

# DEPARTMENT OF VETERANS AFFAIRS 2016 Strategic Sustainability Performance Plan



June 30, 2016

VA Green Management Program Service

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# Policy Statement



DEPARTMENT OF VETERANS AFFAIRS  
WASHINGTON DC 20420

MAY 24 2016

## Sustainability Management Policy

As the Department of Veterans Affairs Chief Sustainability Officer, confirm that the Sustainability Management Policy memorandum signed by Secretary Robert McDonald remains in effect.

All Administration and staff offices shall comply with the policies in agency level directives dealing with sustainable practices. These policies are found in VA Directive 055, VA Energy and Water Management Program; VA Directive 0056, VA Sustainable Buildings Program; VA Directive 0057, VA Environmental Management Program; VA Directive 0058, VA Green Purchasing Program; VA Directive 0059, Chemicals Management and Pollution Prevention; VA Directive 0062, Environmental Compliance Management; VA Directive 0063, Waste Prevention and Recycling Program; VA Directive 0064 - Environmental Management Systems; VA Directive 0065, Climate Change Adaptation Planning; VA Directive 0066, VA Sustainable Locations Program; VA Directive 0067, VA National Environmental Policy Act Implementation; and VA Directive 0637, VA Vehicle Fleet Management Program. VA's goal is to continually improve the agency's sustainability.

As a matter of policy, the Department will, to the best of its ability, and subject to adequate resources:

- Comply with all Federal, state, and local energy, environmental and transportation laws and applicable Presidential Executive Orders;
- Consider environmental and energy impacts when making planning, purchasing, operating, and budget decisions;
- Reduce greenhouse gas emissions, energy consumption, water consumption, and the amount of waste produced;
- Prepare for the impacts of and improving resilience to Climate Change;
- Improve energy efficiency and savings through the use of energy savings and performance contracts;
- Increase resource conservation, pollution prevention, sustainable acquisition, sustainable building design, electronics stewardship, and recycling;
- Participate in local and regional planning, incorporating the principles of environmental justice and consider sustainability when siting facilities;
- Continually improve sustainability by setting goals, measuring progress, taking corrective action when necessary, and communicating the results to VA management and staff;
- Use a headquarters-level Sustainability Management System to set and review objectives and targets at the Department level and Administration level;
- Communicate and reinforce this policy throughout the agency.

A handwritten signature in blue ink that reads "James M. Sullivan".

James M. Sullivan  
Chief Sustainability Officer



DEPARTMENT OF VETERANS AFFAIRS  
WASHINGTON DC 20420

May 1, 2015

**DEPARTMENT OF VETERANS AFFAIRS ENVIRONMENTAL SUSTAINABILITY POLICY**

1. The Department of Veterans Affairs (VA) will continually strive to become a more sustainable agency for the benefit of our Nation's Veterans consistent with all laws, regulations and mandates. VA will put Veterans' interests first by improving the lives of Veterans and their families, safeguarding human health and the environment, and using resources more efficiently. VA empowers employees to work as a single integrated sustainability force supporting the MyVA initiative.
2. VA will apply sustainability initiatives to improve the lives of our Veterans by:
  - Protecting the health and environment of the communities we serve;
  - Using sustainable buildings, equipment, and supplies to improve health outcomes; and
  - Becoming more resilient to the impacts of climate change.
3. VA will safeguard human health and the environment by:
  - Selecting sustainable facility sites to minimize our environmental impact;
  - Constructing and renovating sustainable buildings to improve Veterans' customer experiences; and
  - Operating our facilities and transportation networks to reduce greenhouse gas emissions and other pollution.
4. VA will use resources more efficiently to serve our expanding mission by:
  - Using energy and water more wisely to preserve natural resources and avoid unnecessary costs;
  - Employing vehicles as efficiently as possible while providing critical services directly to increasing numbers of Veterans;
  - Using environmentally preferred products, materials and equipment;
  - Reducing waste streams, safely recycling used materials and products whenever possible; and
  - Integrating sustainability efforts to realize efficiencies.
5. All Administrations and staff offices shall comply with the policies established in agency-wide directives dealing with sustainable practices. Please direct questions regarding this policy to James M. Sullivan, the VA Senior Sustainability Officer, at (202) 461-6671.

A handwritten signature in blue ink that reads "Robert A. McDonald".

Robert A. McDonald

# **Executive Summary**

## **Vision**

The mission of the U.S. Department of Veterans Affairs (VA) is to fulfill President Lincoln's promise "To care for him who shall have borne the battle, and for his widow, and his orphan." VA provides numerous benefits and services to honor the men and women who are America's Veterans, including medical care, financial benefits, and memorial services. Sustainability is fundamental to achieving this mission. VA strives to provide healthy, productive, and cost-effective environments for Veterans, staff, and visitors while minimizing any negative impacts of our operations on the communities and environments in which we operate. In 2015, Secretary McDonald issued his vision in the Sustainability Management Policy. VA's Chief Sustainability Officer (CSO) reaffirms the policy annually.

## **Leadership**

VA senior leaders are responsible for establishing and implementing VA's sustainability policy. The CSO coordinates with senior leaders across the Department, including the Chief Information Officer, the Senior Real Property Officer, the Chief Acquisition Officer, and the General Counsel, in carrying out CSO responsibilities. The CSO also relies on the VA Sustainability Management System, a central office-level framework for establishing sustainability objectives and targets for the Department, and oversees progress toward meeting sustainability goals.

The CSO leads the VA Green Management Program (GMP), which is the Department-level program and policy office for energy, environment, vehicle fleet management, and sustainable buildings. GMP is responsible for establishing agency policy and overseeing its implementation across VA, with emphasis on VA's three Administrations: the Veterans Health Administration (VHA), the Veterans Benefits Administration (VBA), and the National Cemetery Administration (NCA). GMP is responsible for internal coordination and communication regarding VA's sustainability plan, including the integration of agency policy, planning, budgeting, and project implementation.

GMP provides leadership to the Department through formal internal and external working groups and informal stakeholder networks addressing primary areas of sustainability. GMP representatives are active participants in federal interagency working groups and related subgroups, and share information and best practices with other participants.

GMP also provides input and support for VA's Strategic Capital Investment Planning (SCIP) process. SCIP is the Department-wide process designed to improve the delivery of services and benefits by addressing VA's most critical needs and/or performance gaps first. Sustainability is integrated into SCIP as a performance gap factor for evaluating the contribution of projects toward sustainability goals. Proposed capital projects receive credit for energy and water efficiency improvements, sustainable construction and renovation of buildings, increased renewable energy consumption, and reduced greenhouse gas (GHG) emissions.

## Performance Review

VA continues to experience unprecedented growth in services being provided to our Nations Veterans and beneficiaries. Nevertheless, we strive to meet sustainability-related targets while providing the highest standard of care. As VA works towards sustainability related goals and mandates, mission requirements continue to evolve. To better serve Veterans, VA is providing services to Veterans in their homes and neighborhoods as well as at VA facilities. Such developments, in addition to the Department's strict requirements related to infection control, present unique and significant challenges to our ongoing efforts to meet sustainability goals.

The following is a summary of VA's progress on sustainability goals in the past year.

### Goal 1: Greenhouse Gas (GHG) Reduction

VA's Scope 1 & 2 GHG emissions for Fiscal Year (FY) 2015 are 16.3% lower than the 2008 baseline. VA will continue to identify ways of reducing Scope 1 & 2 emissions through facility energy audits, conducted on a rolling four year cycle. These energy audits identify energy and water savings opportunities that directly impact GHG emissions and inform the Department's performance contracting efforts. In addition, VA will continue to conduct renewable energy feasibility studies and install cost-effective, agency-funded systems when funding is available. In FY 2015, VA awarded solar photovoltaic (PV) projects at VA facilities in Houston, Manhattan and Honolulu. Additionally, a PV project was awarded in El Paso as part of an energy savings performance contract.

VA saw an increase in Scope 3 emissions of 22.1% versus the 2008 baseline. Given that the main source of VA's Scope 3 emissions is employee commuting, this increase is an expected result of the Department's expanding mission. Employee commuting made up 75.2% of VA's Scope 3 GHG emissions in the baseline year of 2008 and 80.4% in 2015. However, since 2008, the number of VA employees has grown by over 37% while GHG emissions from employee commuting have risen only 31%. VA's healthcare mission does not lend itself to typical employee commuting mitigations such as telework. Additionally, many VA locations, such as those in rural areas, preclude other employee commuting mitigations such as public transportation and carpooling. That Scope 3 emissions growth is less than employee growth is a testament to the success of VA's employee commuting mitigation programs.

### Goal 2: Sustainable Buildings

In 2015, 15.1% of VA buildings met the Guiding Principles (GP), representing 31.9% of VA gross square footage. VA has reduced energy intensity by 23.2% compared to a 2003 baseline. When compared to hospitals nationwide, VA is a top performer. In FY 2015, VA used approximately 150,000 Btu per gross square foot (GSF) while, according to the recently released 2012 Commercial Buildings Energy Consumption Survey<sup>1</sup>, the average U.S. hospital uses approximately 231,000 Btu per GSF. In addition, 37 VA medical centers (VAMCs), about 24% of all VA hospitals, are ENERGY STAR<sup>®</sup> certified. This represents more than 16% of the 227 ENERGY STAR<sup>®</sup> certified hospitals in the U.S.

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<sup>1</sup> U.S. Energy Information Administration, [Commercial Buildings Energy Consumption Survey 2012](http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption).  
<http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption>

In order to continue identifying cost-effective energy saving opportunities, VA conducts energy audits at facilities every four years. The identified energy conservation measures (ECMs) are included in an energy performance contract or are submitted for funding through the SCIP process.

VA encourages grassroots behavior change through the VA Green Routine Program, which aims to raise awareness, encourage local sustainability initiatives, and recognize sustainability achievements among employees. For example, Calverton National Cemetery received one of the 2015 Green Routine Awards for an Energy Conservation Plan that included the installation of PV, more

efficient lighting, and room occupancy sensors. The Green Routine program recently started a pilot to provide support to encourage facilities to engage in sustainability-themed projects. In addition, the Practice Greenhealth organization recognized four VAMCs with Environmental Excellence Top 25 Awards, covering areas such as energy conservation, environmentally preferred purchasing, healthy food models, water conservation, waste reduction, and recycling. VA won a total of 70 awards including the System Awards for two regions and the Department.



*VA representatives at the Practice Greenhealth Awards ceremony, where VA won 79 awards*

By FY 2025, VA intends for 17.5% of the agency's existing buildings above 5,000 GSF to comply with the revised GPs, with annual progress toward 100 percent conformance. Through aggressive efforts to develop an agency-specific certification protocol and identify high-performing buildings and campuses, by the end of 2015, VA certified more than 500 buildings. This represents more than 15% of all VA buildings and covers more than 30% of the agency's applicable gross square footage. However, most cost-effective opportunities to improve building performance with the goal of GP certification have already been realized. At the same time, VA's campuses continue to add and expand healthcare-specific buildings as patient loads increase. Consequently, it will become increasingly difficult to meet the target as funding is currently unclear.

To address the net-zero mandates of Executive Order (EO) 13693, VA intends for 1% of its existing buildings above 5,000 GSF to be net-zero energy, water, or waste by FY 2030. Beginning in FY 2020, all new construction of VA buildings greater than 5,000 GSF submitted for consideration through the SCIP process will be designed to achieve net-zero energy (exclusive of plug loads) by FY 2030, if life-cycle cost-effective. Achieving net-zero energy in healthcare buildings is not currently feasible due to the heavy plug loads related to providing medical services. Achieving net-zero water in healthcare buildings is also not currently feasible due to heavy use of water for healthcare purposes, including preventing growth of the legionella bacteria. Finally, achieving net-zero waste in healthcare buildings is not feasible due to healthcare protocols that result in unavoidable waste such as hazardous and medical or other regulated wastes. VA will pursue net-zero waste in appropriate non-healthcare buildings.

### Goal 3: Clean & Renewable Energy

In FY 2015, 24.5% of VA's total facility electricity use was generated using renewable sources. VA accomplished this by integrating renewable energy generation and consumption into its overall sustainability strategy. At the Department level, VA's SCIP process includes renewable energy targets as a performance gap factor. SCIP requires each Administration and VHA region (VISN) to create plans that evaluate facility energy needs and the potential for on-site renewable energy installations. Battle Creek VAMC recently brought online a two megawatt (MW) biomass fired combined heat and power (CHP) system. In addition, VA plans on awarding at least one PV project in both FY 2016 and FY 2017, pending available funds. VA will continue to purchase renewable energy certificates (RECs) and use General Services Administration (GSA) reverse auctions to buy renewably generated electricity. Additionally, VA is investigating purchasing electricity and RECs from an off-site PV installation in California.



*A portion of the solar PV installation at the VA Southern Nevada Healthcare System*

Regulations surrounding renewable energy projects, such as the requirement to execute interconnection agreements with local utilities, challenge VA's ability to implement on-site renewable energy projects. In addition, it is difficult for VA to engage in power purchase agreements (PPAs) because the Department lacks the authority to enter into the industry standard long-term PPA.

### Goal 4: Water Use Efficiency

VA reduced water intensity by 30.2% compared to the 2007 baseline. To accomplish this, VA evaluated water efficiency as part of its facility energy audits. Through this process, VA identified and took advantage of opportunities to install water efficient technologies at sites and facilities across the Department to decrease water and energy use and related GHG emissions. For example, Hampton VAMC entered into a utility energy service contract (UESC) that features a conservation measure to capture and reuse rainwater that normally would drain from the roofs to the ground. This water will be used as make-up water for facility cooling towers and boilers. NCA continues efforts to minimize the use of irrigation water. Several national cemeteries, including the new Omaha National Cemetery, are using new web-based irrigation controllers and advanced sensors such as soil moisture sensors to help more proactively control the amount of water used.

While water use efficiency has continually improved, VA faces several mission specific challenges. Installing water reclamation technology while simultaneously meeting healthcare sanitation standards remains a challenge as patient health and safety takes precedence. In addition, VA conducts regular flushing of hot and cold water pipes and fixtures to ensure proper disinfection to prevent the growth of dangerous bacteria such as legionella.

## **Goal 5: Fleet Management**

VA's petroleum consumption increased by 6.9% in FY 2015 compared to the 2005 baseline. This is a significant improvement from 2015 when the increase was 9.0% compared to the 2005 baseline. The VA fleet has grown over 30% since 2008 to help fulfill VA's expanding mission to provide world-class care and services to our Nation's Veterans. In order to keep petroleum consumption at a minimum, VA ensures that the most efficient type of vehicle is acquired for a given function through the vehicle allocation methodology process. The Department continues to acquire electric and plug-in hybrid vehicles when appropriate as well. GMP provides on-site training to fleet managers and is updating fleet manager training based on lessons learned.

In FY 2015, VA use of alternative fuel equaled 14% of total fuel use, and the fleet-wide per-mile GHG emissions dropped 6.2% from the 2014 baseline. VA has integrated the acquisition of alternative fuel vehicles (AFVs) into its overall sustainability strategy. For example, facility energy managers and Green Environmental Management System (GEMS) coordinators are often involved in the process of developing fleet strategies and procuring alternative fueling stations on site to provide alternative fuel for VA's fleet vehicles. Starting in FY 2016, fleet goals change to reducing GHG emissions per mile driven.

## **Goal 6: Sustainable Acquisition**

In FY 2015, 99.4% of applicable contracts reviewed in FY 2015 contained sustainable acquisition requirements. VA continues its active participation in the interagency Sustainable Acquisition and Materials Management Practices (SAMM) Workgroup that received a U.S. Environmental Protection Agency (EPA) Safer Choice 2016 Partner of the Year Award. VA led the SAMM Reporting subgroup that recommended updates to Office of Management and Budget's (OMB) sustainable acquisition contract review reporting template and instructions. VA also co-chaired the SAMM Training subgroup that developed and maintains the Sustainable Acquisition Training Resources spreadsheet. For the second year in a row, VA received a 2016 EPEAT Purchaser Award from the Green Electronics Council for excellence in procurement of sustainable electronics. VA recognizes successes in green purchasing and other sustainability efforts across the Department through the VA Sustainability Achievement Award program.

