

Federal Progress Toward Energy/ Sustainability Goals

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Federal Progress Toward Energy/Sustainability Goals

Learning Objectives

The webinar will present FY 2015 key findings, including:

- Scope 1 & 2 greenhouse gas emission reductions
- Facility energy intensity reductions
- Renewables as a percentage of total electric energy
- Agency performance contracting investments awarded
- Water intensity reductions

Federal Progress Toward Energy/Sustainability Goals

Instructor



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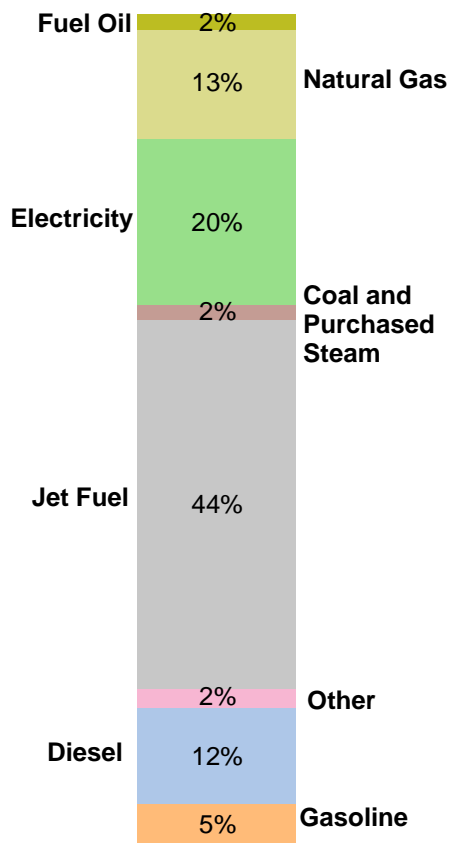
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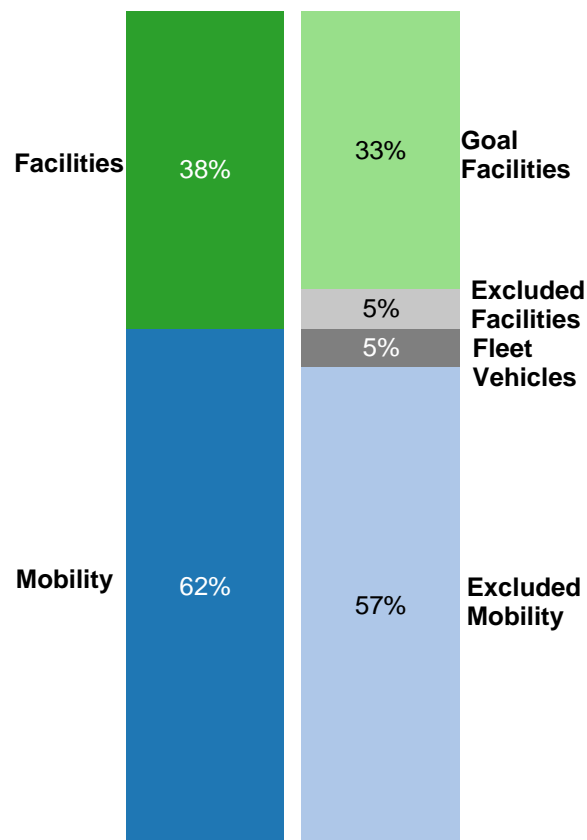
Overview of Federal Energy Consumption by Fuel Type, End Use, & GHG Emissions

Fiscal Year 2015 Federal Energy Consumption and GHG Emissions:
0.95 Quadrillion Btu, \$21 Billion, 83 Million MTCO_{2e}

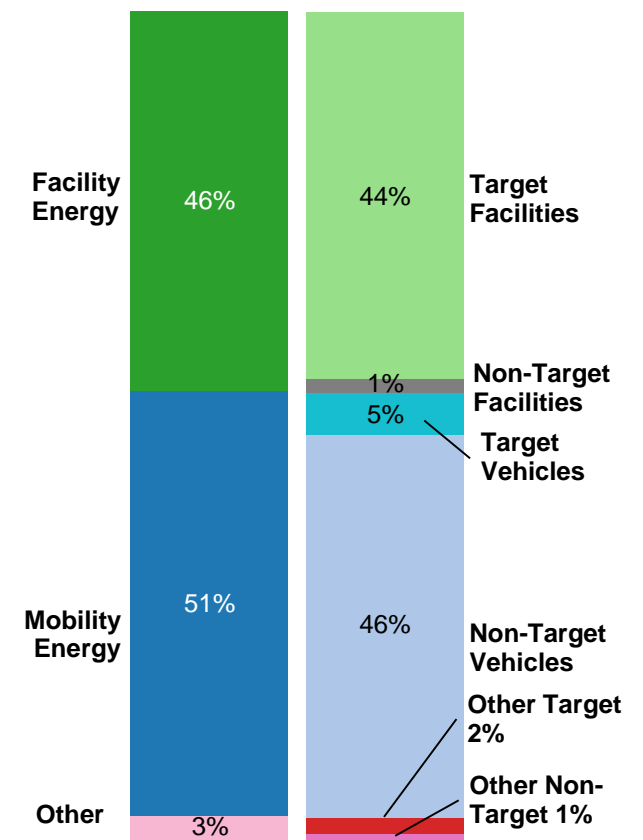
Consumption by Fuel Type



End-Use Sector



Scope 1 and 2 GHG Emissions



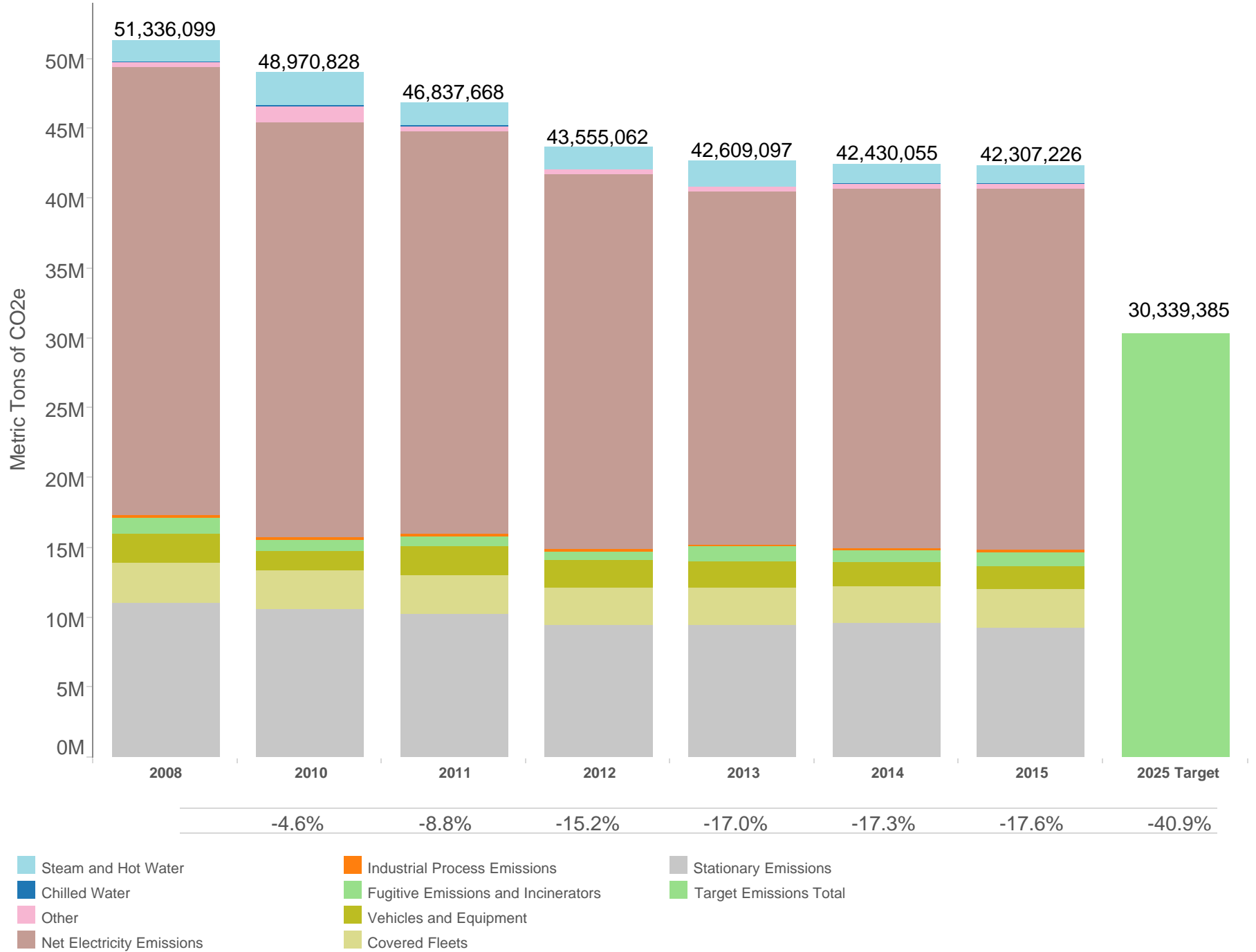
Pre-Existing Federal Goals vs. New E.O. 13693 Targets

