-type: none"> • 2% decrease annually from 2005 • 18% by FY14 	<ul style="list-style-type: none"> • 10% increase annually compounded • 136% by FY14 	<ul style="list-style-type: none"> • 75% of covered light-duty vehicles must be AFVs 	<ul style="list-style-type: none"> • AF use in non-waivered dual-fuel AFVs
PERFORMANCE	3.3% decrease	199% increase	• 192%	20%

FEDERAL FLEET SUSTAINABILITY PERFORMANCE

Fed Fleet Petroleum Consumption

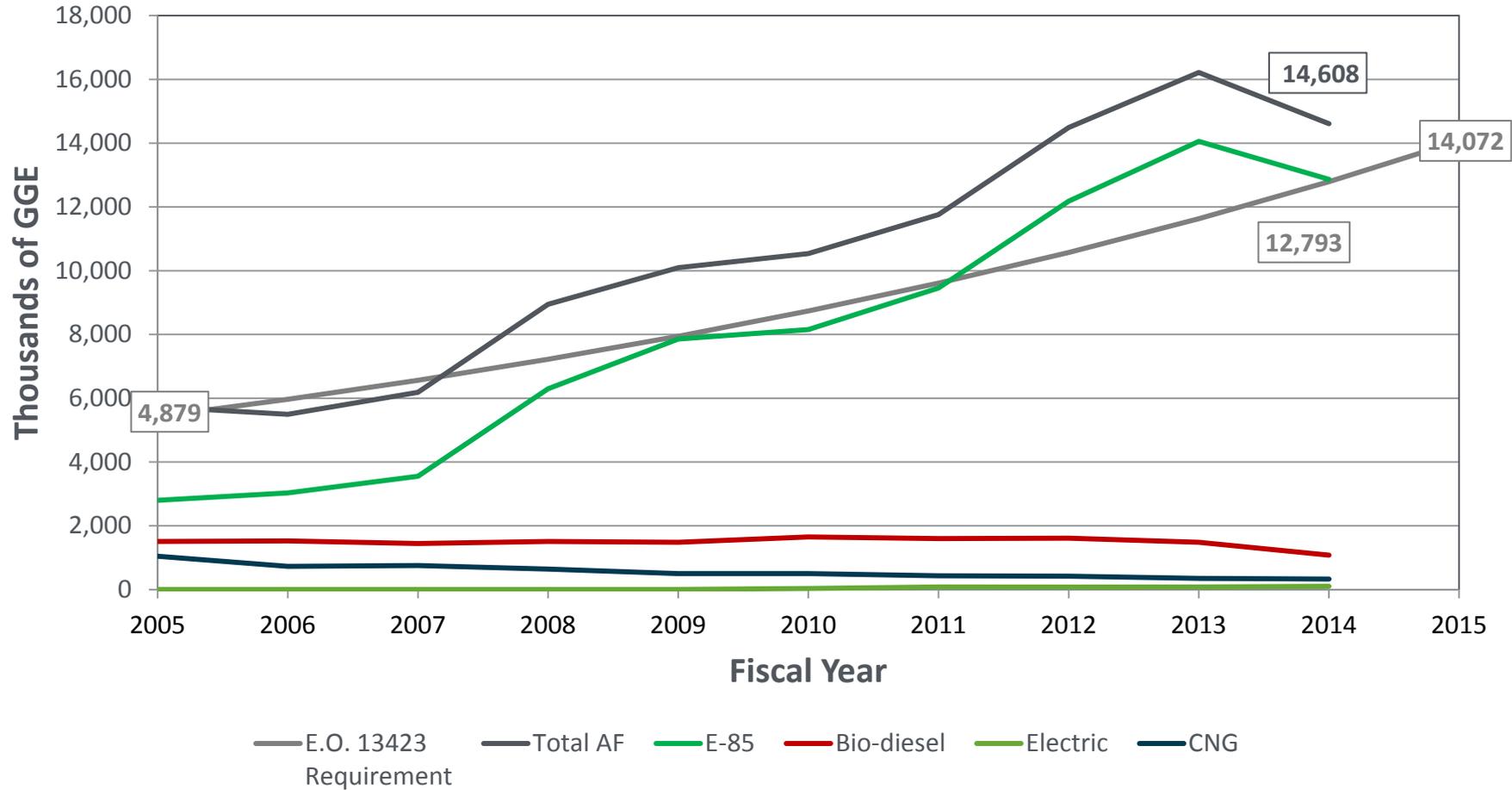


FY14 Petroleum Use Reduction, Relative to FY05 Baseline



FEDERAL FLEET SUSTAINABILITY PERFORMANCE

Fed Fleet Alternative Fuel Use



FY14 Alternative Fuel Use Increase, Relative to FY05 Baseline