VA continues to face resource challenges in completing the required number of contract reviews, given the large number of contract actions VA issues. Reviewing statements of work and other contract requirements is primarily a manual exercise, especially for large and complex construction-related contracts. It is also challenging to implement a standardized review process given broad and evolving review requirements. In addition, the Federal Procurement Data System (FPDS) does not provide sufficient granularity on green requirements and applicability in contracts, limiting VA's ability to use it to conduct sustainable acquisition contract reviews. The addition of biobased compliance questions in the OMB Scorecard Sustainable Acquisition Progress Report template adds to the resource burden for sustainable acquisition reporting.

## **Goal 7: Pollution Prevention & Waste Reduction**

Operating in a health care environment provides a set of unique challenges when it comes to waste reduction. Despite these difficulties, VA has integrated pollution prevention and waste reduction initiatives throughout the Department. Recently, all VAMCs have implemented use of the Practice Greenhealth Waste Tracker to help with data collection and reporting.

VA recognizes successes in pollution prevention and waste reduction efforts across the Department through the internal Green Routine Award program. Three of the 2015 award-winning efforts were directly related to pollution prevention and waste reduction.

### **Goal 8: Energy Performance Contracting**

VA expects to meet its \$320 million commitment for the President's Performance Contracting Challenge (PPCC) in 2016. VA has awarded \$63 million in energy performance contracts in the past year. VA has been an early adopter of the Department of Energy's eProjectBuilder platform for energy performance contracting data, and was the first agency to formally approve task order schedules for a UESC in eProjectBuilder. Energy performance contracts are incorporated into VA's SCIP process as projects that address one or more of the sustainable building, renewable energy, GHG emissions and energy and water intensity performance gap factors. In addition, data from VA's facility energy audits are used as a guide for energy and water conservation measures for inclusion in future energy performance contracts.

VA faces the challenge of balancing the priorities of the local and regional energy engineers between developing energy performance contracts and competing mission requirements. Developing energy performance contracts is a complex process that requires multiple levels of technical, legal, contracting and programmatic review, which in turn creates a lengthy and time-intensive path to award. VA has worked on incorporating renewable energy into its energy performance contracts with some success. Typically, long paybacks for renewable energy projects remain a challenge within the maximum 25-year contract limit. Additionally, the VA agency-level reorganization is generating planning uncertainties, challenging development of such long-term agreements.

### **Goal 9: Electronics Stewardship and Data Centers**

In FY 2015, VA reported 99.9% of covered electronic products acquired were EPEAT-registered, 97.9% of eligible equipment met the power management goal, and 100% of used electronics were managed in an environmentally sound manner at end-of-life. For the second year in a row, VA received a 2016 EPEAT Purchaser Award from the Green Electronics Council for excellence in procurement of sustainable electronics.

VA's size and the decentralized nature of its facilities and operations make it challenging to collect data and track all aspects of electronics procurement, operation, and disposition. VA uses the best available methods to collect and track this data. VA faces constrained resource situations that impact quality and hinder more complete capture of data.

The Department is continuing to investigate data center consolidation. A primary challenge VA faces is to identify a strategy that will allow cost effective consolidation of obsolete and unnecessary data centers and efficient operation and monitoring of the remaining data centers in a way that does not impinge on the Department's ability to provide mission critical services to Veterans in a secure environment. VA is currently investigating if commercial and internal cloud offerings would be able to help meet these goals.

### **Goal 10: Climate Change Adaptation**

VA continues to successfully integrate climate change resilience guidance into ongoing business practices. These include the VA Sustainable Design Manual for new construction and major renovation, employee safety training, and policy directives such as Climate Change Adaptation Directive 0065. VA

has made progress in its efforts to develop and improve climate resilience, but recognizes the ongoing challenges with identifying vulnerabilities and adapting to climate change.

## **Progress on Administration Priorities**

VA understands and embraces the Administration’s priorities in the area of sustainability, including the use of energy performance-based contracting, fleet management and climate change adaptation. The following discussion addresses VA’s accomplishments in these areas. It also presents the progress toward meeting applicable goals and requirements, including those outlined in relevant Presidential Memoranda.

### **President’s Performance Contracting Challenge**

VA continued to utilize performance contracting as a tool to help meet identified energy efficiency and management goals. In accordance with EO 13693 instructions, VA used 15% of annual energy costs times the number of years since FY 2011 as a guide when setting the total cumulative performance contracting commitments. Building from the PPCC 2016 goal of \$320 million, VA is setting the FY 2017 and FY 2018 goals at \$350 million and \$390 million, respectively. Additionally, the first quarter of FY 2017 overlaps with the final three months of the PPCC. To avoid double counting the award values towards both the PPCC goal and the FY 2017 goal, realization of the FY 2017 award goal of \$30 million must occur in the last nine months of FY 2017.

### **Electric and Zero Emission Vehicles**

VA continues to obtain electric and zero emission vehicles where appropriate. The Department’s Vehicle Allocation Methodology process identifies for fleet managers when electric and zero emission vehicles are appropriate for a given activity. To further accommodate electric vehicles, VA continues to investigate the best method for obtaining and installing the necessary infrastructure to accommodate electric vehicles at its facilities such as working with GSA for GSA-leased facilities and determining a pathway for VA to provide pay charging stations at select facilities for employee and client use.



*A VA electric vehicle is plugged in at a VA charging station in Tucson, AZ*

### **Climate Preparedness and Resilience**

VA continues assessing and responding to the challenges that a changing climate poses to its mission. VA has adopted the Interagency Climate Change Adaptation Task Force Guiding Principles, which inform its adaptation strategy. In June 2014, Acting VA Secretary Sloan D. Gibson signed the agency’s Climate Change Adaptation Policy, committing the Department to addressing the impacts of climate change on its operations and assets, and most importantly, on America’s Veterans. VA’s Climate Change Adaptation Directive 0065, June 2012, addresses strategies to minimize the impacts of climate change while carrying out the Department’s core mission. VA’s Climate Change Adaptation Plan, updated in June 2016 and appended to this report, summarizes VA’s climate change risks and opportunities,

planning and program process, and actions to better understand climate change. VA posted the 2015 plan on its web site and received no comments.

VA has taken steps toward implementing its Climate Change Adaptation Plan. Based on results from the vulnerability assessment completed in FY 2012, VA's Climate Change Adaptation Plan focuses on VA's physical infrastructure and the effects of climate change on the health of its staff and the Veterans it serves. VA's efforts focus on: 1) Increasing facility and infrastructure resilience to climate change; 2) Improving preparedness for climate change impacts on human health and; 3) Improving approaches to managing risks from climate change.

VA's strategy for adaptation balances the need for building its climate resilience with other federal policy imperatives and resource needs crucial to the mission. VA is working to inform staff and Veterans of important climate risks and how they can prepare and respond, ensure that its long-term capital investments are designed to anticipate climate impacts, and build the capacity to monitor and track emerging threats. These may include new diseases and other public health risks. VA is also undertaking actions to decrease vulnerability to both physical threats and interruptions to resource networks by designing new buildings to protect against significant climate impacts such as sea level rise and to increase energy and water efficiency. VA incorporates all of these requirements and more in the VA Sustainable Design Manual, which is routinely updated to reflect the most recent requirements mandated by executive orders and other Federal regulations.

## Size & Scope of Agency Operations

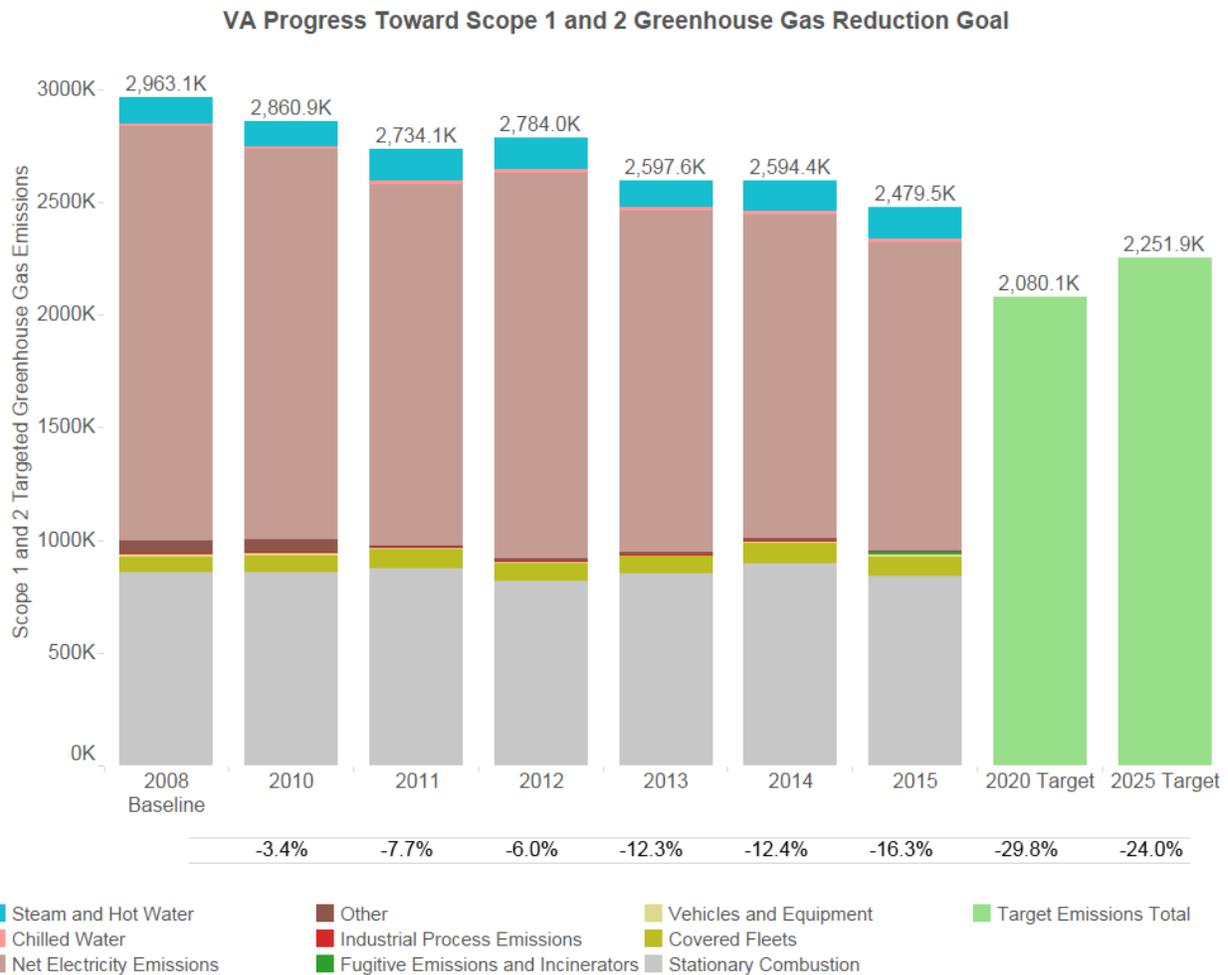
<b>Agency Size and Scope</b>	<b>FY 2014</b>	<b>FY 2015</b>
Total Number of Employees as Reported in the President's Budget	323,016	335,280
Total Acres of Land Managed	34,760	35,193
Total Number of Buildings Owned	6,082	6,227
Total Number of Buildings Leased (GSA and Non-GSA Lease)	1,937	1,951
Total Building Gross Square Feet (GSF)	174,705,227	176,804,511
Operates in Number of Locations Throughout U.S.	1,031	1,045
Operates in Number of Locations Outside of U.S.	23	27
Total Number of Fleet Vehicles Owned	4,656	4,617
Total Number of Fleet Vehicles Leased	14,367	14,846
Total Number of Exempted-Fleet Vehicles (Tactical, Law Enforcement, Emergency, Etc.)	1,010	1,043
Total Amount Contracts Awarded as Reported in FPDS (\$ Millions)	\$19,042	\$19,924

# Agency Progress and Strategies to Meet Federal Sustainability Goals

## Goal 1: Greenhouse Gas (GHG) Reduction

### Scope 1 & 2 GHG Reduction Goal

*EO 13693 requires each agency to establish a Scope 1 & 2 GHG emissions reduction target to be achieved by FY 2025 compared to a 2008 baseline. Department of Veteran Affairs' 2025 Scope 1 & 2 GHG reduction target is 24%.*



VA's Scope 1 & 2 GHG emissions for FY 2015 are 16.3% lower than the 2008 baseline. VA will continue to identify ways of reducing Scope 1 & 2 emissions through facility energy audits, conducted on a rolling four year cycle. These energy audits identify energy and water savings opportunities that directly impact GHG emissions and inform the Department's performance contracting efforts. In addition, VA will continue to conduct renewable energy feasibility studies and install cost-effective, agency-funded systems when funding is available. In FY 2015, VA awarded solar PV projects at VA facilities in Houston, Manhattan and Honolulu. Additionally, a PV project was awarded in El Paso as part of an energy savings performance contract.