Goals	Existing Goals	New E.O. 13693 Targets
Building Energy Intensity (Btu/Sqft) Reduction	30% (in 2015) Baseline 2003	25% (by 2025) Baseline 2015
Clean Energy Use as a Percentage of Facility Electric and Thermal Energy Use	None	25% (by 2025)
Renewable Electricity Use as a Percentage of Facility Electricity Use	7.5% (in 2015)	30% (by 2025)
Potable Water Use Intensity (Gal/Sqft) Reduction	16% (in 2015) Baseline 2007	36% (by 2025) Baseline 2007
Industrial/Landscaping/Agriculture Non-Potable Water Reduction (Gal)	10% (in 2015) Baseline 2010	30% (by 2025) Baseline 2010
Gov't-wide Scope 1&2 GHG Emissions Reduction	28% (by 2020) Baseline 2008	40% (by 2025) Baseline 2008
Gov't-wide Scope 3 GHG Indirect Emissions Reduction	13% (by 2020) Baseline 2008	28% (by 2025) Baseline 2008

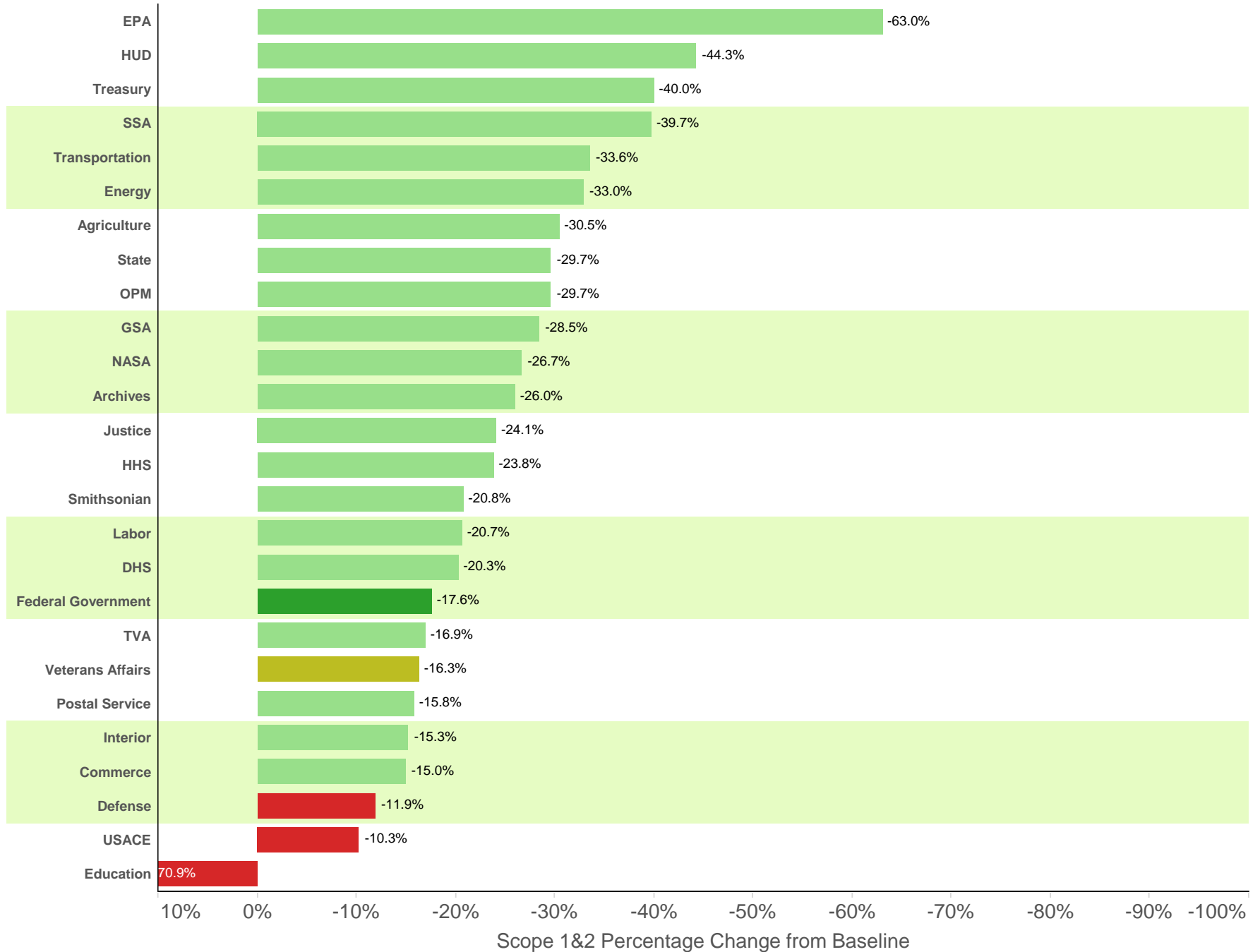
Key Findings for FY 2015

- Scope 1&2 GHG emissions declined 17.6% from FY08
- Scope 3 indirect GHG emissions decreased 17.5% from FY08
- Facility energy intensity fell short of the 30% goal with a 22.7% reduction from FY03; Btu/Sqft reduced 2.2% from prior year
- Renewable energy goal of 7.5% was exceeded (8.3% of electricity use)
- Potable water intensity reduction goal of 16% was exceeded (21.8% reduction vs. 2007) (Goals: 26% in 2020, 36% in 2025)
- Industrial/Landscaping/Agricultural (non-potable) water use was reduced 27% vs. 2010 (Goals: 20% in 2020, 30% in 2025)
- Efficiency investment in Federal facilities increased 15.6% from FY14
 - Direct funding investment: \$1,388 million
 - ESPC investment: \$466 million in FY15
 - UESC Investment: \$126 million in FY15

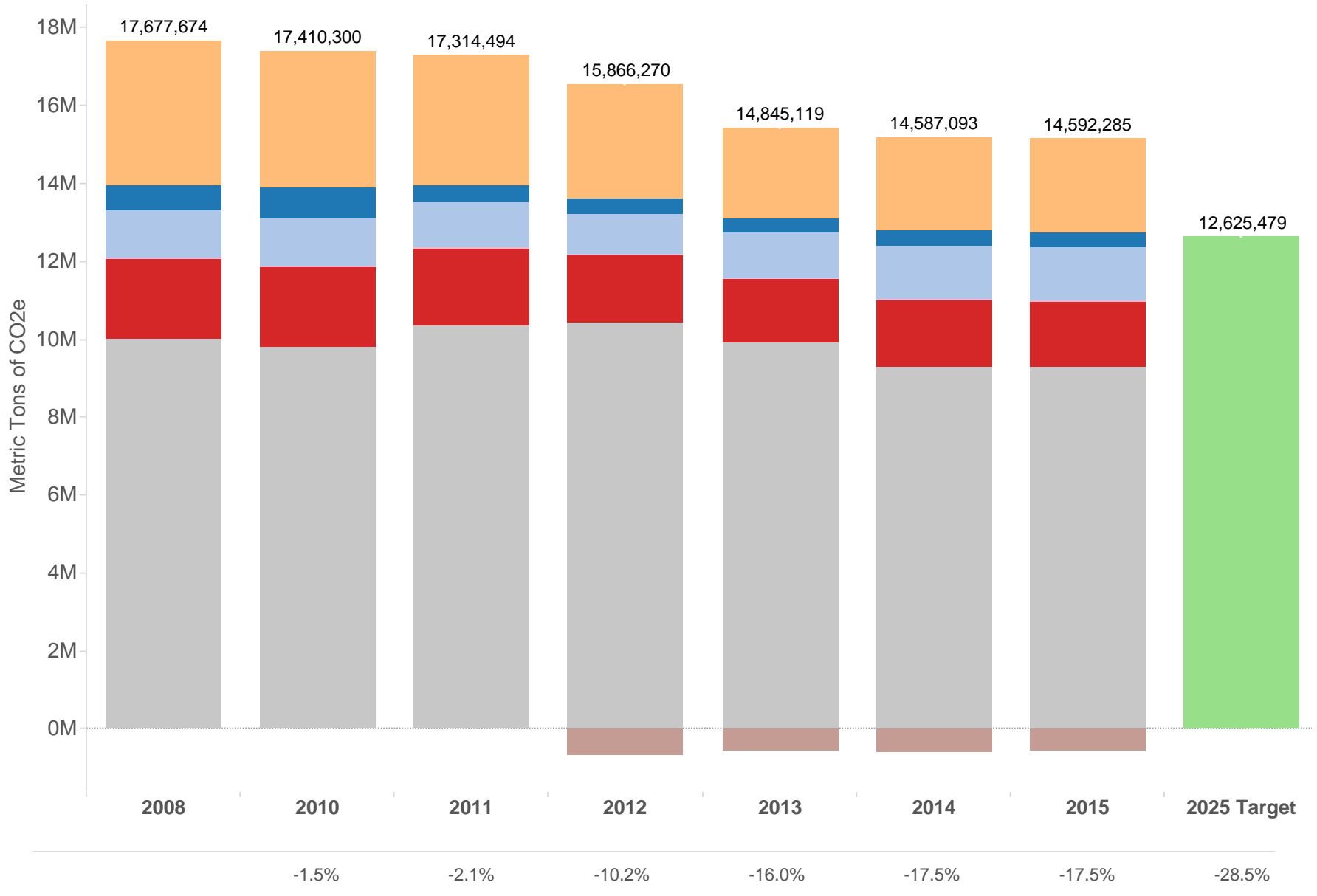
Federal Government Progress toward Scope 1 and 2 Greenhouse Gas Reduction Goal



