

# U.S. Department of Veterans Affairs 2018 Sustainability Report and Implementation Plan

## Executive Summary

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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. Cost savings achieved in energy and sustainability efforts are reinvested to better serve Veterans.

VA's commitment to sustainability is well represented by the agency's success in winning recognition through the non-profit sustainable healthcare organization, *Practice Greenhealth*. This year, VA medical centers received eight of the organization's most prestigious "Top 25" category awards, along with numerous awards in other categories. VA hospitals overall use 37 percent less energy per square foot than the national average for all hospitals<sup>1</sup>.

VA continues to experience unprecedented growth in services being provided to our Nation's 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 in its healthcare facilities, present unique and significant challenges to our ongoing efforts to meet sustainability goals.

VA has made substantial achievements in many sustainability efforts. Through investments in energy improvements and renewable energy, energy use and water use per square foot have each been reduced by about one third (33%) since FY 2003. In recent years, this progress has been fueled particularly by energy performance contracting, with \$174 million in contracts awarded in FY 2017 alone. VA has certified over 42% of building square footage as sustainable. This has been made possible by certification of new buildings upon their completion, but also through a substantial effort to certify existing VA buildings as sustainable. Renewable energy use is over 27 percent, with VA's renewable energy infrastructure continuing to grow as VA pursues renewable energy within energy performance contracting.

Going forward, VA will continue to pursue efficiency and cost-savings strategies. Key strategies for FY 2019 and 2020 focus on energy performance contracting, fleet training, and assessing energy project opportunities.

- Energy performance contracting has been an innovative way for VA to channel private sector investment into improvements for VA's energy and water infrastructure. With VA's awarded portfolio of over \$600 million of energy performance contracts, VA is already addressing infrastructure and building system needs at 58 VA medical centers across the country. This strategy will continue to be a priority with 15 planned projects totaling approximately \$280 million in value for FY 2018 and 2019.

<sup>1</sup> Based on annual energy reporting, average VA hospital energy intensity (130.9 kBtu/sq. ft.) is 37% more energy efficient than average energy intensity of US hospitals (206.7 kBtu/sq. ft. based on August 2018 data in Energy Star Portfolio Manager for Commercial Building Energy Consumption Survey (CBECS) Inpatient Healthcare).

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- Fleet training is an essential way to maintain progress on fleet performance and efficiency. With high turnover and limited staffing in VA fleet positions, on-going comprehensive training is needed for an understanding of fleet operations and requirements nationwide. VA is rolling out a series of courses that cover fleet basics through VA’s internal online learning management system. Additionally, fleet resources are regularly being added on the internal fleet SharePoint site.
- VA continues to identify beneficial energy projects that serve the mission and are responsible with taxpayer dollars while reducing VA’s environmental impact. Improving energy resiliency and reliability, upgrading critical infrastructure, and lowering operating costs increase VA’s ability to serve Veterans. Where possible, VA seeks to employ non-traditional funding for these projects, to include energy sales agreements and energy performance contracting.

**Implementation Summary**

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**1. Facility Management**

**FACILITY ENERGY EFFICIENCY**

FY 2017 Status: 33% reduction (Btu/GSF) since FY 2003 (12% reduction since FY 2015)

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• Implemented new technologies when retrofitting or constructing new facilities to reduce building energy consumption per square foot.</li> <li>• Perform energy audits and retro-commissioning to inform future energy efficiency measures.</li> </ul>	<ul style="list-style-type: none"> <li>• VA mission has grown, and Veteran population continues to shift, requiring reallocation and expansion of services.</li> </ul>	<ul style="list-style-type: none"> <li>• VA will continue to ensure that future infrastructure investments are as energy efficient as is economically possible.</li> <li>• VA will continue to explore ways to increase efficiency through the use of energy audits and energy performance contracting.</li> </ul>

**EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING**

ESPC and UESC investment / number of projects FY 2017: \$174 million / 7 new awards and 10 contract modifications

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA awarded \$174 million in energy performance contracts in FY 2017, and has already exceeded its FY 2018 goal of awarding \$40 million.</li> <li>• With VA’s total awarded portfolio of over \$600</li> </ul>	<ul style="list-style-type: none"> <li>• Energy performance contracts are incorporated into VA’s strategic capital investment planning (SCIP) process as projects that address one or more of the sustainability-related performance gaps. In addition, data from VA’s facility energy audits are used as a guide for energy and water</li> </ul>	<ul style="list-style-type: none"> <li>• VA will continue to pursue efficiency and savings through energy performance contracting at its facilities. VA’s planned investment for FY 2018 is \$220 million across 7</li> </ul>

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<p>million of energy performance contracts, VA is addressing infrastructure and building system needs at 58 VA medical centers across the country. The installed systems and upgrades across nearly 53 million square feet of medical center space are expected to translate into over \$1 billion of energy and water savings over the life of the contracts, and \$40 million of annual savings to VA facilities.</p>	<p>conservation measures for inclusion in future energy performance contracts.</p> <ul style="list-style-type: none"> <li>• Long paybacks for renewable energy projects remain a challenge within the maximum 25-year contract limit.</li> <li>• VA facility and regional energy engineers face the challenge of balancing the priorities of developing energy performance contracts with 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.</li> <li>• Budgetary issues, hiring challenges, and continually updating design standards are contributing to planning uncertainties and longer development timelines.</li> </ul>	<p>projects, and \$60 million across 8 projects for FY 2019.</p> <ul style="list-style-type: none"> <li>• VA will continue to use energy performance contracting as a tool to aid facilities in addressing facility condition assessment deficiencies, deferred maintenance issues, and infrastructure upgrades to mission critical building and energy systems.</li> </ul>
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**RENEWABLE ENERGY**