## Scope 1 & 2 GHG Reduction Strategies

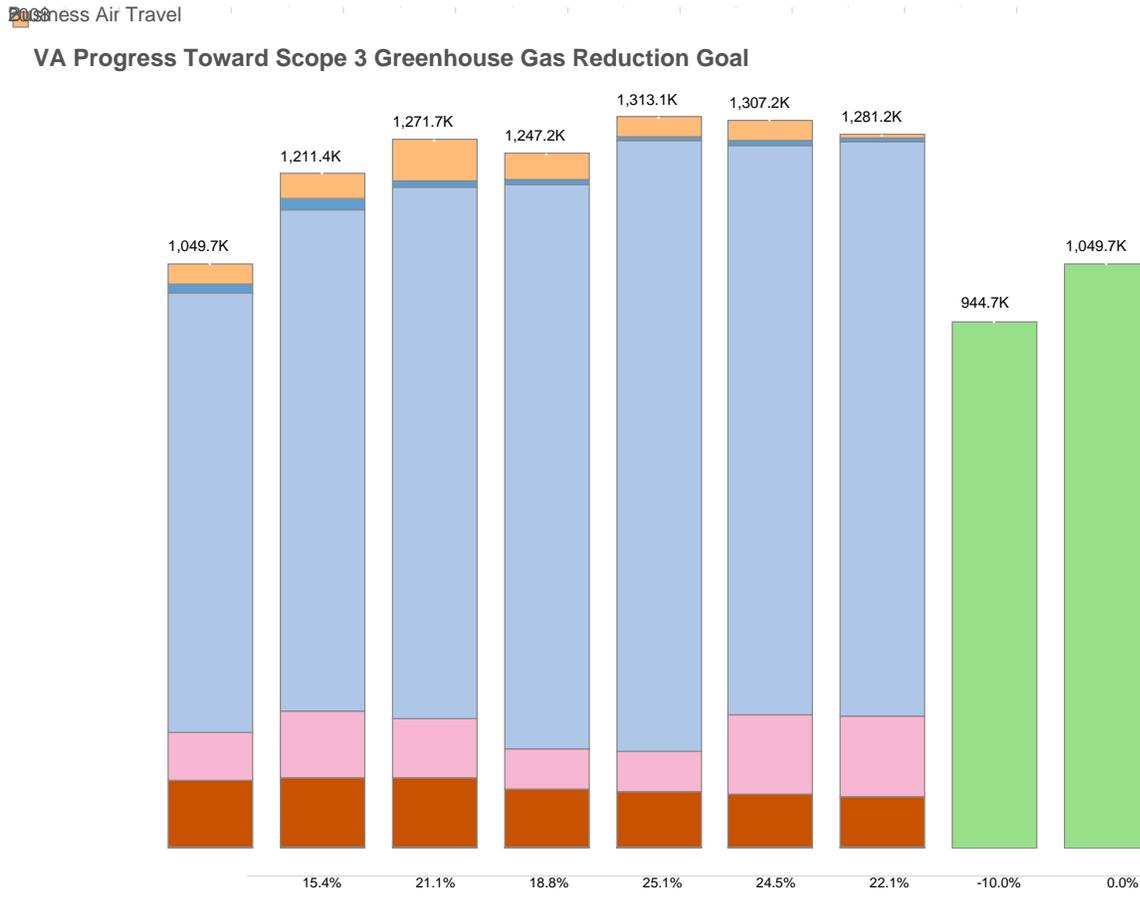
Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
<p>Use the Federal Energy Management Program (FEMP) GHG emission report to identify/target high emission categories and implement specific actions to address high emission areas identified.</p>	<p>Yes</p>	<p>Approximately 96% of VA's GHG emissions come from building energy use. In FY 2016, VA will continue to address these GHG emissions by 1) increasing energy efficiency across the Department's facilities, and 2) increasing the use of on-site renewable energy. Four energy performance contracts were awarded between July 2015 and June 2016, valued at \$63 million. Renewable energy initiatives were evaluated as part of these contracts, and are evaluated for every energy performance contract. Projects include a PV system installation, a PV system repair and upgrade, and a solar hot water system.</p>	<p>1) Plan to award a total of \$320 million in multi-site energy performance-based contracts by December 31, 2016.</p> <p>2) Evaluate renewable energy initiatives for potential implementation in 100% of planned performance-based contract activities.</p>
<p>Identify and support management practices or training programs that encourage employee engagement in addressing GHG reduction.</p>	<p>Yes</p>	<p>The VA Green Routine program aims to raise awareness and recognize sustainable achievements among employees. Many VA facilities raise environmental awareness through events and outreach, which help promote actions the typical VA employee can take to reduce VA's environmental footprint, such as energy conservation measures. VA recently established a pilot program to award grants to facilities to help drive sustainability-themed programs.</p>	<p>Continue best practices outreach and annual recognition through the Green Routine Program.</p>
<p>Determine unsuccessful programs or measures to be discontinued to better allocate agency resources.</p>	<p>No</p>	<p>VA has a process in place to evaluate the effectiveness of programs and measures to meet VA's sustainability goals through the GMP sustainability working groups.</p>	
<p>Given agency performance to date, determine whether current agency GHG target should be revised to a more aggressive/ambitious target.</p>	<p>No</p>	<p>VA evaluates its performance towards meeting federal targets annually, and aims to maximize potential improvement in each goal area where feasible. Given that VA's mission is expanding, setting more aggressive targets is not currently feasible.</p>	

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Employ operations and management (O&M) best practices for emission generating and energy consuming equipment.	Yes	VA employs the four-year facility energy audit cycle as a best management practice for ensuring the efficiency of energy consuming and emission generating equipment at all facilities. In conjunction with the facility audit, VA conducts retro-commissioning at facilities to ensure the optimal operation of mechanical equipment. To further inform the audit process, VA is partnering with FEMP on an intensive audit at the VA Little Rock facilities to generate enhanced data for the preliminary assessment of an energy savings performance contract (ESPC).	Continue to conduct energy audits on the four-year cycle.
Identify additional sources of data or analysis with the potential to support GHG reduction goals.	No	VA has completed updates to its utility data collection system, which allows for new metrics to track data such as tracking thermal energy to meet the clean energy goal of EO 13693.	
Reduce on-site fossil-fuel consumption by installing more efficient boilers, generators, furnaces, etc. and/or use renewable fuels	Yes	When our energy audits identify upgrades or when potential energy savings are shown to economically feasible, VA installs more efficient boilers, generators, and related equipment. Using the audit results and the SCIP process, VA determines which upgrades to implement.	Continue to evaluate facility energy audits to select life-cycle cost-effective projects to reduce on-site fossil fuel consumption, and to identify the best implementation method.
Continue to include GHG emission as a ranking metric for project prioritization in VA's SCIP process.	Yes	VA's SCIP process includes Scope 1 & 2 GHG emissions as a ranking metric for prioritizing projects. This metric addresses the impact the project will have in addressing GHG reduction needs at individual facilities and for each VISN.	Continue to consider GHG emission reductions in projects through SCIP.

## Scope 3 GHG Reduction Goal

*EO 13693 requires each agency to establish a Scope 3 GHG emission reduction target to be achieved by FY 2025 compared to a 2008 baseline. VA's 2025 Scope 3 GHG target is to experience no growth in Scope 3 emissions.*

### Chart: Progress Toward Scope 3 GHG Reduction Goal



VA saw an increase in Scope 3 emissions of 22.1% versus the 2008 baseline. Given that the main source of VA's Scope 3 emissions is employee commuting, this increase is an expected result of the Department's expanding mission. Employee commuting made up 75.2% of VA's Scope 3 GHG emissions in the baseline year of 2008 and 80.4% in 2015. However, since 2008, the number of VA employees has grown by over 37% while GHG emissions from employee commuting have risen only 31%. VA's healthcare mission does not lend itself to typical employee commuting mitigations such as telework. Additionally, many VA locations, such as those in rural areas, preclude other employee commuting mitigations such as public transportation and carpooling. That Scope 3 emissions growth is less than employee growth is a testament to the success of VA's employee commuting mitigation programs.

### Scope 3 GHG Reduction Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Reduce employee business ground travel.	Yes	VA is reducing employee business travel by increasing the use of video-conferencing for meetings and trainings that do not require in-person attendance. VA has an internal conferencing system that allows video conferencing among facilities on a secure network. Additionally, VA employees have access to various tools such as LiveMeeting to facilitate collaboration among employees when they are not in the same physical location. VA delivers internal training courses through VA Learning University (VALU) and the Talent Management System (TMS).	<p>1) Continue supporting programs that make it easier for VA employees to limit their business travel through virtual meetings, collaboration, and training.</p> <p>2) Report annual GHG emissions associated with business travel.</p>
Reduce employee business air travel.	Yes	VA is reducing employee business travel by increasing the use of video-conferencing for meetings and trainings that do not require in-person attendance. VA has an internal conferencing system that allows video conferencing among facilities on a secure network. Additionally, VA employees have access to various tools such as LiveMeeting to facilitate collaboration among employees when they are not in the same physical location. VA delivers internal training courses through VALU and TMS.	<p>1) Continue supporting programs that make it easier for VA employees to limit their business travel through virtual meetings, collaboration, and training.</p> <p>2) Report annual GHG emissions associated with business travel.</p>
Develop and deploy an employee commuter emissions reduction plan.	No	VA facilities have employee commuter reduction plans in place where required by local law. VA may consider expanding this strategy to include additional facilities in future years. In addition, VA is continuing to encourage teleworking for eligible employees when feasible.	
Use an employee commuting survey to identify opportunities and strategies for reducing commuter emissions.	Yes	VA conducts an annual employee commuting survey. Among other items, the survey allows employees to provide feedback and ideas on how VA can reduce the environmental impact of their commute. This past year, VA increased the sample size of the survey to make the results more representative.	Identify changes in commuting patterns through the VA Employee Commuter Survey.

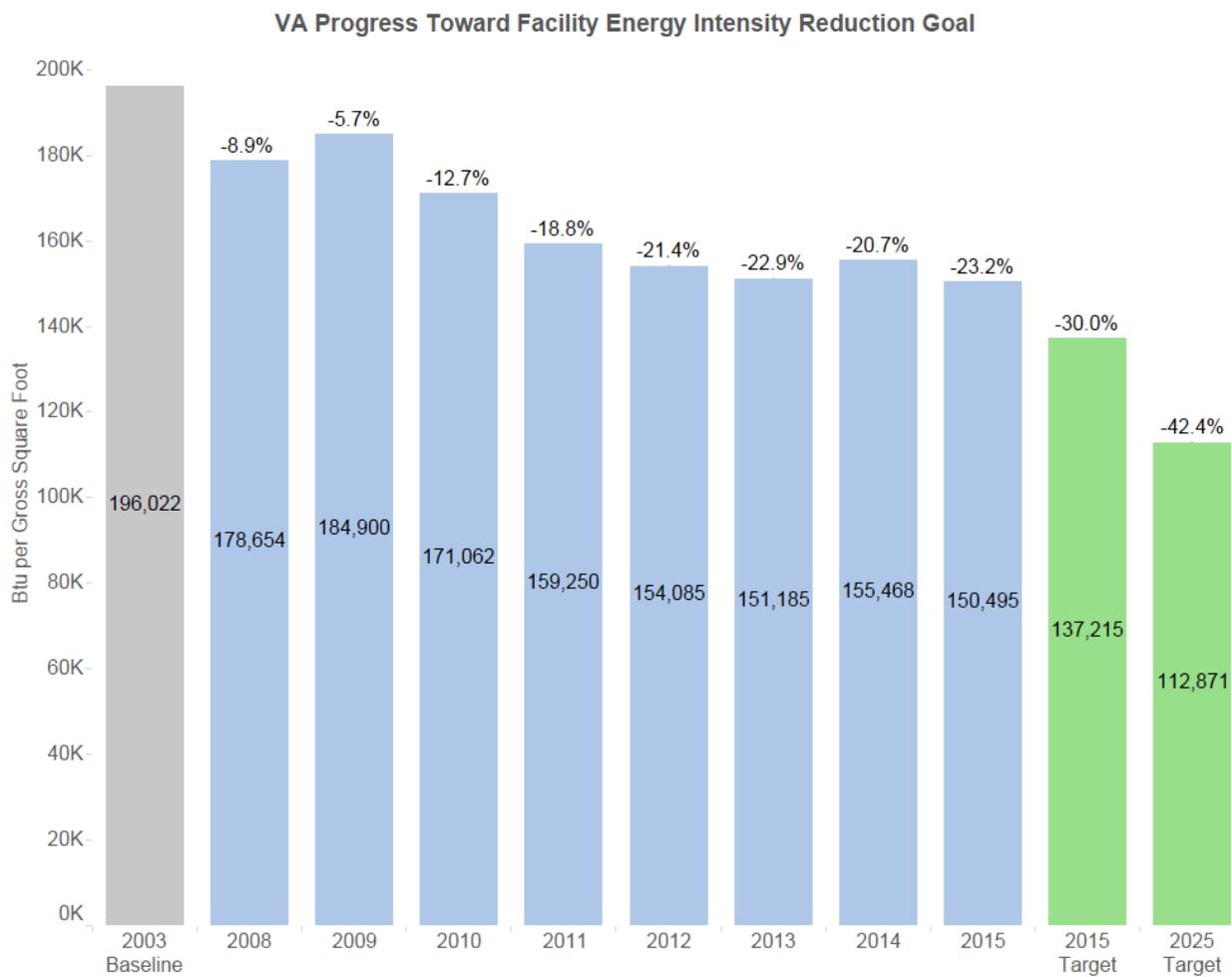
<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Increase & track number of employees eligible for telework and/or the total number of days teleworked.	Yes	VA has increased telework participation by increasing awareness among managers, employees, and unions of the benefits of telework. The Office of Human Resources Management facilitates a quarterly telework conference presentation to help telework coordinators in the field overcome challenges they face in promoting telework at their facilities.	Increase the total number of teleworkers as a percentage of telework eligible employees.
Develop and implement a program to support alternative/zero emissions commuting methods and provide necessary infrastructure.	No	VA considers alternative / zero emissions commuting methods when designing or renovating our facilities. The VA Sustainable Design Manual promotes the design of walk-able and bike-able facilities.	
Establish policies and programs to facilitate workplace charging for employee electric vehicles.	No	VA has been investigating charging stations for employee electric vehicles. VA's Office of General Counsel recently determined that VA would be allowed to have paid charging stations. VA is currently determining how to implement them.	
Include requirements for building lessor disclosure of carbon emission or energy consumption data and report Scope 3 GHG emissions for leases over 10,000 rentable square feet.	No	VA is awaiting guidance on how to report Scope 3 emissions from GSA leased buildings.	
Continue waste diversion efforts to reduce Scope 3 emissions.	Yes	VA's Waste Management and Recycling Program is administered through environmental management systems all VA facilities. VHA fully implemented the use of the Practice Greenhealth Waste Tracker in 2014, a service that enables VHA facilities to track waste generation and diversion rates. VHA facilities diverted more than 37% of non-hazardous solid waste in FY 2015.	Continue to reduce landfilled municipal solid waste.

## Goal 2: Sustainable Buildings

### Building Energy Conservation Goal

*The Energy Independence and Security Act of 2007 (EISA) requires each agency to reduce energy intensity 30% by FY 2015 as compared to FY 2003 baseline. Section 3(a) of EO 13693 requires agencies to promote building energy conservation, efficiency, and management and reduce building energy intensity by 2.5% annually through the end of FY 2025, relative to a FY 2015 baseline and taking into account agency progress to date, except where revised pursuant to Section 9(f) of EO 13693.*

### Chart: Progress Toward Facility Energy Intensity Reduction Goal



VA has reduced energy intensity by 23.2% since 2003. When compared to hospitals nationwide, VA is a top performer. In FY 2015, VA used approximately 150,000 Btu per GSF while, according to the recently released 2012 Commercial Buildings Energy Consumption Survey<sup>2</sup>, the average US hospital uses approximately 231,000 Btu per GSF. In addition, 37 VAMCs (about 24% of all VA hospitals) are ENERGY STAR<sup>®</sup> certified. That makes up over 16% of the 227 ENERGY STAR<sup>®</sup> certified hospitals in

<sup>2</sup> U.S. Energy Information Administration, [Commercial Buildings Energy Consumption Survey 2012](http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption).  
<http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption>

the US. VAMC Ann Arbor and VAMC Battle Creek were just nominated for a Michigan Governor’s Energy Excellence Award celebrating outstanding achievements in energy excellence. In addition, the Practice Greenhealth organization recognized four VAMCs with Environmental Excellence Top 25 Awards, covering areas such as energy conservation, environmentally preferred purchasing, healthy food models, water conservation, waste reduction, and recycling. VA won a total of 70 awards including the System Awards for two regions and the Department.

### Building Energy Conservation Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Make energy efficiency investments in agency buildings.	Yes	VA continues to focus on ensuring that energy efficiency projects are conducted. Projects are identified through the four-year facility energy audit cycle. If feasible, projects are executed through ESPCs or UESCs. VA has developed a return on investment model for energy conservation projects that is used to inform investments in buildings. The SCIP process takes into account energy use intensity. The VA Sustainable Design Manual requires facilities where construction began before 8/10/2012 are designed to be at least 30% better than ASHRAE 90.1 2004. For facility where construction began after that date they must be designed to be at least 30% better than ASHRAE 90.1 2007.	Continue to leverage energy audits, ESPCs/UESCs, and ECMs to improve building performance.
Use remote building energy performance assessment auditing technology	No	The complexities of operations at many VA facilities make remote building energy performance assessment ineffective.	
Participate in demand management programs.	No	VA has incorporated demand management guidance in the VA Sustainable Design Manual. VA will evaluate the appropriateness of demand management in different types of existing buildings.	
Incorporate Green Button data access system into reporting, data analytics, and automation processes.	No	VA facilities currently manually report monthly utility data manually to VA energy collection databases. Given the number of utility providers that VA works with across the country, it is extremely complex to try to integrate Green Button data into the VA energy collection databases and therefore would not be cost effective.	