Percentage Reduction in Scope 1 and 2 GHG Emissions FY 2008 - FY 2015

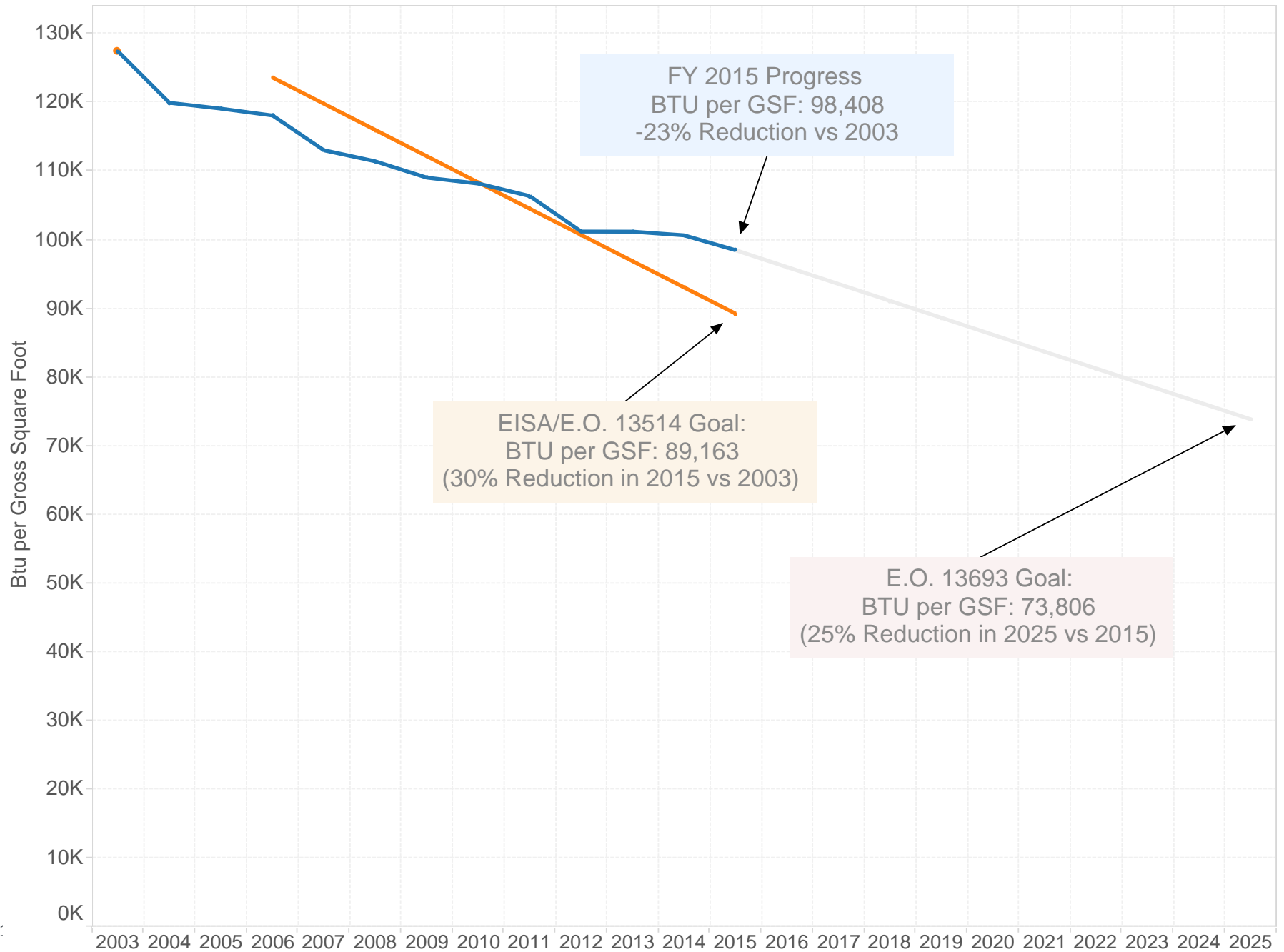


Federal Government Progress toward Scope 3 Greenhouse Gas Reduction Goal

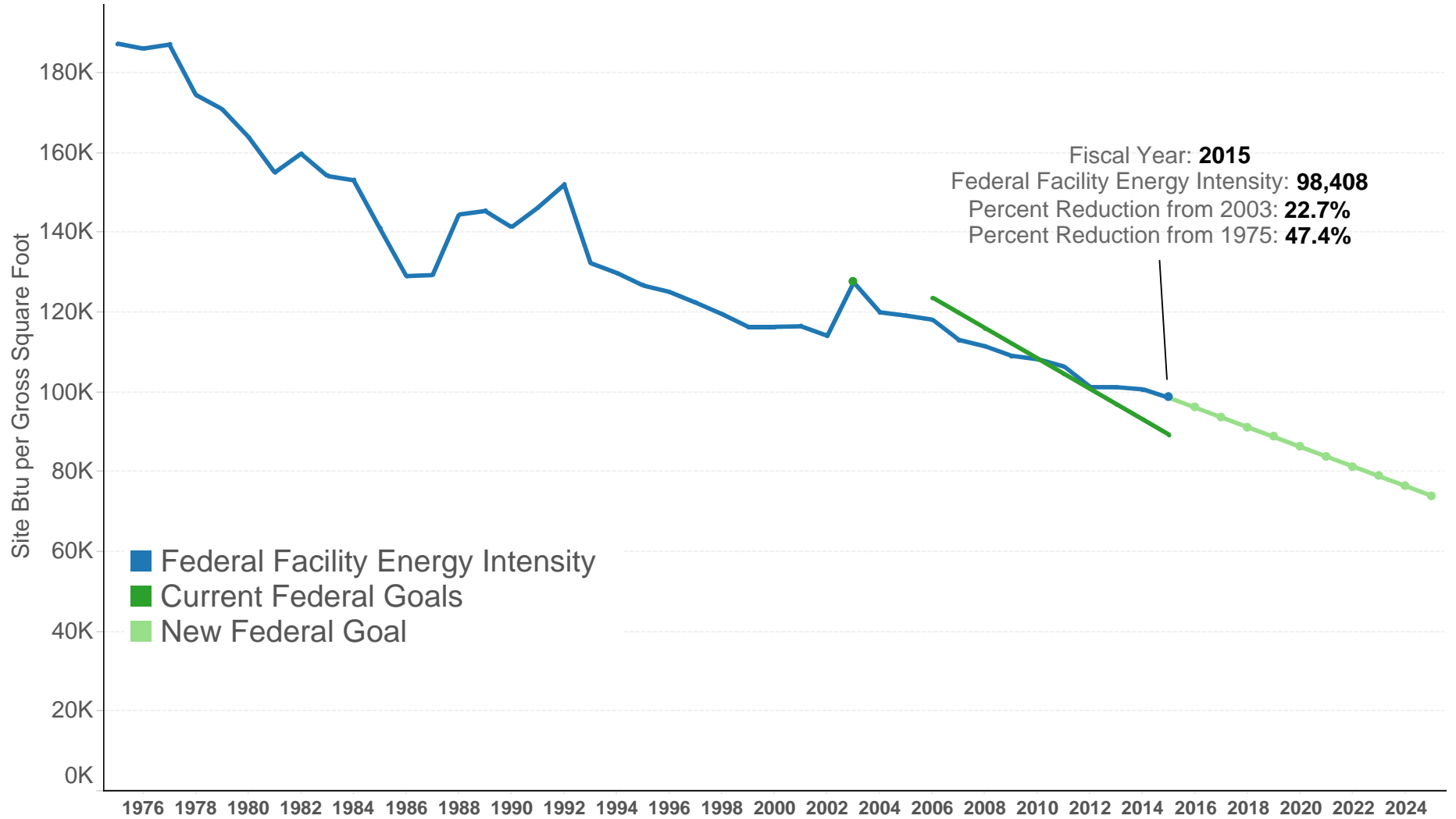


- Business Air Travel
- Contracted Wastewater Treatment
- Renewable Energy Hosting Credit
- Business Ground Travel
- Electricity T&D Losses
- Scope 3 Target Emissions
- Contracted Solid Waste
- Employee Commuting