<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Redesign interior space to reduce energy use through daylighting, space optimization, and sensors and control systems.	Yes	The VA Sustainable Design Manual requires daylighting in accordance with the GP. Potential improvements to sensors and control systems are evaluated during our energy audits and are evaluated when entering into ESPCs/UESCs.	1) Maintain Sustainable Design Manual to be in accordance with the GP. 2) Continue to consider sensors and control systems when entering ESPCs/UESCs.
Identify opportunities to transition test-bed technologies to achieve energy reduction goals.	No	VA participates in the Interagency Sustainability Working Group and monitors Department of Energy (DOE), Department of Defense (DoD), and GSA pilot programs to identify potential “new” technologies to achieve energy reduction goals.	
Follow city energy performance benchmarking and reporting requirements.	No	VA facilities conform to any applicable local energy performance and benchmarking requirements.	
Install and monitor energy meters and sub-meters.	No	VA continues to install and monitor energy meters and sub-meters when cost effective.	
Collect and utilize building and facility energy use data to improve building energy management and performance.	Yes	VA leverages Energy Star Portfolio Manager (ESPM) to collect and utilize building and facility energy use data to improve building energy management and performance.	Continue to track and monitor VHA and NCA buildings through ESPM.
Ensure that monthly performance data is entered into the EPA ESPM.	Yes	VA collects monthly performance data through internal databases. That data is analyzed to benchmark buildings for energy performance and analyze anomalies. VA has awarded a contract for utility data management and integration with ESPM.	Continue to ensure that monthly performance data is entered into the ESPM.

## **Building Efficiency, Performance, and Management Goal**

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*Section 3(h) of EO 13693 states that agencies will improve building efficiency, performance, and management and requires that agencies identify a percentage of the agency's existing buildings above 5,000 gross square feet intended to be energy, waste, or water net-zero buildings by FY 2025 and implementing actions that will allow those buildings to meet that target. VA's 2025 target is 1%.*

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VA intends for 1% of its existing buildings above 5,000 GSF to be net-zero energy, water or waste buildings by FY 2030. Beginning in FY 2020, all new construction of VA buildings greater than 5,000 GSF, submitted for consideration through the SCIP process, will be designed to achieve net-zero energy (exclusive of plug loads) by FY 2030, if life-cycle cost-effective. Achieving net-zero energy in healthcare buildings is not currently feasible due to the heavy plug loads related to providing medical services. Achieving net-zero water in healthcare buildings is also not currently feasible due to heavy use of water for healthcare purposes, including preventing growth of the legionella bacteria. Finally, achieving net-zero waste in healthcare buildings is not feasible due to healthcare requirements that result in unavoidable waste.

### **Guiding Principles for Sustainable Federal Buildings**

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*Section 3(h) of EO 13693 also states that agencies will identify a percentage, by number or total GSF, of existing buildings above 5,000 GSF that will comply with the Guiding Principles for Sustainable Federal Buildings (Guiding Principles) by FY 2025.*

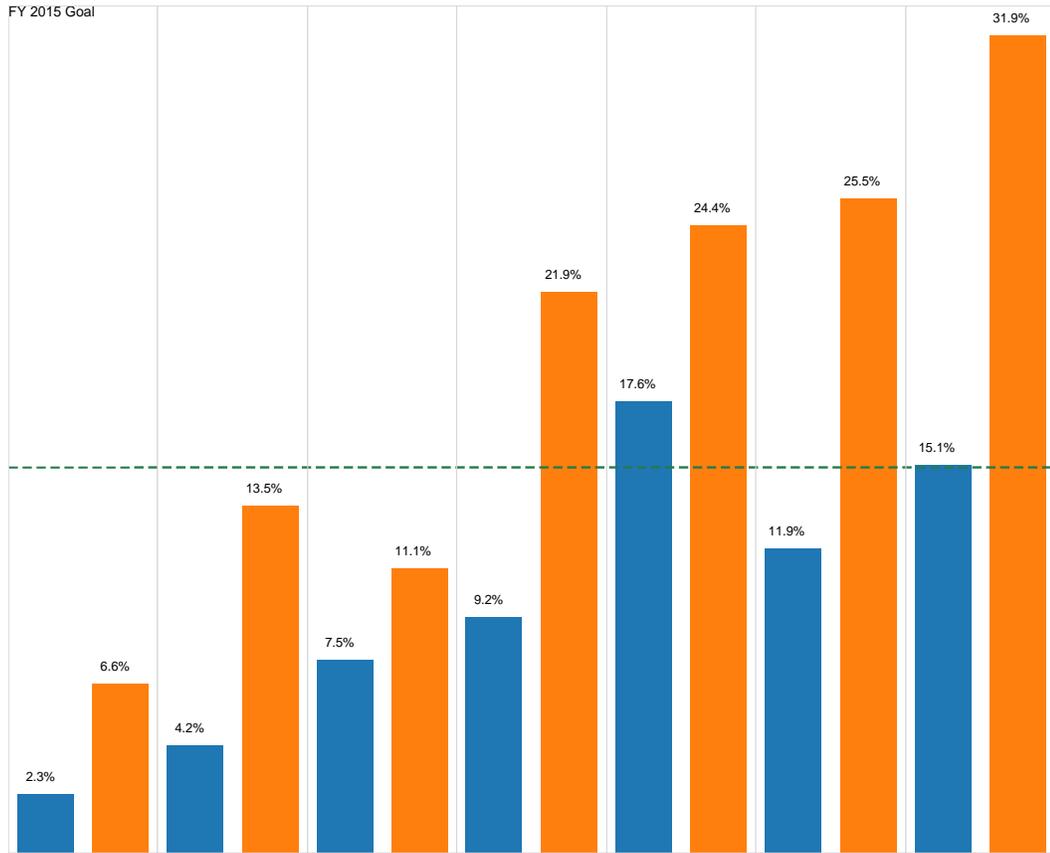
*VA's FY 2025 target is 17.5% of the agency's existing buildings above 5,000 GSF will comply with the Guiding Principles.*

*(Agencies' 2025 targets should be at least 10% higher than current (2015) level of achievement.)*

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## Chart: Percent of Buildings Meeting the Guiding Principles

VA Percent of Buildings Meeting the Guiding Principles



VA has met the goal of achieving 15%, by number of buildings, meeting the Guiding Principles. Additionally, VA far exceeded the EO 13514 2015 goal for buildings that meet guiding principles by GSF. VA is one of the few agencies that has met either goal, let alone both. Through VA's aggressive efforts to develop an agency-specific certification protocol and identify high-performing buildings and campuses, VA certified more than 500 buildings representing more than 15% of the agency's total buildings and covering more than 30% of the agency's applicable gross square footage as compliant with the GPs by the end of FY 2015. VA worked with a contractor to develop an agency-specific checklist for each of the five GPs and subprinciples, and created a third-party certification protocol for use in assessing existing buildings' compliance with the GPs. By FY 2025, VA intends for 17.5% of existing buildings above 5,000 GSF to comply with the revised GPs, with annual progress toward 100 percent conformance with the GP for its building inventory.

VA's 17.5% goal for existing buildings is an effort to build on past program success while making realistic continual progress towards 100 percent compliance. However, most low-cost or no-cost opportunities to improve building performance with the goal of GP certification have already been realized. At the same time, VA's campuses continue to add and expand healthcare-specific buildings as patient loads increase. Therefore, it will become increasingly difficult to meet the target as funding availability to meet this mandate is currently unclear.

The Department helps drive compliance through the adoption and use of the VA Sustainable Design Manual. This document helps ensure VA's facilities support the VA mission in a manner that is socially,

economically, and environmentally sustainable. To measure compliance, VA contracted a service-disabled Veteran-owned small business to conduct third-party GP assessment and certification of more than 90 buildings in FY 2015.

### Sustainable Buildings Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
<p>Include climate resilient design and management into the operation, repair, and renovation of existing agency buildings and the design of new buildings.</p>	<p>No</p>	<p>VA recognizes that climate change will impact Department services, operations, programs, and assets and has broad national security implications. The VA Sustainable Design Manual incorporates climate resiliency into design, and new VA facilities must integrate climate change adaptation concepts into site selection and design.</p>	
<p>In planning new facilities or leases, include cost-effective strategies to optimize sustainable space utilization and consideration of existing community transportation planning and infrastructure, including access to public transit.</p>	<p>Yes</p>	<p>VA’s SCIP process is designed to reduce gaps in space utilization and access while improving the quality and cost efficiency of the delivery of VA benefits and services through facilities that match current and future demand. The Sustainable Locations Program implements guidance to address the federal requirements to maximize use of existing federal space. VA’s Sustainable Design Manual requires consideration for community transportation and access to public transit.</p>	<p>SCIP evaluation is an on-going annual process.</p>
<p>Ensure all new construction of Federal buildings greater than 5,000 GSF that enters the planning process be designed to achieve energy net-zero and, where feasible, water or waste net-zero by FY 2030.</p>	<p>No</p>	<p>VA is awaiting additional guidance regarding this strategy and looks forward to guidance for net-zero buildings. In addition, VA has worked on net-zero working groups as part of the GSA Green Building Advisory Council to help drive the federal discourse. VA plans to establish a net-zero working group to determine how to implement this measure once the guidance is released.</p>	
<p>Include criteria for energy efficiency as a performance specification or source selection evaluation factor in all new agency lease solicitations over 10,000 rentable square feet.</p>	<p>No</p>	<p>VA uses GSA lease solicitation and lease agreement language including GSA Green Lease Policies and Procedures. VA looks forward to GSA updating these lease specifications based on EO 13693.</p>	

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Incorporate green building specifications into all new construction, modernization, and major renovation projects.	Yes	The VA Sustainable Design Manual requires all new construction, modernization, and major renovation projects to incorporate the green building requirements of the GP.	Ensure the Sustainable Design Manual incorporates any changes to the GP.
Implement space utilization and optimization practices and policies.	Yes	VA's SCIP process is designed to reduce gaps in space utilization and access while improving the quality and cost efficiency of the delivery of VA benefits and services through facilities that match current and future demand.	SCIP evaluation is an on-going annual process.
Implement programs on occupant health and well-being in accordance with the <i>Guiding Principles</i> .	Yes	VA meets state, local, and federal mandates for occupant health and well-being.	VA continues to evaluate and certify buildings in accordance with the Guiding Principles.

### Goal 3: Clean & Renewable Energy

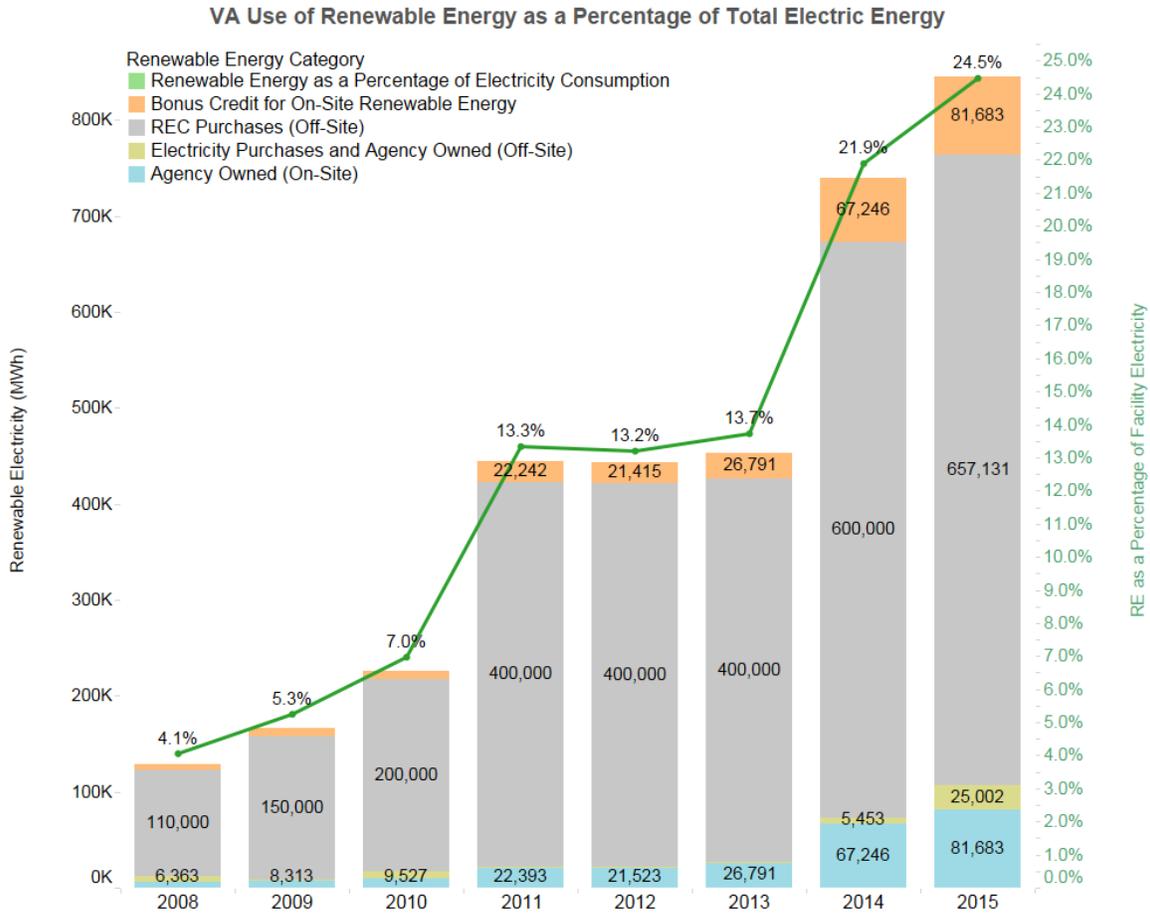
#### Clean Energy Goal

*EO 13693 Section 3(b) requires that, at a minimum, the percentage of an agency's total electric and thermal energy accounted for by renewable and alternative energy shall be not less than: 10% in FY 2016-17; 13% in FY 2018-19; 16% in FY 2020-21; 20% in FY 2022-23; and 25% by FY 2025.*

#### Renewable Electric Energy Goal

*EO 13693 Section 3(c) requires that renewable energy account for not less than 10% of total electric energy consumed by an agency in FY 2016-17; 15% in FY 2018-19; 20% in FY 2020-21; 25% in FY 2022-23; and 30% by 2025.*

## Chart: Use of Renewable Energy as a Percentage of Total Electric Energy



In FY 2015, 24.5% of total VA facility electricity use was renewably generated. VA achieved this by integrating the generation and consumption of renewable energy into its overall sustainability strategy. At the Department level, VA’s SCIP process includes renewable energy targets as a performance gap factor. SCIP requires each Administration and VISN to create plans that evaluate facility energy needs and the potential for on-site renewable energy installations. Battle Creek VAMC has recently brought online a two MW biomass fired CHP system. In addition, VA plans on awarding at least one PV project in both FY 2016 and FY 2017 if funding is available. VA will continue to purchase electricity via reverse auctions through GSA, and is investigating purchasing electricity and RECs for an off-site PV installation in California.

Regulations surrounding renewable and clean energy projects, such as the requirement to execute interconnection agreements with local utilities, challenge VA’s ability to implement on-site renewable energy projects. VA’s renewable and clean energy projects require interconnection to the local electrical grid to allow for the exchange of electricity. In addition, other renewable and clean energy system components are dependent on factors outside of VA jurisdiction.