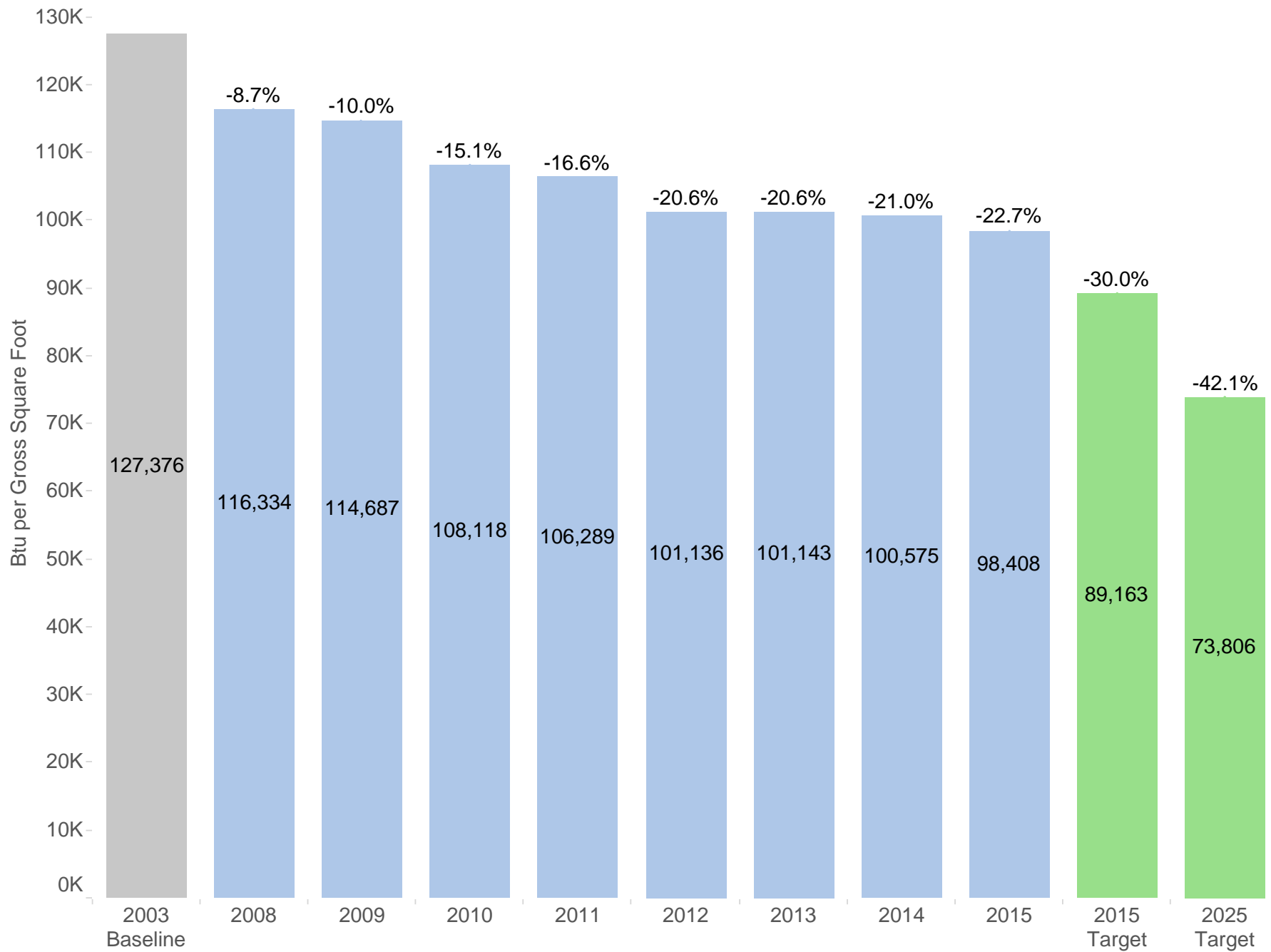
Overall Government Progress Toward Facility Energy Efficiency Goals, FY 2003 - FY 2015



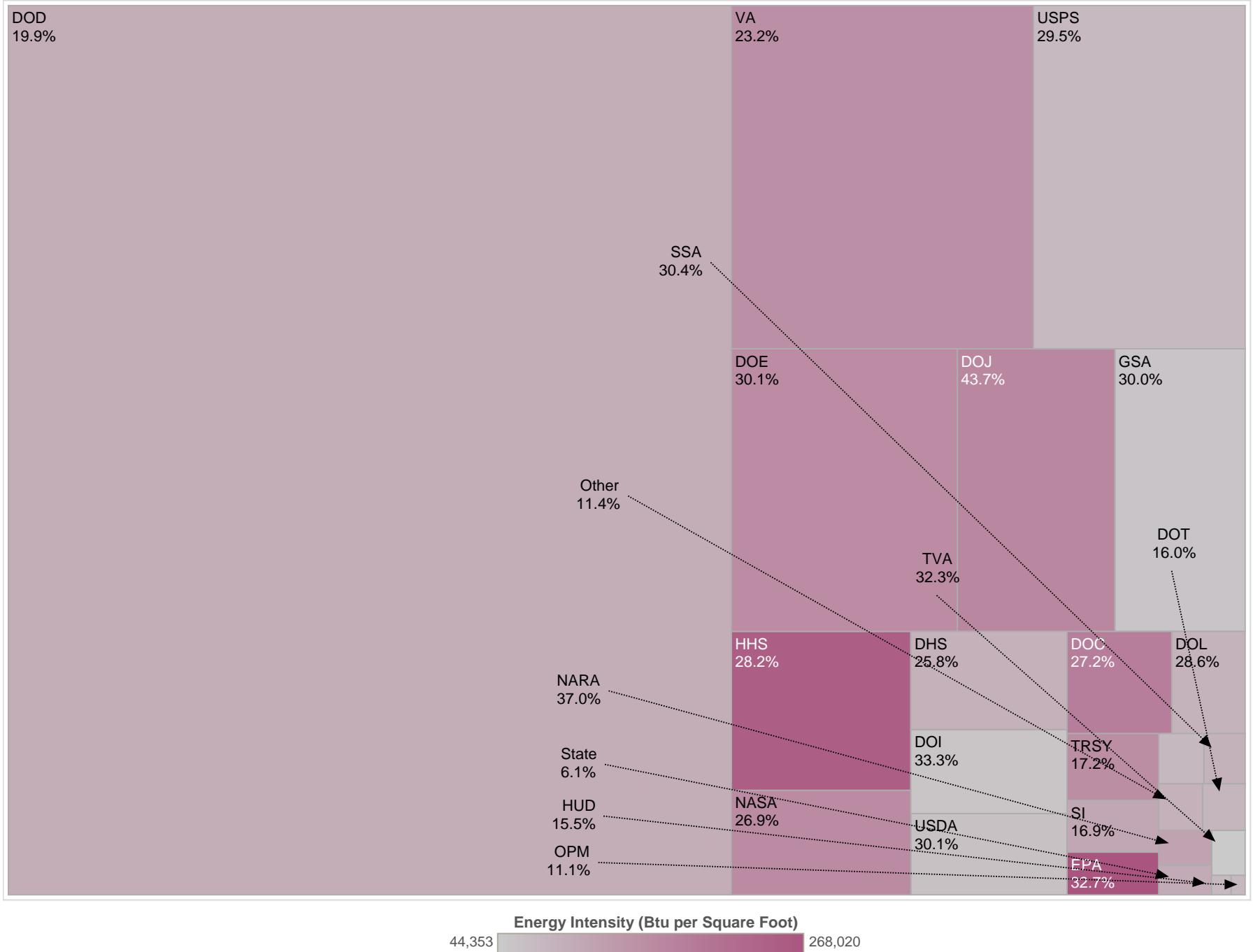
The Long Road of Progress



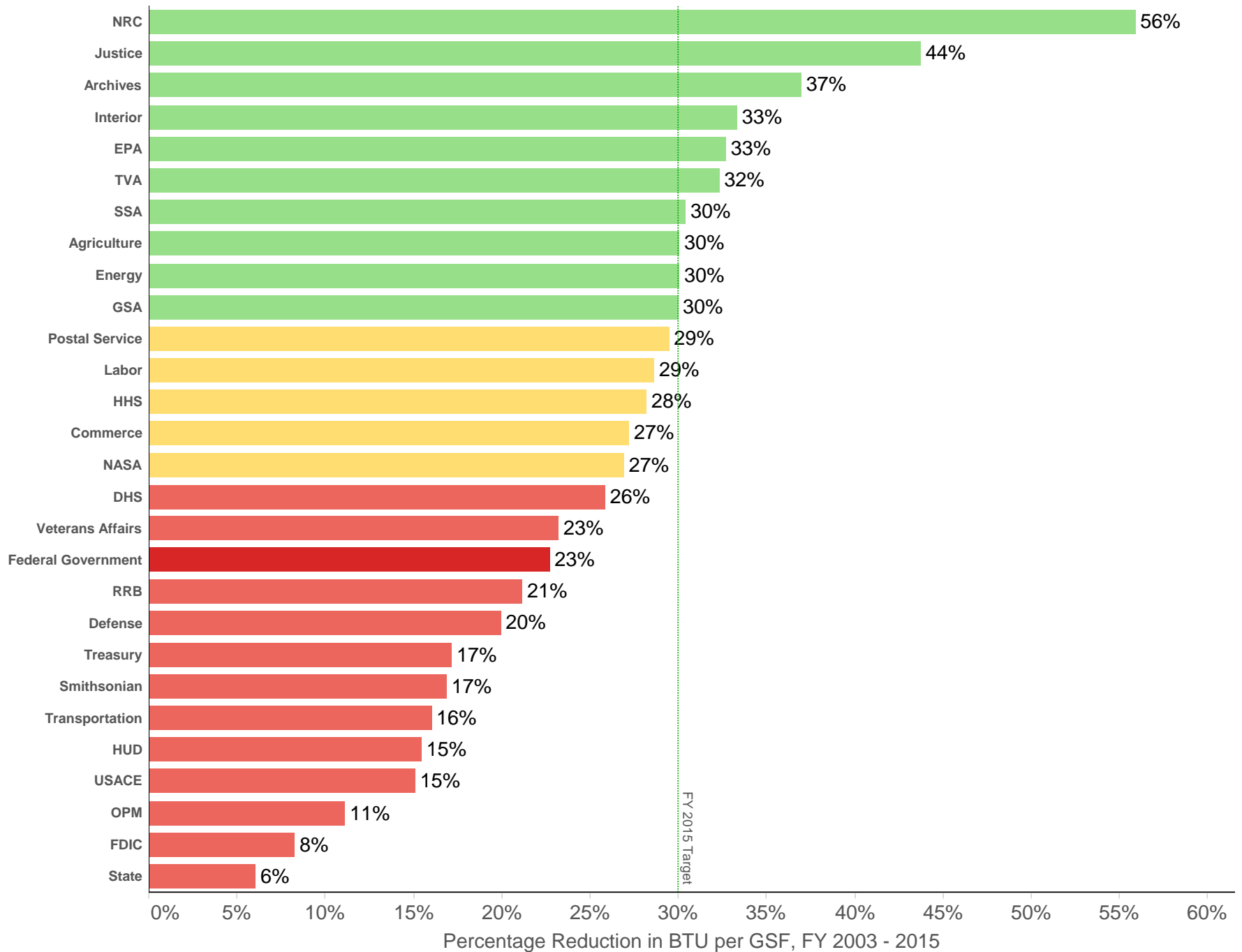
Federal Government Progress Toward Facility Energy Intensity Reduction Goal



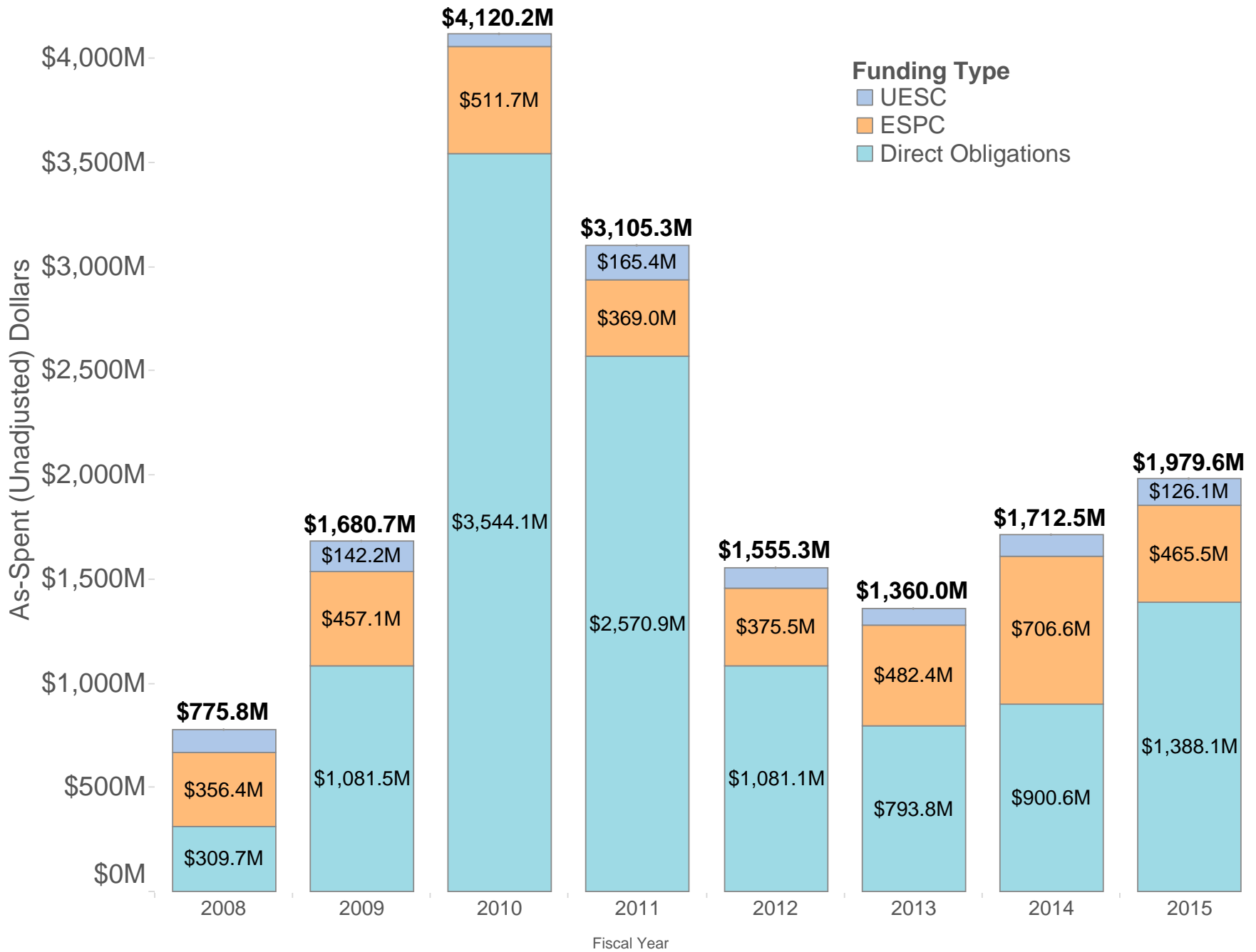
Goal Building Energy Use, Intensity and Reduction Progress 2015 vs 2003



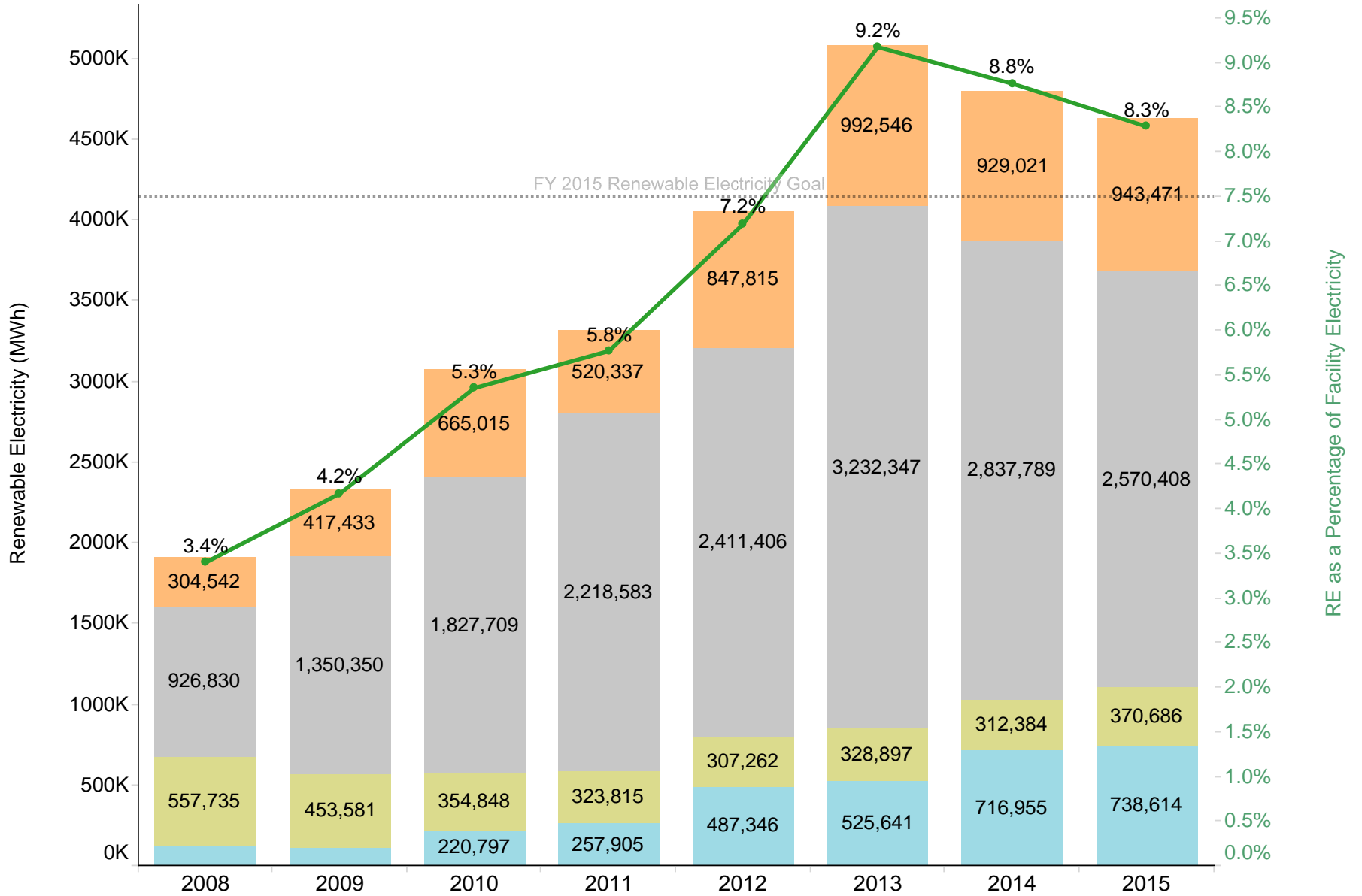
Federal Facilities: FY 2015 Agency Progress Toward Energy Intensity Reduction Goal