## Clean and Renewable Energy Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Install agency-funded renewable on-site and retain corresponding RECs.	Yes	VA has installed agency-funded solar photovoltaic systems for on-site energy generation. In FY 15, VA awarded PV projects in Houston (<5MW), Manhattan (25kW), and Honolulu (119kW). VA plans to award at least one PV project in FY 2016. VA will continue to conduct feasibility studies and install cost-effective, agency-funded renewable systems.	Award at least one PV project in FY 2016 and one in FY 2017, if funding is available.
Contract for the purchase of energy that includes installation of renewable energy on or off-site and retain RECs or obtain replacement RECs.	Yes	VA is currently investigating the contracting of the purchase of electricity and RECs from an off-site PV installation in California. Office of General Counsel approval will be required.	Execute a financially viable off-site power purchase agreement that includes ownership of subsequent RECs, and continue to investigate other contracting opportunities.
Purchase electricity and corresponding RECs or obtain equal value replacement RECs.	Yes	Included in many of its commodities purchases is a requirement that a certain percentage of electricity provided be renewable energy, and that corresponding RECs be retired.	Continue to purchase GSA reverse auctions for electricity.
Purchase RECs to supplement installations and purchases of renewable energy, when needed to achieve renewable goals.	Yes	VA meets federal renewable energy mandates through on-site generation of renewable energy and the purchase of RECs. VA will continue to purchase RECs in an amount sufficient to meet federal mandates after accounting for renewable energy generated on-site.	Document RECs purchased. RECs will be purchased by the end of FY 2017.
Install on-site thermal renewable energy and retain corresponding renewable attributes or obtain equal value replacement RECs.	Yes	VA requires each Administration and VISN to create plans that evaluate facility energy needs and renewable energy feasibility on-site. VA conducts detailed feasibility studies to evaluate potential renewable energy installations of thermal technologies such as geothermal and solar thermal. Renewable energy projects are submitted through the SCIP process for prioritization.	<p>1) Track number of renewable energy feasibility studies and project contracts awarded in FY 2017.</p> <p>2) Track number of renewable energy installations installed on-site in FY 2017</p>

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Install on-site combined heat and power processes.	Yes	VA requires each Administration and VISN to create plans that evaluate facility energy needs and renewable energy feasibility on-site. VA conducts detailed feasibility studies to evaluate potential renewable energy installations of technologies such as CHP. Renewable energy projects are submitted through the SCIP process for prioritization.	1) Track number of renewable and clean energy feasibility studies and project contracts awarded in FY 2017. 2) Track number of renewable and clean energy installations installed on-site in FY 2017.
Identify opportunities to install on-site fuel cell energy systems.	Yes	VA requires each Administration and VISN to create plans that evaluate facility energy needs and renewable energy feasibility on-site. VA conducts detailed feasibility studies to evaluate potential renewable energy installations of technologies such fuel cells. Renewable energy projects are submitted through the SCIP process for prioritization.	1) Track number of renewable and clean energy feasibility studies and project contracts awarded in FY 2017. 2) Track number of renewable and clean energy installations installed on-site in FY 2017.
Identify opportunities to utilize energy that includes the active capture and storage of carbon dioxide emissions associated with energy generation.	No	VA currently does not generate enough carbon dioxide emissions on-site to make carbon capture and storage cost effective.	
Identify and analyze opportunities to install or contract for energy installed on current or formerly contaminated lands, landfills, and mine sites.	No	VA currently does not evaluate energy projects on the basis of the type of lands where the project is located. VA currently does not have any current or formerly contaminated lands, landfills, and mine site in its portfolio.	
Identify opportunities to utilize energy from small modular nuclear reactor technologies.	No	VA requires each Administration and VISN to create plans that evaluate facility energy needs and renewable energy feasibility on-site.	

## Goal 4: Water Use Efficiency & Management

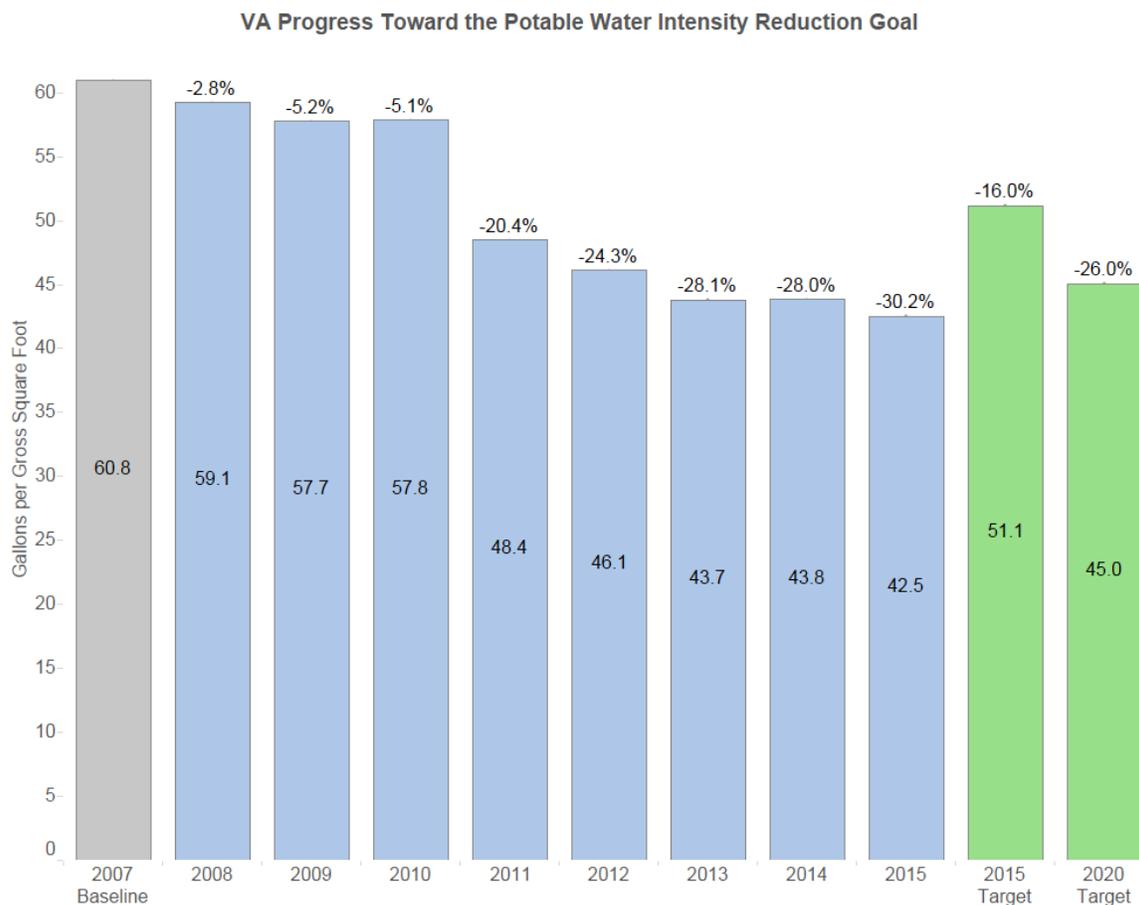
### Potable Water Consumption Intensity Goal

*EO 13693 Section 3(f) states that agencies must improve water use efficiency and management, including stormwater management, and requires agencies to reduce potable water consumption intensity, measured in gallons per square foot, by 2% annually through FY 2025 relative to an FY 2007 baseline. A 36% reduction is required by FY 2025.*

### Industrial, Landscaping and Agricultural (ILA) Water Goal

*EO 13693 section 3(f) also requires that agencies reduce ILA water consumption, measured in gallons, by 2% annually through FY 2025 relative to a FY 2010 baseline.*

### Chart: Progress Toward the Potable Water Intensity Reduction Goal



VA reduced water intensity by 30.2% compared to the 2007 baseline. To accomplish this, VA evaluated water efficiency as part of its facility energy audits. Through this process, VA has identified and taken advantage of opportunities to install water efficient technologies at sites and facilities across the Department to decrease water and energy use and related GHG emissions. For example, Fort Sam Houston National Cemetery, partnering with the University County Hospital, uses recycled water from

cooling towers to meet some of their irrigation needs. Last year, it was able to reuse 79 million gallons of water.

While water use efficiency has continued to improve, VA faces several mission specific challenges. Installing water reclamation technology while simultaneously meeting healthcare sanitation standards remains a challenge, as patient health and safety takes precedence. In addition, VA conducts regular flushing of hot and cold water pipes and fixtures to ensure proper disinfection to prevent the growth of bacteria such as legionella.

### Water Use Efficiency & Management Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Install green infrastructure features to assist with storm and wastewater management.	Yes	VA conducts energy audits of all covered facilities on a rolling four year basis. These audits also identify water diversion opportunities. VA has installed a wide range of storm water management systems (e.g. retention and infiltration ponds) throughout their facilities. For example, Tahoma National Cemetery has installed rain gardens and bioswales to address storm water management. The VA Sustainable Design Manual requires every design reduce storm water runoff.	Continue to install green infrastructure to assist with storm water management when feasible.
Install and monitor water meters and utilize data to advance water conservation and management.	Yes	VA currently collects, monitors, and utilizes water meter data to ensure proper water efficient practices. VA installs flow meters whenever an irrigation project is installed.	Continue to collect and analyze building and facility water data collected from water meters.
Install high efficiency technologies, e.g. WaterSense fixtures.	Yes	The VA Sustainable Design Manual requires that all products and equipment installed are water-efficient, when available. For example, it requires installation of WaterSense labeled fixtures (or those of similar performance). When installing or upgrading irrigation projects, VA uses the most water efficient solution that is cost efficient.	Ensure that the VA Sustainable Design Manual continues to require high efficiency technologies such as WaterSense fixtures.
Prepare and implement a water asset management plan to maintain desired level of service at lowest life cycle cost.	No	VA currently collects, monitors, and utilizes water meter data to ensure water efficient practices. By incorporating any water conservation measures that were identified during our four-year audit cycle, VA is attempting to minimize life cycle costs through proper maintenance and new technology.	

<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Minimize outdoor water use and use alternative water sources as much as possible.	No	All new designs take into account all water sources and their efficient use.	
Design and deploy water closed-loop, capture, recharge, and/or reclamation systems.	Yes	VA installs water reclamation systems at facilities where this practice is feasible and sanitary. For example, Cheyenne VAMC uses reclaimed water from the city's treatment plant for irrigation and other uses. In FY 2017, VA will continue to use energy audits to identify new opportunities for designing and deploying capture, recharge and reclamation systems where feasible.	Evaluate facility energy audits to select water reclamation upgrades or installations and identify best implementation methods where these practices are feasible and sanitary.
Install advanced meters to measure and monitor potable and ILA water use.	Yes	VA has installed meters to monitor industrial and landscaping water use at eligible facilities. Meter data is reviewed to identify any unusual variances. In FY 2017, VA will continue to install and train users on soil moisture sensors to help reduce water consumption and experiment with advanced data analysis tools, such as cloud-based irrigation controllers like at Florence National Cemetery.	1) Review water data throughout the year. 2) Continue to train cemetery field staff and MSN engineers/agronomists on how to use handheld soil moisture meters.
Develop and implement programs to educate employees about methods to minimize water use.	No	VA conducts yearly training for cemetery directors on best practices and cemetery management. NCA is investigating developing Administration-wide training to address water use.	
Assess the interconnections and dependencies of energy and water on agency operations, particularly climate change's effects on water which may impact energy use.	No	VA has developed a Climate Change Adaptation Plan that addresses the Department's operations in the face of climate change. VA will continue to monitor and examine the impacts of water availability on facility water usage.	
Consistent with State law, maximize use of grey-water and water reuse systems that reduce potable and ILA water consumption.	No	Given VA healthcare mission, grey-water usage is extremely difficult and in general is not considered applicable.	
Consistent with State law, identify opportunities for aquifer storage and recovery to ensure consistent water supply availability.	No	Given VA's mission, aquifer storage and recovery is very difficult and is not considered applicable.	

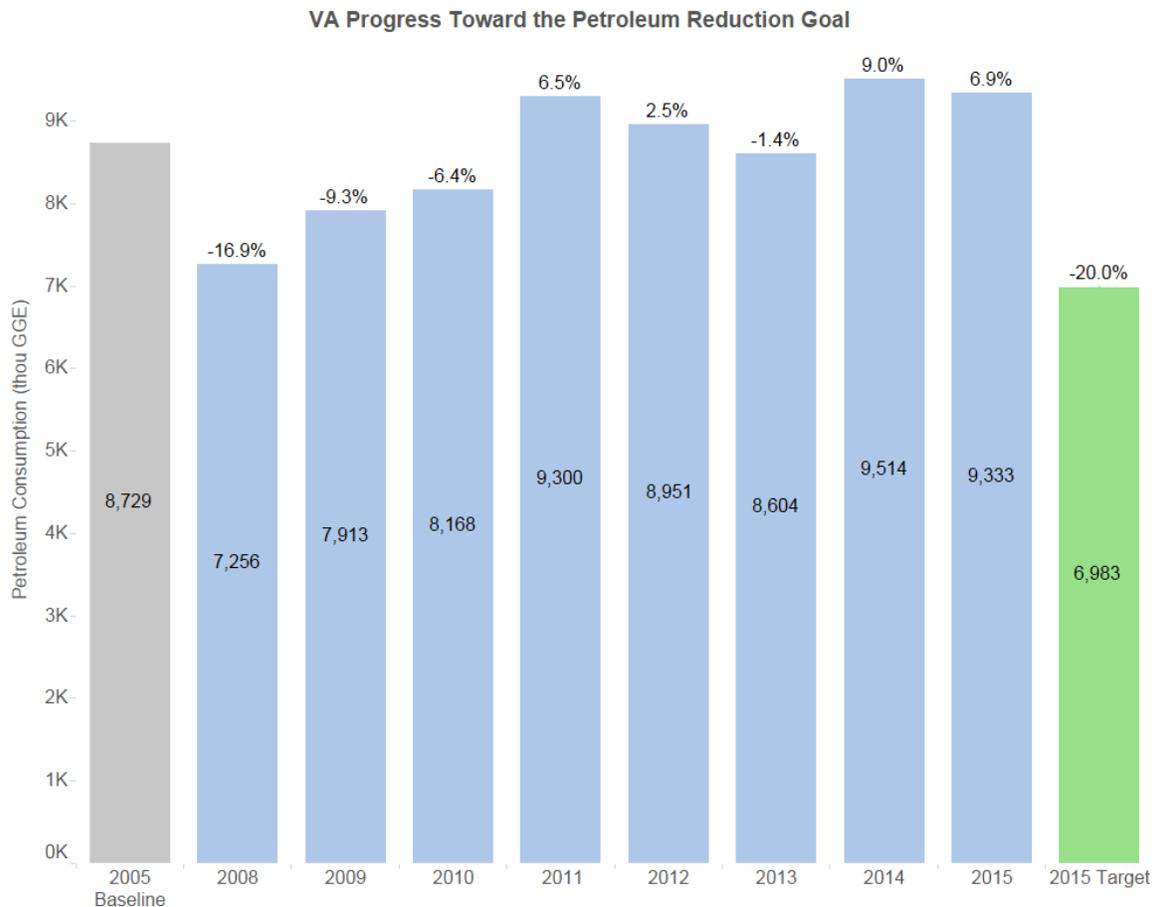
<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Ensure that planned energy efficiency improvements consider associated opportunities for water conservation.	No	VA conducts audits at all covered facilities on a rolling four year basis to identify energy efficiency and water conservation measures. VA considers water conservation measures when entering into ESPCs/UESCs, including efficient fixtures, solar water heaters, and upgraded equipment.	
Where appropriate, identify and implement regional and local drought management and preparedness strategies that reduce agency water consumption	No	VA considers local environmental conditions when designing their facilities.	

## Goal 5: Fleet Management

### Fleet Petroleum Use Reduction Goal

*EO 13514 and the Energy Independence and Security Act of 2007 (EISA) required that by FY 2015 agencies reduce fleet petroleum use by 20% compared to a FY 2005 baseline.*

#### Chart: Progress Toward the Petroleum Reduction Goal



### Fleet Alternative Fuel Consumption Goal

*Agencies should have exceeded an alternative fuel use that is at least 5% of total fuel use. In addition, EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management, required that agencies increase total alternative fuel consumption by 10% annually from the prior year starting in FY 2005. By FY 2015, agencies must have increased alternative fuel use by 159.4%, relative to FY 2005.*

In FY 2015, VA's use of alternative fuel equaled 14% of total fuel use. VA has increased its alternative fuel use by 4,095% since FY 2005.