Federal Government Awarded Investment for Facility Efficiency (\$Million)



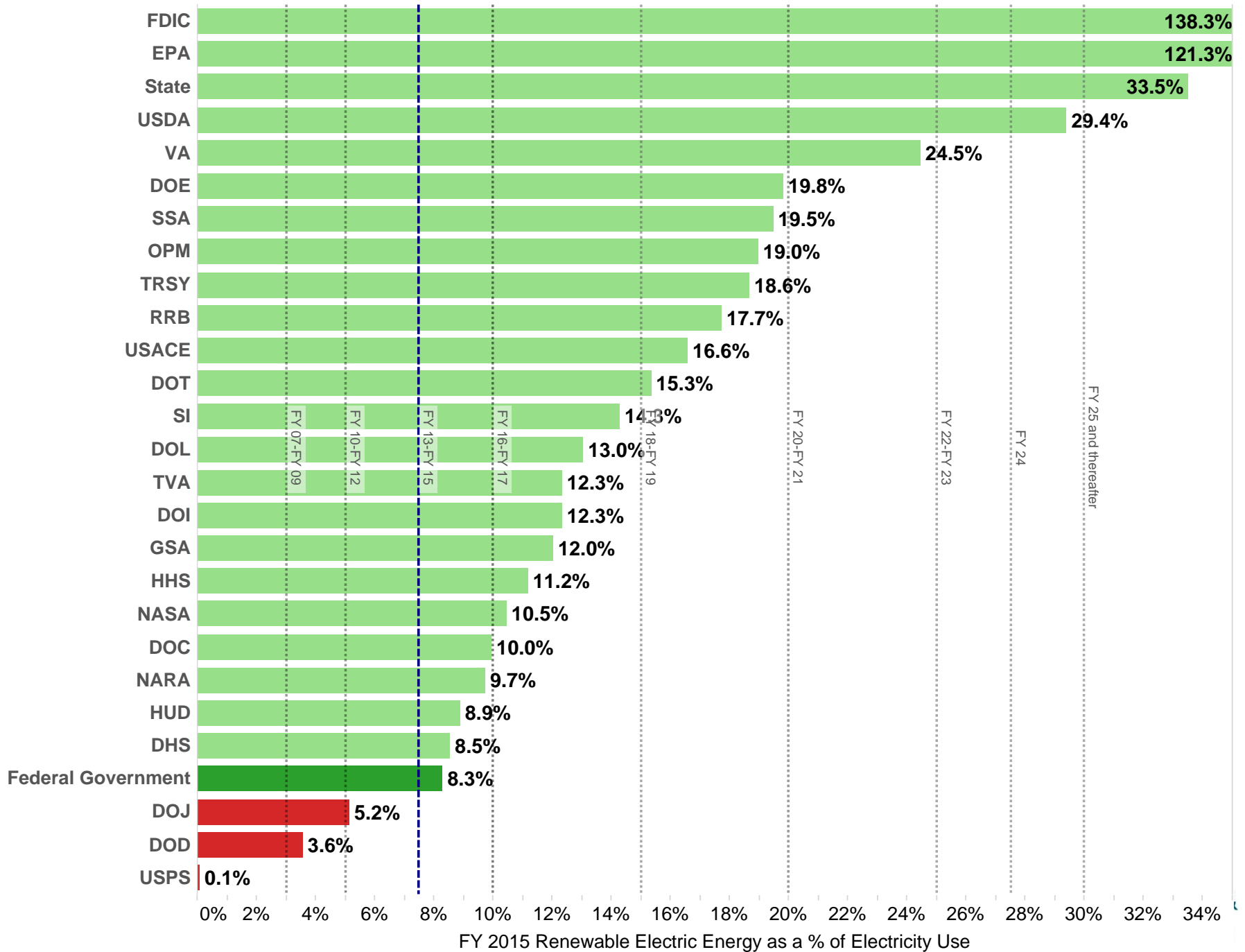
Federal Government Renewable Electricity Use



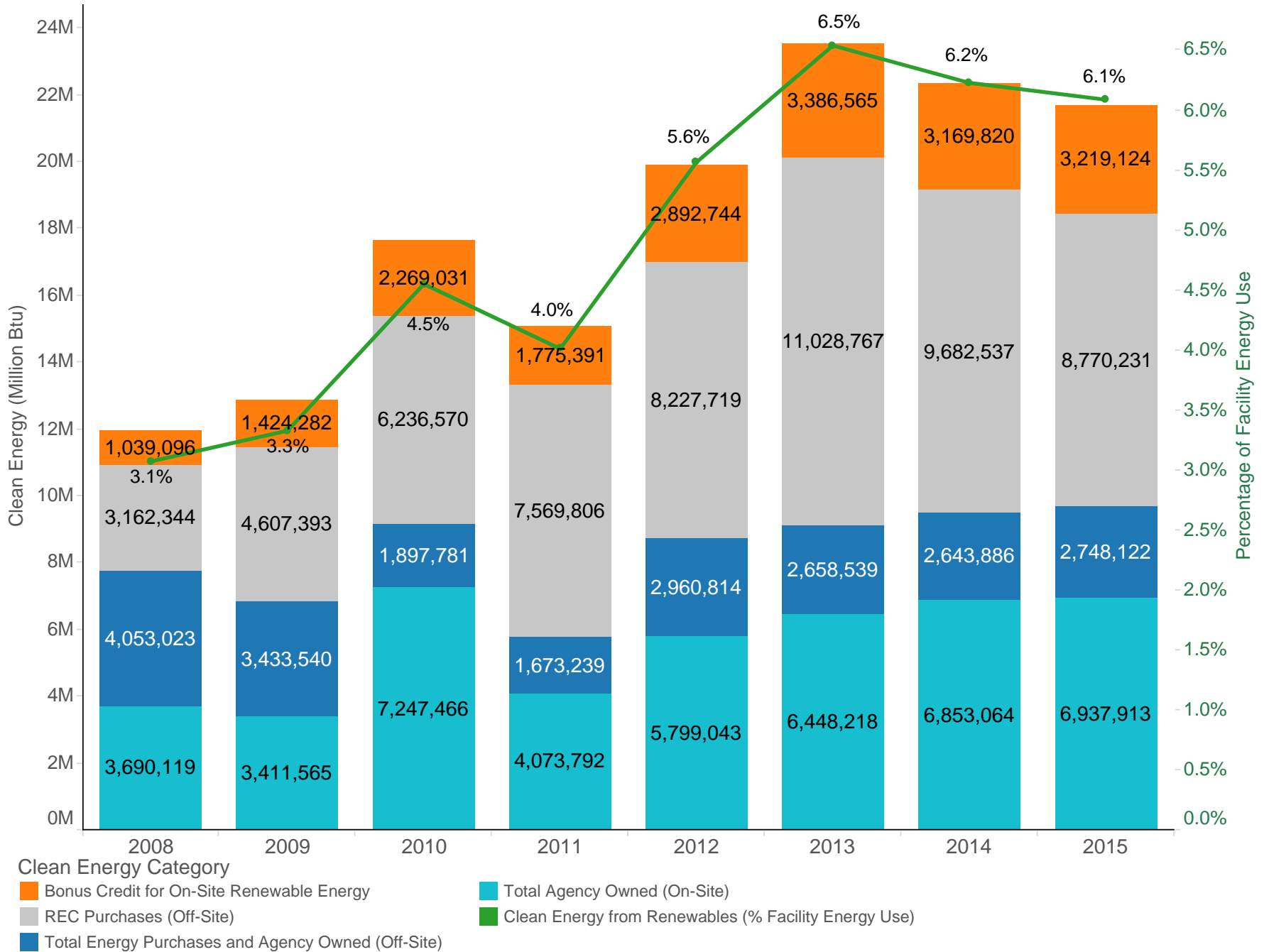
Renewable Energy Category

- Renewable Energy as a Percentage of Electricity Use
- Bonus Credit for On-Site Renewable Energy
- REC Purchases (Off-Site)
- Electricity Purchases and Agency Owned (Off-Site)
- Agency Owned (On-Site)

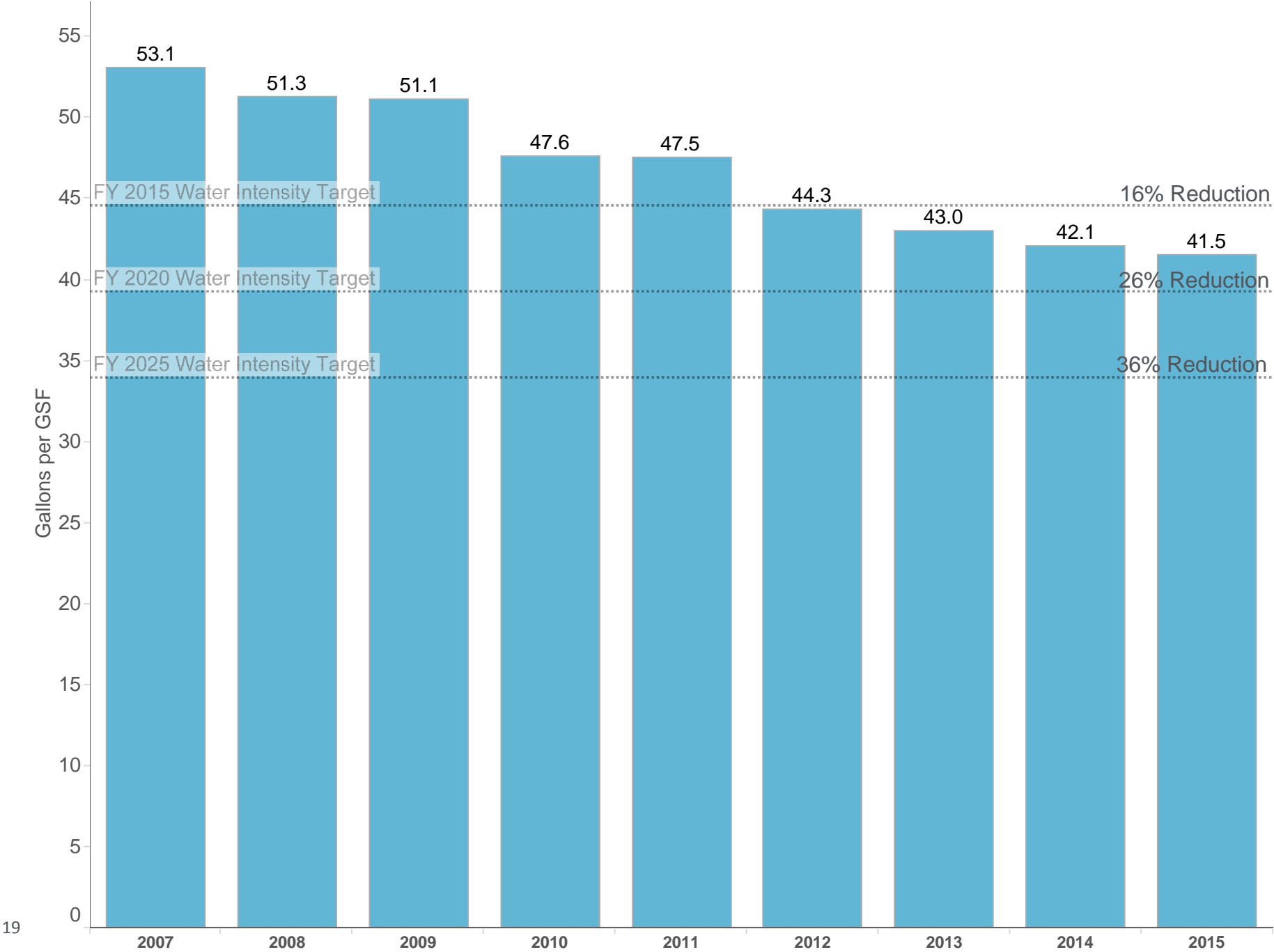
Federal Agency Progress Toward Renewable Electricity Target



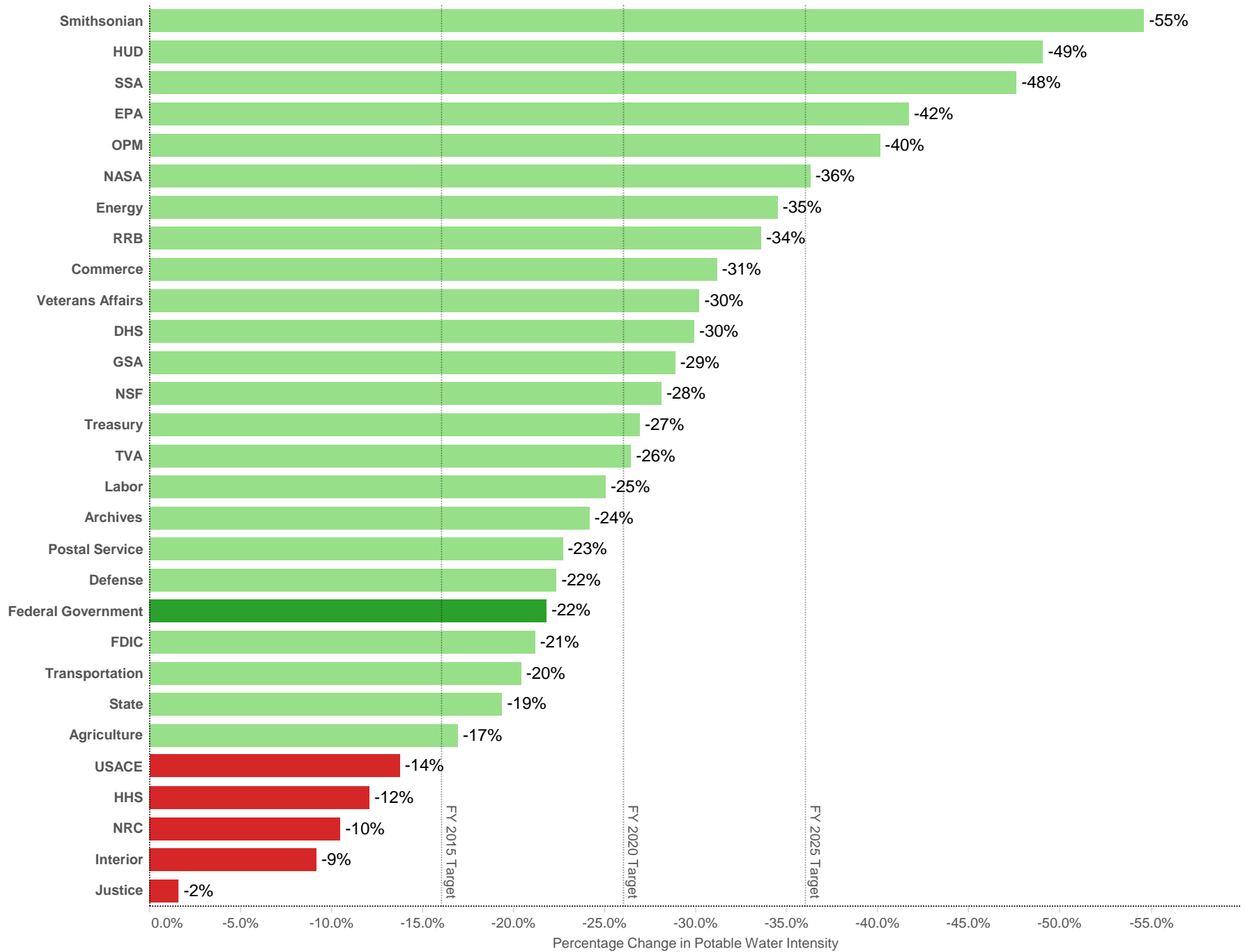
Federal Government Clean Energy Use as a Percentage of Federal Facility Energy Consumption



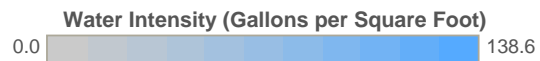
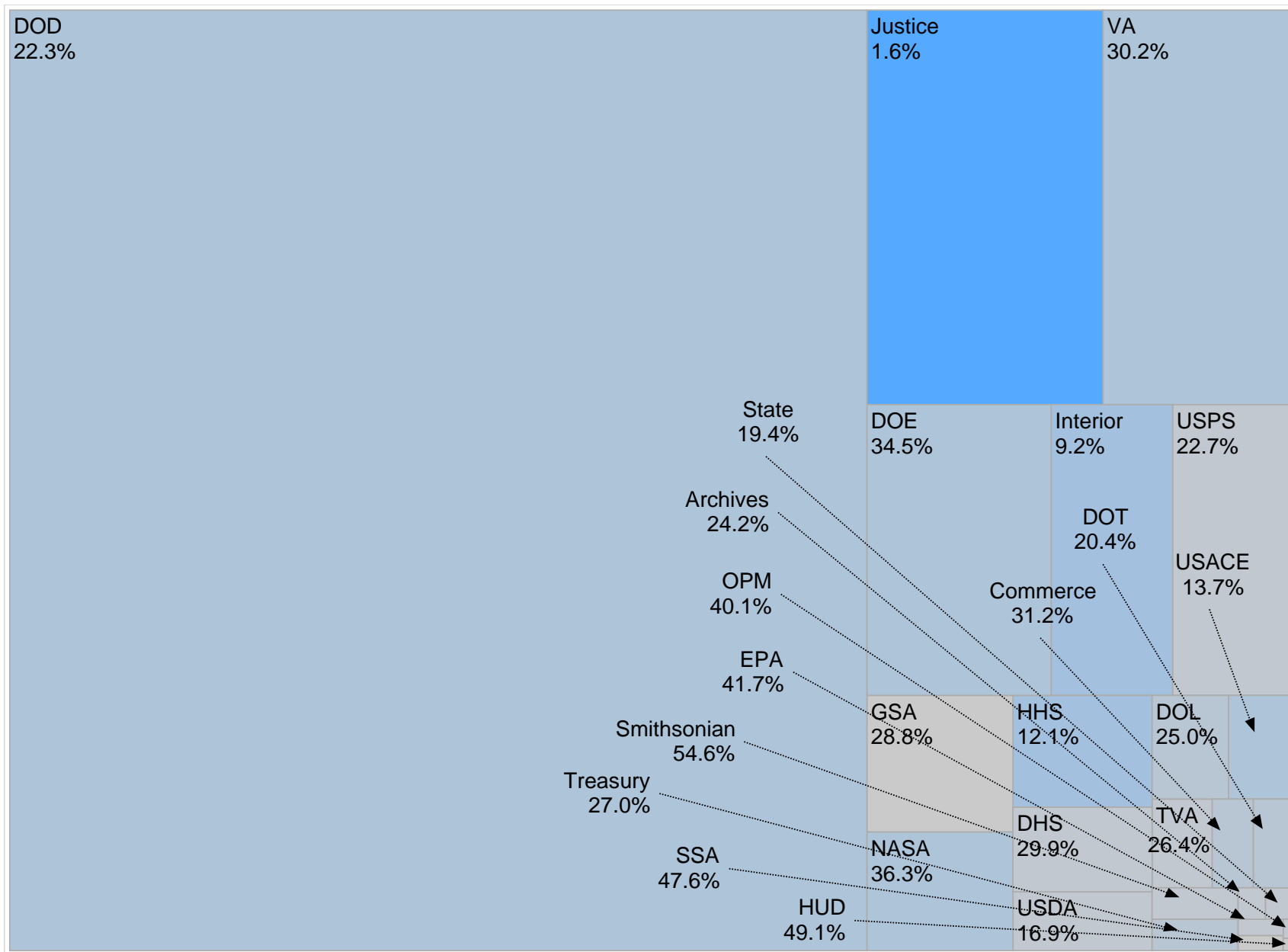
Federal Government Potable Water Intensity FY 2007 to FY 2015 (gallons per GSF)