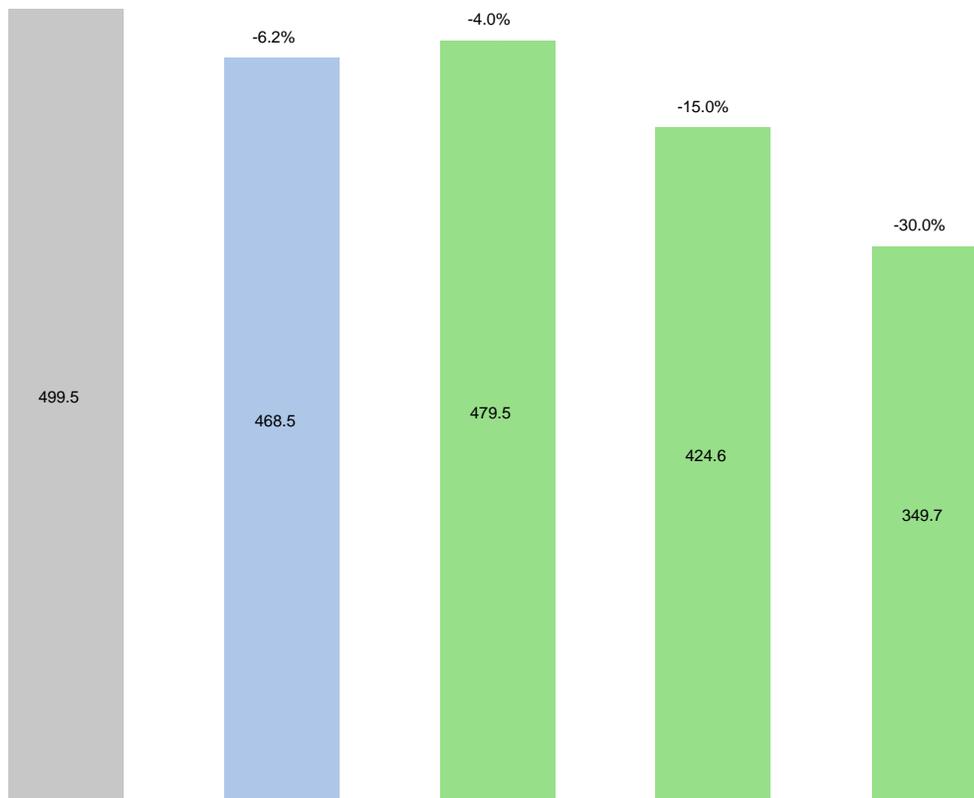
## Fleet Per-Mile Greenhouse Gas (GHG) Emissions Goal

*EO 13693 Section 3(g) states that agencies with a fleet of at least 20 motor vehicles will improve fleet and vehicle efficiency and management. EO 13693 section 3(g)(ii) requires agencies to reduce fleet-wide per-mile GHG emissions from agency fleet vehicles relative to a FY 2014 baseline and sets new goals for percentage reductions: not less than 4% by FY 2017; not less than 15 % by FY 2020; and not less than 30% by FY 2025.*

*EO 13693 Section 3(g)(i) requires that agencies determine the optimum fleet inventory, emphasizing eliminating unnecessary or non-essential vehicles. The Fleet Management Plan and Vehicle Allocation Methodology (VAM) Report are included as appendices to this plan.*

### Chart: Fleet-wide Per-mile GHG Emissions

VA Fleet-wide Per-mile Greenhouse Gas Emissions



VA's petroleum consumption increased by 6.9% in FY 2015 compared to the 2005 baseline. However, the VA fleet has grown over 30% since 2008 to help fulfill VA's expanding mission to provide world-class care and services to our Nation's Veterans. In order to keep petroleum consumption at a minimum, VA ensures that the most efficient type of vehicle is acquired for a given function through the vehicle allocation process. The Department continues to acquire electric and hybrid vehicles when appropriate as well. GMP provides on-site training to fleet managers and is updating fleet manager training based on lessons learned.

Starting with FY 2016, the fleet goal is to reduce GHG emissions per mile driven. In FY 2015, VA use of alternative fuel equaled 14% of total fuel use, and the fleet-wide per-mile GHG emissions dropped 6.2% from the 2014 baseline. VA has integrated the acquisition of AFVs into its overall sustainability strategy. For example, facility energy managers and GEMS coordinators are often involved in the process of developing fleet strategies and procuring alternative fueling stations on site to provide alternative fuel for VA’s fleet vehicles.

### Fleet Management Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Collect and utilize agency fleet operational data through deployment of vehicle telematics.	No	VA has been installing telematics systems in its vehicles for many years. The process will continue, and will require VA to determine how telematics will be integrated with GSA data collection.	
Ensure that agency annual asset-level fleet data is properly and accurately accounted for in a formal Fleet Management Information System (FMIS) as well as submitted to the Federal Automotive Statistical Tool reporting database, the Federal Motor Vehicle Registration System, and the Fleet Sustainability Dashboard (FleetDASH) system.	Yes	VA has completed conversion of its agency-wide Fleet Management Information System to the GSA systems. VA’s CSO has issued a letter designating the GSA DriveThru and FedFMS combination as the FMIS of choice. VA has been a user of Federal Motor Vehicle Registration System (FMVRS) and FleetDASH for several years.	Ensure the necessary data is properly and accurately populated into the Federal Fleet Management System (FedFMS) and FMVRS. Utilize FleetDASH to the fullest extent possible.
Increase acquisitions of zero emission and plug-in hybrid vehicles.	Yes	Working with GSA to identify a plan for leased charging infrastructure. Need infrastructure in place to get the vehicles.	Acquire 10 zero emission and plug-in hybrid vehicles.
Issue agency policy and a plan to install appropriate charging or refueling infrastructure for zero emission or plug-in hybrid vehicles and opportunities for ancillary services to support vehicle-to-grid technology.	No	VA is partnering with GSA to install appropriate charging or refueling infrastructure for zero emission or plug-in hybrid vehicles at GSA leased facilities.	
Optimize and right-size fleet composition, by reducing vehicle size, eliminating underutilized vehicles, and acquiring and locating vehicles to match local fuel infrastructure.	Yes	VA has issued scorecards to Administrations to demonstrate how they are performing in accordance to fleet utilization. Fleet managers are using VA-developed tools to better decide the type of vehicle based on their needs and local fueling infrastructure.	Every vehicle acquisition is backed by a VA VAM Tool analysis.

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Increase utilization of alternative fuel in dual-fuel vehicles.	No	VA has identified or installed a large number of alternative fueling stations for the dual-fuel fleet and has provided that information to both fleet managers and vehicle users.	
Use a FMIS to track real-time fuel consumption throughout the year for agency-owned, GSA-leased, and commercially-leased vehicles.	Yes	VA will begin fully utilizing the GSA Drive Thru and FedFMS combination for the entire FY for the first time.	All vehicles are accounted for in the FMIS.
Implement vehicle idle mitigation technologies.	No	VA's Fleet Directive prohibits unnecessary idling.	
Minimize use of law enforcement exemptions by implementing GSA Bulletin FMR B-33, <i>Motor Vehicle Management, Alternative Fuel Vehicle Guidance for Law Enforcement and Emergency Vehicle Fleets</i> .	No	Due to the unique uses of VA law enforcement vehicles, the classifications in B-33 do not fit well for the VA fleet. Therefore, this strategy will not be applied to VA vehicles.	
Where State vehicle or fleet technology or fueling infrastructure policies are in place, meet minimum requirements.	No	VA meets all state vehicle or fleet technology or fueling infrastructure policies.	
Establish policy/plan to reduce miles traveled, e.g. through vehicle sharing, improving routing with telematics, eliminating trips, improving scheduling, and using shuttles, etc.	No	Due to the expanding nature of VA's mission, including the expansion of providing at-home medical care, VA is unable to commit to a reduction in vehicle miles traveled.	
Develop and deploy an agency wide training for fleet managers.	Yes	VA will continue to develop and deploy an agency wide training program for fleet managers to ensure consistency through staffing turnover. VA is developing a series of modules for fleet manager training based on lessons learned. In the interim, GMP has been conducting comprehensive on-site training for fleet managers as needed.	Develop and deploy at least one module of agency-wide training for fleet management staff by the end of FY 2017.

## Goal 6: Sustainable Acquisition

### Sustainable Acquisition Goal

*EO 13693 section 3(i) requires agencies to promote sustainable acquisition by ensuring that environmental performance and sustainability factors are considered to the maximum extent practicable for all applicable procurements in the planning, award and execution phases of acquisition.*

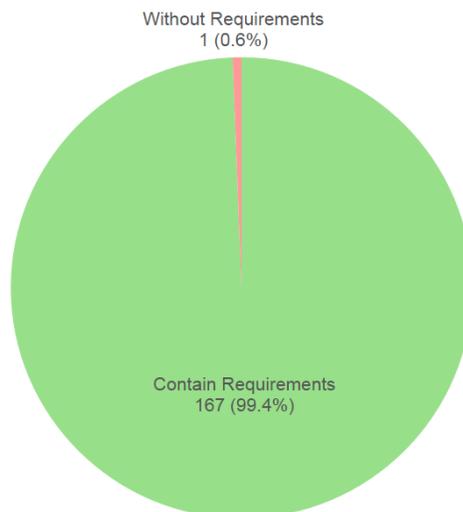
### Biobased Purchasing Targets

*The Agricultural Act of 2014 requires that agencies establish a targeted biobased-only procurement requirement. EO 13693 section 3(iv) requires agencies to establish an annual target for increasing the number of contracts to be awarded with BioPreferred and biobased criteria and the dollar value of BioPreferred and biobased products to be delivered and reported under those contracts in the following fiscal year.*

VA is unable to provide biobased targets at this time due to lack of sufficient and reliable data on which to base the targets in the System for Award Management (SAM) and the Federal Procurement Data System – Next Generation (FPDS-NG). Such data would be vital to supporting a defensible methodology for developing and tracking the targets. VA is aware of ongoing Federal efforts to improve FPDS/SAM data quality and is exploring these and alternative methods for setting biobased targets.

### Chart: Percent of Applicable Contracts Containing Sustainable Acquisition Requirements

VA Percent of Applicable Contracts Containing Sustainable Acquisition Requirements  
(FY 2015 Goal: 95%)



Total Number of Contracts Reviewed: 168

Based on agency-reported results of quarterly reviews of at least 5% of applicable contract actions

*(Note that the sustainable acquisition progress chart will outline contract compliance for FY 2015, quarters 1, 2, 3, and 4, based on review of 5% of applicable contracts. In future SSPPs, FPDS data will also be used to demonstrate inclusion of sustainability criteria in procurements.)*

VA continues its active participation in the interagency SAMM Workgroup, which received a U.S. EPA Safer Choice 2016 Partner of the Year Award. VA led the SAMM Reporting subgroup, which recommended updates to OMB’s sustainable acquisition contract review reporting template and instructions. VA also co-chaired the SAMM Training subgroup, which developed and maintains the Sustainable Acquisition Training Resources Excel-based spreadsheet. VA received a 2016 EPEAT Purchaser Award from the Green Electronics Council for excellence in procurement of sustainable electronics. Further, VA recognizes successes in green purchasing and other sustainability efforts across the Department through the VA Sustainability Achievement Award program.

To continue to improve awareness of sustainable acquisition requirements, VA has focused its efforts on training and outreach. For example, VA hosted two sustainable acquisition training webinars in recognition of Earth Day 2016, which were open to all VA employees and instructed by GSA’s lead sustainable acquisition expert. In addition, VA’s Office of Acquisition and Logistics (OAL) issued Green Purchasing News (GPN), a quarterly electronic newsletter for the acquisition community, focused on raising awareness of and promoting compliance with sustainable acquisition requirements.

VA continues to face resource challenges in completing the required number of contract reviews, given the large number of contract actions VA issues each quarter. Reviewing statements of work and other contract requirements is primarily a manual exercise and adds to the challenge, especially for large and complex construction-related contracts. It is also challenging to implement a standardized review process given broad and evolving review requirements. In addition, the FPDS does not provide sufficient granularity on green requirements and applicability in contracts, limiting VA’s ability to use it to conduct sustainable acquisition contract reviews. The addition of biobased compliance questions in the OMB scorecard sustainable acquisition progress report template adds to the resource burden for sustainable acquisition reporting.

### Sustainable Acquisition Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Establish and implement policies to meet statutory mandates requiring purchasing preference for recycled content products, ENERGY STAR qualified and FEMP-designated products, and BioPreferred and biobased products designated by USDA.	Yes	VA procurement policy memorandum ensures awareness of and promotes compliance with these statutory mandates and FAR 23.103. VA continues to use VA Directive and Handbook 0058, VA Green Purchasing Program (GPP), to provide policy and guidance to integrate statutory and other sustainable acquisition requirements into agency procurements. VA issued an Acquisition Policy Flash reminding acquisition workforce that vendors with FAR clause 52.223-2 must report types and dollar amount of biobased products provided to VA via those contracts. In addition, VA's Sustainable Design Manual addresses statutory and other sustainable procurement requirements.	1) Continue to use 5% contract reviews to demonstrate compliance with the inclusion of applicable biobased, recycled, and energy efficient requirements.  2) Continue to use the VA Sustainable Design Manual to help ensure applicable construction contracts contain appropriate green criteria.

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Establish and implement policies to purchase sustainable products and services identified by EPA programs, including SNAP, WaterSense, Safer Choice, and Smart Way.	Yes	VA procurement policy memorandum ensures awareness of and promotes compliance with non-ozone depleting, water-efficient, non-toxic or less-toxic, and other sustainable requirements. VA Directive and Handbook 0058 provide policy and guidance to integrate SNAP, WaterSense, and other sustainable requirements into agency procurements. VA's Sustainable Design Manual includes SNAP, WaterSense, minimizing use of toxic materials, and other sustainable requirements. As members of SAMM, VA and others received EPA 2016 Safer Choice Partner of the Year award. OAL's GPP website includes SNAP, WaterSense, Safer Choice, Smart Way, and other EO 13693 requirements, which were also featured in the Summer 2015 issue of GPN.	1) Continue to use 5% contract reviews to demonstrate compliance with the inclusion of applicable EPA program requirements.  2) Continue to use the VA Sustainable Design Manual to help ensure applicable construction contracts contain appropriate green criteria.
Establish and implement policies to purchase environmentally preferable products and services that meet or exceed specifications, standards, or labels recommended by EPA.	No	VA's Acquisition Policy Flash reminds the acquisition workforce of EPEAT requirements in the FAR. VA published an article and Q&A on EPEAT requirements in the Fall 2015 issue of GPN. For the second year in a row, VA received a 2016 EPEAT Purchaser Award from the Green Electronics Council for excellence in procurement of sustainable electronics.	
Use Category Management Initiatives and government-wide acquisition vehicles that already include sustainable acquisition criteria.	No	VA continues to utilize government-wide acquisition vehicles, such as Federal Strategic Sourcing Initiative Office Supplies 3 and GSA Managed Print Services blanket purchase agreements, as well as Solutions for Enterprise-Wide Procurement (SEWP), to help VA effectively meet its sustainable acquisition goals.	
Ensure contractors submit timely annual reports of their BioPreferred and biobased purchases.	No	VA issued an Acquisition Policy Flash reminding acquisition workforce that vendors with FAR clause 52.223-2 must report types and dollar amount of biobased products provided to VA via those contracts.	

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Reduce copier and printing paper use and acquiring uncoated printing and writing paper containing at least 30 percent postconsumer recycled content or higher.	No	These requirements are addressed in VA Directives & Handbooks 0058 (VA Green Purchasing Program) and 0063 (Waste Prevention and Recycling Program).	
Identify and implement corrective actions to address barriers to increasing sustainable acquisitions.	Yes	In FY 15, VA demonstrated compliance with sustainable acquisition requirements. VA conducted green purchasing trainings; issued GPN, a quarterly electronic newsletter for the acquisition community to raise awareness of and promote compliance with the requirements and other aspects of sustainable acquisition; updated OAL's Green Purchasing Program website to include the new sustainable acquisition mandates of EO 13693; chaired the SAMM reporting subgroup; and continued to co-chair the SAMM training subgroup that updated the Sustainable Acquisition Training Resources tool at FedCenter.gov.	Continue to conduct training and outreach, and participate in the SAMM workgroup.
Improve quality of data and tracking of sustainable acquisition through the FPDS.	No	Suggestions for improving data and reporting for FPDS-NG are found in the draft interagency Data Quality and Reporting Work Group Procurement Report. Having improved FPDS-NG sustainable acquisition data fields and associated government-wide training efforts would greatly enhance tracking.	
Incorporate compliance with contract sustainability requirements into procedures for monitoring contractor past performance and report on contractor compliance in performance reviews.	No	VA is currently focused on making sure contracts have sustainable language at the outset. VA may in the future explore ways of reviewing contractor past performance.	
Review and update agency specifications to include and encourage products that meet biobased criteria.	Yes	VA reviews and updates its master construction specifications on a rolling four year cycle to ensure that they contain applicable and up-to-date biobased criteria, where appropriate.	Continue to review and update specifications with applicable biobased criteria, where appropriate.

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Identify opportunities to reduce supply chain emissions and incorporate criteria or contractor requirements into procurements.	No	VA is evaluating the recently issued federal guidance for this requirement and will be exploring strategies to implement it.	
Update and deploy agency procurement policies and programs to ensure that federally- mandated designated sustainable products are included in all relevant procurements and services.	Yes	A VA procurement policy memorandum helps ensure compliance with federal sustainable acquisition requirements. VA continues to use VA Directive and Handbook 0058, VA Green Purchasing Program, to provide policy and guidance to integrate statutory and other sustainable acquisition into agency procurements. VA issued an Acquisition Policy Flash reminding acquisition workforce that vendors with FAR clause 52.223-2 must report types and dollar amount of biobased products provided to VA via those contracts. In addition, VA's Sustainable Design Manual addresses statutory and other sustainable procurement requirements.	<p>1) Continue to utilize the policy and guidance in VA Directive and Handbook 0058, VA Green Purchasing Program.</p> <p>2) Continue to explore potential revisions to existing procurement policy documents to address sustainable acquisition mandates.</p>

## Goal 7: Pollution Prevention & Waste Reduction

### Pollution Prevention & Waste Reduction Goal

*EO 13693 section 3(j) requires that Federal agencies advance waste prevention and pollution prevention and to annually divert at least 50% of non-hazardous construction and demolition debris. Section 3(j)(ii) further requires agencies to divert at least 50% of non-hazardous solid waste, including food and compostable material, and to pursue opportunities for net-zero waste or additional diversion.*

*Reporting on progress toward the waste diversion goal will begin with annual data for FY 2016.*

VA has integrated pollution prevention and waste reduction initiatives throughout the agency. Recently, all VAMCs have implemented Practice Greenhealth Waste Tracker for data collection and reporting. This will allow VA to better track and understand their waste diversion rates in the future and compare VAMC performance to private sector hospitals. As an indicator of progress in 2016, four VAMCs received Top 25 Environmental Excellence Awards from Practice Greenhealth. VA won a total of 70 awards including the System Awards for two regions and the Department. Further, VA internally recognizes success in pollution prevention and waste reduction efforts through the GMP Sustainability Achievement and Green Routine Award programs. Three of the 2015 Green Routine Award winners were directly related to pollution prevention and waste reduction projects. For example, the Togus Regional Benefit Office won an award for a program that recycled, reused, repurposed, or disposed over 48,000 pounds of paper, supplies, equipment and furniture, creating only 30 pounds of waste.

### Pollution Prevention & Waste Reduction Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Report in accordance with the requirements of sections 301 through 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C 11001-11023).	Yes	VA program includes 3rd party audits to ensure that all covered facilities and operations report in accordance with the requirements of sections 301-313 of the Emergency Planning and Community Right-to-Know Act of 1986.	Continue 3 <sup>rd</sup> party audit program to ensure compliance.
Reduce or minimize the quantity of toxic and hazardous chemicals acquired, used, or disposed of, particularly where such reduction will assist the agency in pursuing agency greenhouse gas reduction targets.	Yes	VA employs a mature Chemicals Management Program at the facility level in order to meet federal, state, and local regulations. VA updates the Chemicals Management Program as necessary to assess toxic and hazardous chemicals maintained in facility inventories and to ensure that refrigerant and other fugitive emissions are reduced where they cannot be eliminated. VHA issues an annual waste minimization report.	Continue to follow the Chemicals Management and Pollution Prevention Directive, and monitor execution of the VA Chemicals Management Program.

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Eliminate, reduce, or recover refrigerants and other fugitive emissions.	No	VA's standard maintenance practices minimize fugitive emissions.	
Reduce waste generation through elimination, source reduction, and recycling.	Yes	VA's Waste Management and Recycling Program is administered through environmental management systems at all VHA facilities. VHA uses a waste tracker service to understand diversion rates. In FY 15, VHA has a MSW diversion rate of 37%.	Continue using waste tracker and report recycling data.
Implement integrated pest management and improved landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials.	Yes	Since 1998 VHA's Integrated Pest Management Program Guide mandates elimination or reduction of unnecessary products containing hazardous substances or toxic chemicals. The Guide stipulates that pests should be controlled by non-chemical means or that the least toxic pesticide possible be used for effective pest control.	Continual review and improvement as new materials enter the marketplace.
Develop or revise Agency Chemicals Inventory Plans and identify and deploy chemical elimination, substitution, and/or management opportunities.	Yes	VHA employs a service to track Safety Data Sheets (SDS) and chemical inventories at 176 VA facilities or locations and to support the use of the Green Product Analyzer (GPA). GPA allows staff to assess the relative hazard impact of comparable products alternatives. This helped VA establish a baseline and methodology to measure performance in eliminating, substituting and managing chemicals onsite. VA will continue this service across VHA.	Track percentage of facilities transitioned and utilizing the SDS/Chemical Inventory Service as the enterprise standard.
Inventory current HFC use and purchases.	No	VA currently tracks HFCs based on the EPA square foot calculations.	
Require high-level waiver or contract approval for any agency use of HFCs.	No	VA does not consider this a priority due to potential negative impacts to our mission.	
Ensure HFC management training and recycling equipment is available.	No	Proper HFC handling and management training is ensured through our facility auditing program.	

## Goal 8: Energy Performance Contracts

### Performance Contracting Goal

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*EO 13693 section 3(k) requires that agencies implement performance contracts for Federal buildings. EO 13693 section 3(k)(iii) also requires that agencies provide annual agency targets for performance contracting. VA's commitment under the President's Performance Contracting Challenge is \$320 million in contracts awarded by the end of calendar year 2016. Agency's targets for the next two fiscal years are:*

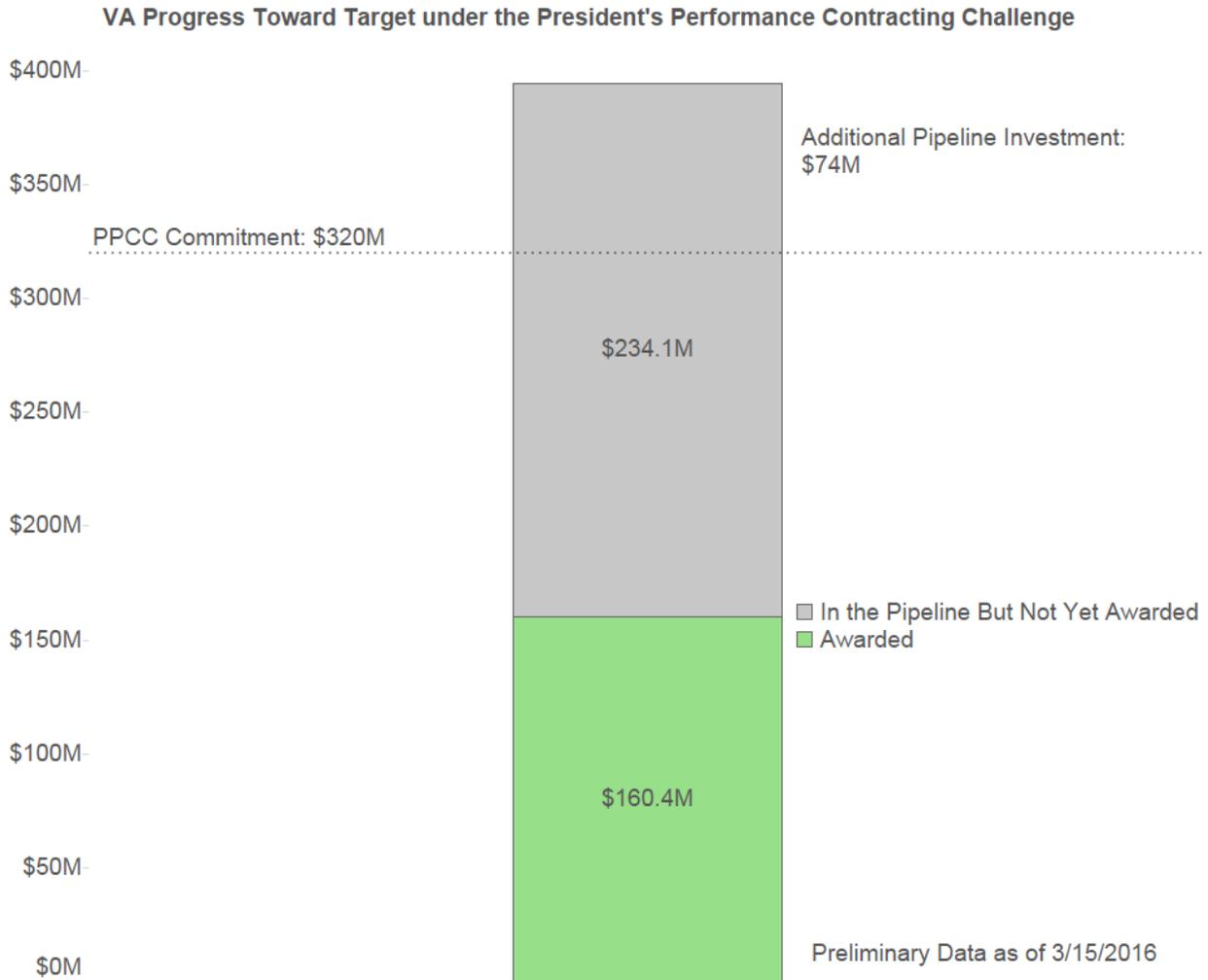
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VA's FY17 Goal: \$30 million, for a cumulative goal target of \$350 million

VA's FY18 Goal: \$40 million, for a cumulative goal target of \$390 million

In accordance with EO 13693 instructions, VA used 15% of annual energy costs times the number of years since FY 2011 as a guide when creating the total cumulative performance contracting commitments. Building from VA's PPCC goal from 2011 through 2016 of \$320 million, the above FY 2017 and FY 2018 goals appear well aligned with the EO guidelines. Additionally, the first quarter of FY 2017 overlaps with the final three months of the PPCC. To avoid double counting the award values towards both the PPCC goal and the FY 2017 goal, the FY 2017 award goal of \$30 million must occur in the remaining 9 months of FY 2017. Finally, ongoing VA budget challenges continue to impact VA's performance contracting project timelines. The FY 2017 and FY 2018 targets take these challenges into consideration.

**Chart: Progress Toward Target under the President’s Performance Contracting Challenge**



VA is expecting to meet the \$320 million commitment for the end of Calendar Year (CY) 2016 under the President’s Performance Contracting Challenge, and has awarded \$63 million in energy performance contracts in the past year. VA has been an early adopter of the Department of Energy’s eProjectBuilder platform for energy performance contracting data, and was the first agency to formally approve Task Order schedules for a UESC in eProjectBuilder. Energy performance contracts are incorporated into VA’s SCIP process as projects that address one or more of the sustainable building, renewable energy, GHG emissions and energy and water intensity performance gap factors. In addition, data from VA’s facility energy audits are used as a guide for ECMs that could be included in future energy performance contracts.

VA has faced the challenge of balancing the priorities of the local and regional energy engineer network with the development of energy performance contracts due to competing mission requirements. Developing energy performance contracts is a complex process that requires multiple levels of technical, legal, contracting and programmatic review, which in turn creates a lengthy and time-intensive path to award. VA has worked on incorporating renewable energy into its energy performance contracts with some success. Typically, long paybacks for renewable energy projects remain a challenge within the maximum 25-year contract limit. Additionally, VA’s agency-level reorganization is generating some planning uncertainties, challenging the development of such long-term agreements.

## Performance Contracting Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Utilize performance contracting to meet identified energy efficiency and management goals while deploying life-cycle cost effective energy and clean energy technology and water conservation measures.	Yes	VA is dedicated to utilizing energy performance-based contracting to improve its energy efficiency. In the past year, VA has awarded \$63 million in energy performance-based contracts and is moving forward on contracts for facilities in four regions.	Continue to utilize performance contracting and award \$127.4 million by December 31, 2016.
Fulfill existing agency target/ commitments towards the PPCC by the end of CY16.	Yes	VA is on track to meet its 2016 PPCC commitment.	Continue to strive to meet 2016 PPCC commitment
Evaluate 25% of agency's most energy intensive buildings for opportunities to use ESPCs/UESCs to achieve goals.	No	VA conducts energy audits at all covered facilities on a four year rotation. The results of the energy audits are used as starting points for ESPCs/UESCs.	
Prioritize top ten portfolio wide projects which will provide greatest energy savings potential.	No	VA supports development of all sites that are interested in pursuing a project and does not prioritize by energy savings potential. VA conducts energy audits at all covered facilities on a four year rotation. The results of the energy audits are used as starting points for ESPCs/UESCs.	
Identify and commit to include onsite renewable energy projects in a percentage of energy performance contracts.	No	VA conducts renewable energy analysis within energy performance contracts wherever feasible. Few renewable energy projects have proven to be economically feasible during this process.	
Submit proposals for technical or financial assistance to FEMP and/or use FEMP resources to improve performance contracting program.	Yes	VA engages with both FEMP Federal Project Executives and Project Facilitators for each ESPC and UESC project.	Continue to engage with FEMP Federal Project Executives and Project Facilitators.
Work with FEMP/USACE to cut cycle time of performance contracting process, targeting a minimum 25% reduction.	No	VA has made great strides in reducing cycle time, such as the launch of a Nationwide ESPC model that reduces transaction time by an average of 5 months on some projects, and continues to look for additional areas of opportunity.	

<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Ensure agency procurement staff is trained by the FEMP ESPC/UESC course curriculum.	Yes	VA's centralized performance contracting office receives FEMP ESPC and UESC training on a regular basis.	Each member of the Energy Performance Contracting Team within Program Contracting Activity Central participates in at least one FEMP ESPC/UESC online or in-person course curriculum each year.
Assign agency lead to participate in strategic sourcing initiatives	Yes	VA's Office of Asset Enterprise Management has assigned a point of contact to support strategic sourcing initiatives. The Program Office explores potential opportunities with every project as well as one-off opportunities.	Maintain at least one agency lead from the Office of Asset Enterprise Management to participate in strategic sourcing initiatives. The agency lead will participate in applicable strategic sourcing initiatives and implement opportunities where feasible.