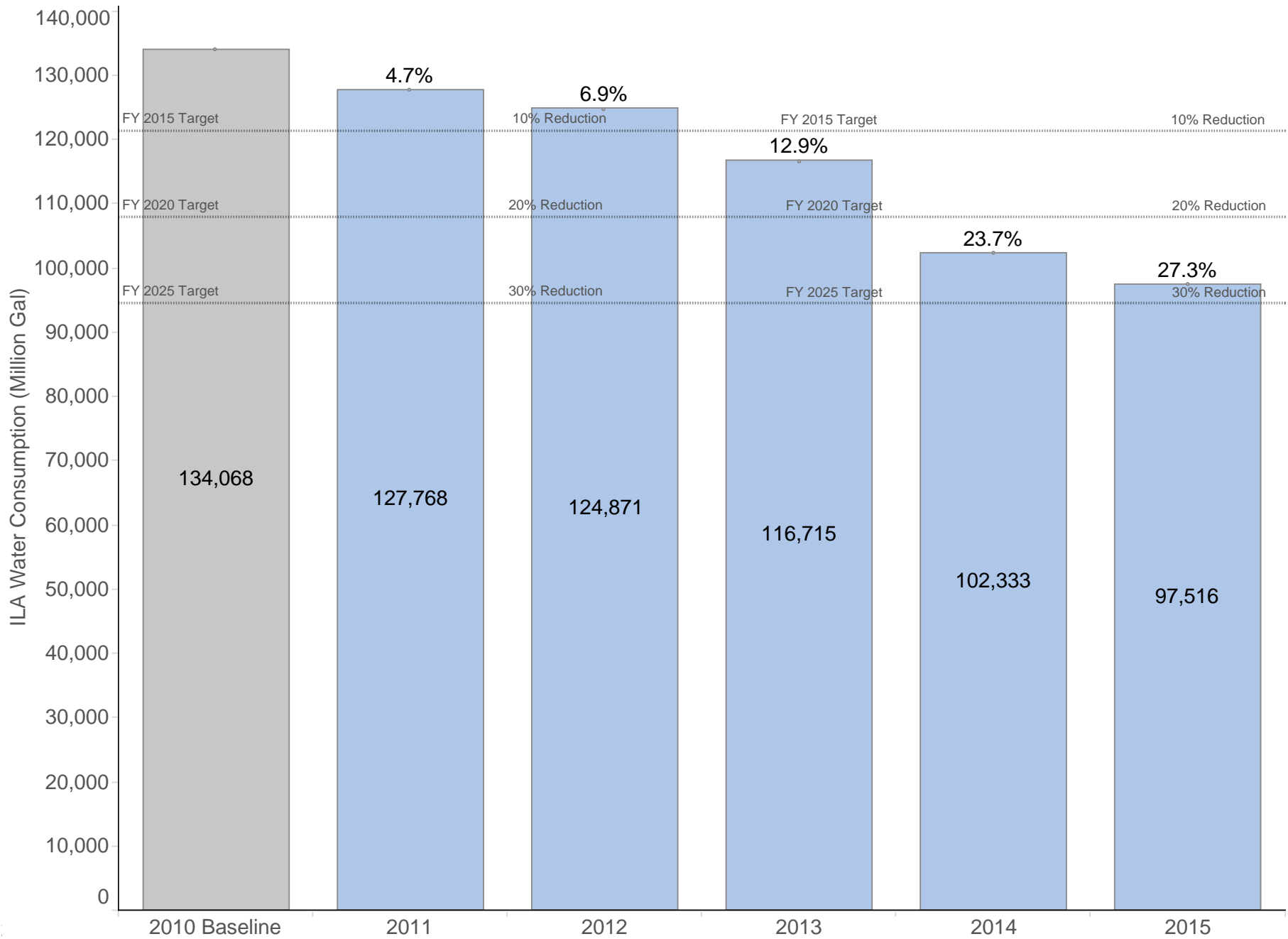
Federal Agency Progress in Potable Water Intensity FY 2007 to FY 2015



Potable Water Use, Intensity and Reduction Percentage 2015 vs. 2007



Federal Government Industrial, Landscaping and Agricultural (ILA) Water Consumption and Reductions from 2010



FEMP Annual Performance Data Site:

energy.gov/eere/femp/federal-facility-annual-energy-reports-and-performance

Comprehensive Annual Energy Data and Sustainability Performance

v1.1.5.0

Federal Facility Reporting and Data » Comprehensive Annual Energy Data and Sustainability Performance » Annual Data

FEDERAL GOVERNMENT ENERGY/WATER USE AND EMISSIONS IN 2015

In fiscal year 2015 Federal agencies used 947 trillion British thermal units (Btu) of delivered electric and thermal energy from fossil and Renewable sources across All End-Use Sectors including:

- 317 trillion Btu in buildings subject to statutory energy reduction requirements (Goal Subject Buildings)
- 45 trillion Btu in facilities excluded from statutory energy reduction requirements (Goal Excluded Facilities)
- 584 trillion Btu in Vehicles and Equipment including aircraft, ships, and on-road vehicle fleets.

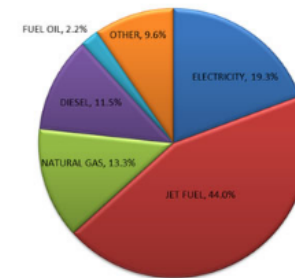
Direct (scope 1 and 2) Greenhouse Gas (GHG) Emissions mostly from energy use, totaled 84 million metric tons of carbon dioxide equivalent (MTCO₂e) including emissions subject to reduction targets, excluded from reduction targets, and emissions from biogenic sources. Emissions subject to reduction goals totaled 42 million MTCO₂e, a reduction of almost 18 percent from fiscal year 2008.

Federal agency Water Use totaled 129 billion gallons, equivalent to 41.5 gallons/square foot of facilities which is a 22% decrease from 2007 potable water use intensity.

Facility Investment, Gross Square Footage and Other Metrics reported by agencies include information on \$1.9 billion of investments in energy efficiency and renewable energy and agency progress in metering all appropriate buildings for electricity, natural gas and steam.

[Read more...](#)

Total Energy Consumption by Fuel Type: 0.94 quads



ENERGY USE AND COST

End-Use Sectors

[Read more...](#)

- A-1 Total Site-Delivered Energy Use in All End-Use Sectors, by Federal Agency (Billion Btu)
- A-2 Government-Wide Site-Delivered Energy Use and Costs in All End-Use Sectors (Constant Dollars)
- A-3 Site-Delivered Energy Use, Costs, and Gross Square Footage of Federal Facilities by Agency
- A-4 Total Primary (Source) Energy Use in All End-Use Sectors, by Federal Agencies (Billion Btu)
- A-5 Historical Federal Energy Consumption and Cost Data by Agency and Energy Type (FY 1975 to Present)
- A-8 Site-Delivered Energy Use and Costs by End-Use Sector and Energy Type, by Federal Agency (Native Units and Billion Btu)
- A-7 Energy Cost Metrics for Federal Facilities by Agency

Renewable Energy (All End-Use Sectors)

Goal Subject Buildings

Goal Excluded Facilities

Vehicles and Equipment

OTHER METRICS

Greenhouse Gas Emissions

[Read more...](#)

- E-1 Comprehensive Greenhouse Gas (GHG) Inventories by Agency and Fiscal Year
- E-2 Total Scope 1 & 2 GHG Emissions Subject to Reduction Targets (Compared to FY 2008)
- E-3 Scope 1 & 2 GHG Emissions Subject to Reduction Targets by Category (Compared to FY 2008)
- E-4 Scope 3 GHG Emissions Subject to Reduction Targets by Category (Compared to FY 2008)

Water Use

Facility Investment, Gross Square Footage, Other Metrics

References

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In Conclusion

Following the presentation:

- Click the link to complete a brief evaluation
- Receive a *Certificate of Completion*

This First Thursday Update will be archived on the FEMP Training website for on-demand viewing.

Thank you for joining us!

Questions? Please contact:

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