## Goal 9: Electronics Stewardship & Data Centers

### Electronics Stewardship Goals

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*EO 13693 Section 3(l) requires that agencies promote electronics stewardship, including procurement preference for environmentally sustainable electronic products; establishing and implementing policies to enable power management, duplex printing, and other energy efficient or environmentally sustainable features on all eligible agency electronic products; and employing environmentally sound practices with respect to the agency's disposition of all agency excess or surplus electronic products.*

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### Agency Progress in Meeting Electronics Stewardship Goals

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*If your agency cannot track performance agency-wide, do not fill in a percentage. Instead, under status, note "(Agency) does not have agency-wide systems in place to track performance for this goal."*

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#### **Procurement Goal:**

At least 95% of monitors, PCs, and laptops acquired meet environmentally sustainable electronics criteria (EPEAT registered).

FY 2015 Progress: 99.9% (This percentage represents all covered product types, i.e., monitors, PCs, laptops, printers, multifunction devices, and televisions.)

#### **Power Management Goal:**

100% of computers, laptops, and monitors have power management features enabled.

FY 2015 Progress: 97.9% of equipment has power management enabled. (This percentage refers to eligible (non-exempted) equipment.)

1% of equipment has been exempted. (This percentage refers to equipment in the total inventory.)

#### **End-of-Life Goal:**

100% of electronics disposed using environmentally sound methods, including GSA Xcess, Computers for Learning, UNICOR, U.S. Postal Service Blue Earth Recycling Program, or Certified Recycler (R2 or E-Stewards).

FY 2015 Progress: 100%

Maintaining 100% power management is challenging due to various installation issues. VA is continuing to address these issues to improve compliance.

## Data Center Efficiency Goal

*EO 13693 Section 3(a) states that agencies must improve data center efficiency at agency facilities, and requires that agencies establish a power usage effectiveness target in the range of 1.2-1.4 for new data centers and less than 1.5 for existing data centers.*

VA's size and the decentralized nature of its facilities and operations make it challenging to precisely track all aspects of electronics procurement, operation, and disposition. In conducting data calls, VA uses the best available methods to collect and track the data. VA also faces ongoing resource challenges in that significant additional resources would be required to enhance data quality and ensure a more complete capture of data.

VA faces a number of challenges when it comes to meeting data center efficiency goals. First and foremost, VA's data centers provide mission critical support to our hospitals, clinics, and other facilities in serving the Nation's Veterans. Because of this, VA must be extremely cautious with any changes to our data center environments. Second, VA is a very large and geographically dispersed organization. This necessarily has led to a large number of data centers being utilized to support our mission. VA is still determining how to provide these mission critical services in an environment with fewer data centers while still ensuring patient safety. The Department is currently investigating potential cloud strategies that may be able to help meet the data center efficiency goals. Finally, given VA's size, meeting these goals would take a significant amount of funding, which may not be available given mission priorities.

## Electronics Stewardship Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Use government-wide strategic sourcing vehicles to ensure procurement of equipment that meets sustainable electronics criteria.	No	In FY 15 VA continued to use a variety of solutions to obtain IT electronic equipment, such as NASA SEWP V.	
Enable and maintain power management on all eligible electronics; measure and report compliance.	Yes	Workstation Power Management (WPM) is implemented in hundreds of locations, including medical centers and other clinical facilities. VA has strived toward continuous improvement in its power management, including ensuring computers are using the latest available power management software. Maintaining 100% power management is challenging due to various installation issues. VA is addressing these issues to improve compliance.	<ol style="list-style-type: none"> <li>1) Continue monitoring power management compliance.</li> <li>2) Continue to address issues as necessary to improve compliance.</li> </ol>

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Implement automatic duplexing and other print management features on all eligible agency computers and imaging equipment; measure and report compliance.	No	VA provides employees with duplexing and other green printing tips online. VA also recognized a field level effort to reduce printing with a 2015 Green Routine Award Honorable Mention.	
Ensure environmentally sound disposition of all agency excess and surplus electronics, consistent with Federal policies on disposal of electronic assets, and measure and report compliance.	Yes	VA's policy is to use environmentally sound practices with respect to the disposition of electronic equipment that has reached the end of its useful life. VA utilizes a Memorandum of Understanding with UNICOR, whose e-recycling facilities are R2-certified.	Continue utilizing UNICOR R2-certified facilities to recycle VA end-of-life electronics.
Improve tracking and reporting systems for electronics stewardship requirements through the lifecycle: acquisition and procurement, operations and maintenance, and end-of-life management.	Yes	VA has been a leading voice on the interagency Federal Electronics Stewardship Working Group (FESWG) for clarifying and exploring options to implement new reporting requirements in the EO 13693 implementing instructions. While agencies await further guidance, VA has been using internal data calls to collect electronics stewardship data.	1) Continue data calls to collect electronics stewardship data. 2) Continue to work with FESWG to clarify and explore options for implementing EO 13693 tracking and reporting requirements.
Establish, measure, and report procurement preference for environmentally sustainable electronic products.	Yes	VA procurement policy and Directive and Handbook 0058 VA Green Purchasing Program address federal requirements for purchasing environmentally preferable products, including electronics. In FY15 VA tracked EPEAT purchases through contracts such as NASA SEWP V. For the second year in a row, VA received a 2016 EPEAT Purchaser Award from the Green Electronics Council for excellence in procurement of sustainable electronics.	Continue procuring and tracking environmentally sustainable electronic products.

<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
<p>Promote acquisition of EPEAT registered, ENERGY STAR qualified, and FEMP designated electronic office products.</p>	<p>Yes</p>	<p>Continued to follow VA procurement policy memorandum promoting compliance with federal sustainable acquisition requirements, including EPEAT, ENERGY STAR, and FEMP. VA issued Acquisition Policy Flashes reminding VA Acquisition Workforce of FAR requirement to procure EPEAT and recognizing relevant personnel for achievements in procuring and using EPEAT. Featured EPEAT in Fall 2015 GPN article and Q&amp;A. VA Directive and Handbook 0058 VA Green Purchasing Program address EPEAT, ENERGY STAR, and FEMP designated product requirements. VA acquired EPEAT and ENERGY STAR electronic products through contracts such as NASA SEWP V. VA's receipt of 2016 EPEAT Purchaser Award helps promote EPEAT acquisition.</p>	<p>1) Continue purchasing EPEAT and ENERGY STAR electronic products.</p> <p>2) Continue internal outreach efforts on EPEAT requirements.</p>

## Data Center Efficiency Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Develop, issue, and implement policies, procedures and guidance for data center energy optimization, efficiency, and performance.	No	VA is evaluating the recently updated Federal guidance for this requirement and will be exploring strategies to address changes where necessary.	
Install and monitor advanced energy meters in all data centers (by fiscal year 2018) and actively manage energy and power usage effectiveness.	Yes	VA has currently proposed projects to increase metering capabilities of our major core data centers and awaits funding.	Identify existing capabilities and gaps in energy metering.
Optimize total cost of ownership in data center and cloud computing operations.	Yes	VA has completed the site investigations of several data centers. We will continue conducting the pilot project to develop recommendations for aligning VA resources to provide cost efficiency and operational (consolidation and/or closure) results.	Develop recommendations moving forward, including potential resource allocations.
Identify, consolidate and migrate obsolete, underutilized and inefficient data centers to more efficient data centers or cloud providers; close unneeded data centers.	Yes	VA is continuing to conduct a pilot project that will provide results and recommendations on how (and whether) to consolidate or close underutilized and potentially unnecessary enterprise data centers. The results will be presented to VA leadership for review and decision. VA continues to actively develop a modern cloud strategy that takes advantage of developing FedRamp standards with the potential to allow sensitive information to be stored in commercial cloud facilities.	Develop a consolidation strategy based on the results of the pilot project.
Improve data center temperature and air-flow management to capture energy savings.	No	VA understands that data center temperature and air-flow management is a major driver for data center energy consumption. VA is investigating standards for data center air-flow management.	.
Assign certified Data Center Energy Practitioner(s) to manage core data center(s).	Yes	VA has begun investigating this new requirement and how to implement it.	Once updated OMB Data Center Optimization Initiative memo and guidance are issued, identify appropriate staff for training, assuming funding is available.

## Goal 10: Climate Change Resilience

*EO 13653, Preparing the United States for the Impacts of Climate Change, outlines Federal agency responsibilities in the areas of supporting climate resilient investment; managing lands and waters for climate preparedness and resilience; providing information, data and tools for climate change preparedness and resilience; and planning.*

*EO 13693 Section 3(h)(viii) states that as part of building efficiency, performance, and management, agencies should incorporate climate-resilient design and management elements into the operation, repair, and renovation of existing agency buildings and the design of new agency buildings. In addition, Section 13(a) requires agencies to identify and address projected impacts of climate change on mission critical water, energy, communication, and transportation demands and consider those climate impacts in operational preparedness planning for major agency facilities and operations. Section 13(b) requires agencies to calculate the potential cost and risk to mission associated with agency operations that do not take into account such information and consider that cost in agency decision-making.*

### Climate Change Resilience Strategies

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
Strengthen agency <i>external</i> mission, programs, policies and operations (including grants, loans, technical assistance, etc.) to incentivize planning for, and addressing the impacts of, climate change.	No	VA will continue to explore opportunities to update agency external programs and policies with language designed to incentivize planning for, and addressing the impacts of, climate change. The VA Sustainable Design Manual encourages project teams to coordinate with local and regional officials to synchronize project intentions with local and regional plans for climate change adaptation.	

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
<p>Update and strengthen agency <i>internal</i> mission, programs, policies, and operations to align with the Guiding Principles, including facility acquisition, planning, design, training, and asset management processes, to incentivize planning for and addressing the impacts of climate change.</p>	<p>Yes</p>	<p>VA's Climate Change Adaptation Directive 0065 is VA policy related to climate change adaptation planning, including the implementation of resilience strategies while carrying out the Department's core mission. In FY 2015, VA reviewed the directive and ensured that the content is current and consistent with EO 13693. VA shares information and collaborates using an internal SharePoint site. VA participates in interagency meetings and promotes climate change adaptation awareness through traditional workforce events, activities, and programs such as Earth Day events.</p> <p>VA has health and safety programs to ensure that workers take the appropriate actions when exposed to extreme weather.</p>	<p>1) Review Climate Change Adaptation Directive 0065 annually and update as needed.</p> <p>2) Monitor and review climate change information on a regular basis and when new information is released.</p> <p>3) Facilitate introductions among technical peers at VA GEMS trainings and external meetings and other organizations to share best practices.</p>
<p>Update emergency response, health, and safety procedures and protocols to account for projected climate change, including extreme weather events.</p>	<p>Yes</p>	<p>VA has health and safety programs in place to ensure that workers take the appropriate actions when exposed to extreme weather. Additionally, VA is part of regional emergency response planning. During times of national disaster, VA becomes a regional resource.</p>	<p>1) Continue to ensure emergency response planning covers emergencies potentially caused by climate change.</p> <p>2) Continue coordination with other federal agencies to meet these response requirements.</p>

Strategy	Priority for FY 2017	Strategy Narrative	Targets and Metrics
<p>Ensure climate change adaptation is integrated into both agency-wide and regional planning efforts, in coordination with other Federal agencies as well as state and local partners, Tribal governments, and private stakeholders.</p>	<p>Yes</p>	<p>VA's Climate Change Adaptation Planning Directive 0065 recognizes that climate change will impact Department services, operations, programs, and assets and has broad national security implications. VA's Sustainable Design Manual contains Resilient Design Requirements integrating adaptation concepts into new facility site selection and design.</p> <p>VA is part of regional emergency response planning. During times of national disaster, VA becomes a regional resource and coordinates with the appropriate Federal agencies as well as state and local partners, Tribal governments, and private stakeholders as necessary.</p>	<p>1) Maintain the Sustainable Design Manual to ensure any revisions maintain climate change adaptation planning in new facility design.</p> <p>2) Continue to ensure emergency response planning coordinates with the appropriate Federal agencies as well as state and local partners, Tribal governments, and private stakeholders as necessary.</p>
<p>Ensure that vulnerable populations potentially impacted by climate change are engaged in agency processes to identify measures addressing relevant climate change impacts.</p>	<p>Yes</p>	<p>VA is an organization of continual improvement as we address the needs of our vulnerable populations. We continue to research the impact of climate change on the infection rate of vector borne diseases.</p>	<p>Continue to investigate the impacts of climate change on vulnerable populations through research.</p>
<p>Identify interagency climate tools and platforms used in updating agency programs and policies to encourage or require planning for, and addressing the impacts of, climate change.</p>	<p>Yes</p>	<p>VA will continue participate in the multi-agency Climate Change Community of Practice (COP) meetings.</p>	<p>1) Attend COP and Climate Preparedness and Resilience Council meetings.</p> <p>2) Support Council on Environmental Quality (CEQ) requests and initiatives.</p>

<b>Strategy</b>	<b>Priority for FY 2017</b>	<b>Strategy Narrative</b>	<b>Targets and Metrics</b>
Design and construct new or modify/manage existing agency facilities and/or infrastructure to account for the potential impacts of projected climate change.	Yes	<p>VA continues to provide guidance to teams on how to incorporate climate change adaptation into project planning and development.</p> <p>VA continues to analyze vulnerability from sea level rise and sea level rise enhanced storm surge at all VA medical centers.</p>	<p>1) Promulgate the new VA sea level rise design standard for new and renovated facilities.</p> <p>2) Develop sea level rise guidance material for facility designers based on the results of the recently completed SLR impact study.</p> <p>3) Apply sea level rise information, risk analyses, and design standards to improve resilience during new construction and renovations.</p>

## Acronyms and Abbreviations

AFV	Alternative Fuel Vehicle
CEQ	Council on Environmental Quality
CHP	Combined Heat and Power
COP	Community of Practice
CSO	Chief Sustainability Officer
CY	Calendar Year
DoD	Department of Defense
DOE	Department of Energy
ECM	Energy Conservation Measure
EISA	Energy Independence and Security Act of 2007
EO	Executive Order
EPA	Environmental Protection Agency
ESPC	Energy Savings Performance Contract
ESPM	EPA ENERGY STAR Portfolio Manager
FedFMS	Federal Fleet Management System
FEMP	Federal Energy Management Program
FESWG	Federal Electronics Stewardship Working Group
FleetDASH	Fleet Sustainability Dashboard
FMIS	Fleet Management Information System
FMVRS	Federal Motor Vehicle Registration System
FPDS	Federal Procurement Data System
FPDS-NG	Federal Procurement Data System – Next Generation
FY	Fiscal Year
GEMS	Green Environmental Management System
GHG	Greenhouse Gas
GMP	Green Management Program
GP	Guiding Principles
GPA	Green Product Analyzer

GPN	Green Purchasing News
GPP	Green Purchasing Program
GSA	General Services Administration
GSF	Gross Square Foot
ILA	Industrial, Landscaping and Agricultural
MW	Megawatt
NCA	National Cemetery Administration
O&M	Operations and Management
OAL	Office of Acquisition and Logistics
OMB	Office of Management and Budget
PPA	Power Purchase Agreement
PPCC	President's Performance Contracting Challenge
PV	Photovoltaic
RECs	Renewable Energy Certificates
SAM	System for Award Management
SAMM	Sustainable Acquisition and Materials Management Practices
SCIP	Strategic Capital Investment Planning
SDS	Safety Data Sheets
SEWP	Solutions for Enterprise-Wide Procurement
TMS	Talent Management System
UESC	Utility Energy Service Contract
VA	Department of Veterans Affairs
VALU	VA Learning University
VAM	Vehicle Allocation Methodology
VAMC	VA Medical Center
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network (VHA Region)
WPM	Workstation Power Management