FY 2017 Status: 27.6% renewable electricity

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA integrates renewable energy generation and consumption, including purchase of renewable energy certificates (RECs), into its overall sustainability strategy.</li> <li>• VA's agency-level SCIP process includes renewable energy targets as a performance gap. 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.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• VA lacks the authority to enter into the industry standard long-term power purchase agreement.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote integration of renewable energy in to new construction where economically feasible.</li> <li>• Pursue renewable power purchase agreements in markets where shorter term (five years or less) are economically viable.</li> <li>• Pursue energy sales agreements where financially and economically viable.</li> <li>• Investigate renewable energy and energy storage systems as part of current and future energy performance contracts.</li> </ul>

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**WATER EFFICIENCY**

FY 2017 Status: 34.3% reduction in potable water (gal/gsf) compared to the 2007 baseline (6% reduction from FY 2016)

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA evaluates water efficiency as part of its facility energy audits and install water efficient technologies at sites and facilities across the Department where practicable.</li> <li>• VA's national cemeteries' ongoing efforts to minimize the use of irrigation water include using web-based irrigation controllers and advanced sensors to control the amount of water used.</li> </ul>	<ul style="list-style-type: none"> <li>• 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 prevent the growth of dangerous bacteria such as Legionella.</li> </ul>	<ul style="list-style-type: none"> <li>• Install water efficient technologies at sites and facilities where practicable, particularly within energy performance contracts. For example, six facilities in VISN 12 entered into an energy savings performance contract (ESPC) that features comprehensive water conservation measures which are projected to save approximately 127 million gallons of water and \$940,000 of affiliated savings per year for the facilities.</li> </ul>

**HIGH PERFORMANCE SUSTAINABLE BUILDINGS**

FY 2017 Status: 26% by no. of buildings (2% increase from FY 2016); 42% by gross square footage (2.6% increase from FY 2016)

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA requires all new construction to meet the Guiding Principles and has made extensive efforts to certify existing buildings, resulting in the impressive VA square footage certified as sustainable.</li> </ul>	<ul style="list-style-type: none"> <li>• Due to the extensive certification of buildings that VA has completed already, there are limited opportunities remaining.</li> <li>• Building on past success, VA has made internal online resources available so VA staff can self-certify space.</li> </ul>	<ul style="list-style-type: none"> <li>• VA will continue to require the Guiding Principles for all new construction, encourage certification for existing buildings, and seek out new candidates for certification.</li> <li>• VA will review up to five percent of the portfolio per year to identify potential candidates for certification.</li> </ul>

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**WASTE MANAGEMENT AND DIVERSION**

FY 2017 Status: 21.1% non-hazardous solid waste diverted, and 92.9% construction and demolition (C&D) materials and debris diverted

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>All VA medical centers used the Practice Greenhealth (PGH) Waste Tracker to help with data collection and reporting. This has allowed them to better track and understand their waste diversion rates and compare their performance to private sector hospitals.</li> <li>VA medical centers across the country have earned numerous internal and external awards for outstanding achievements in pollution prevention and waste reduction, including from VA's Energy Management Program, EPA's Federal Green Challenge, and the PGH Environmental Excellence awards programs.</li> </ul>	<ul style="list-style-type: none"> <li>The health care environment presents 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.</li> </ul>	<ul style="list-style-type: none"> <li>VA will be transitioning from the PGH Waste Tracker to a new waste and recycling tracking system. The new system will have the same functionality as the current system with additional modifications to improve tracking and data entry.</li> </ul>

**2. Fleet Management**

**TRANSPORTATION / FLEET MANAGEMENT**

FY 2017 Status: 9.8% reduction in petroleum since FY 2005 (14.9% reduction since FY 2016) & 11.6% alternative fuel consumption

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>VA ensures that the most efficient type of vehicle is acquired for a given function through the use of the VA vehicle allocation methodology (VAM) tool.</li> <li>VA fleets continue to acquire electric and plug-in hybrid vehicles when appropriate as well.</li> <li>Fleet managers are provided with centralized training and support.</li> <li>VA has integrated the acquisition of alternative fuel vehicles (AFVs) into its overall sustainability strategy.</li> </ul>	<ul style="list-style-type: none"> <li>The VA fleet has grown over 40% since 2008 to help fulfill VA's expanding mission to provide world-class care and services to our Nation's Veterans.</li> <li>Virtually every medical center fleet includes a number of donated vehicles, almost none of which are AFVs or low GHG emitting vehicles. VA must accept vehicle donations, and does so on an on-going basis.</li> </ul>	<ul style="list-style-type: none"> <li>A comprehensive online training program for VA fleet managers will be rolled out in the coming months, including webinar and video components.</li> <li>To continue "right-sizing" vehicles, VA implemented a new and improved VAM tool to assist with purchasing.</li> <li>Purchase alternative fuel, and acquire electric and plug-in hybrid vehicles as appropriate.</li> </ul>

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**3. Cross-Cutting**

**SUSTAINABLE ACQUISITION / PROCUREMENT**

FY 2017 Status: 0.0 percentage point change from FY 2016 in percent of contracts with green clauses and 0.8 percentage point decrease from FY 2016 in percent of contract dollars with green clauses

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA has focused its efforts on training and outreach. For example, VA issued quarterly Green Purchasing (GP) News for the VA acquisition community, maintained a comprehensive GP Program website, and issued Acquisition Policy Flashes on biobased/GP topics and the new EO 13834 acquisition goal.</li> <li>• VA provided GP trainings to its Green Environmental Management System managers.</li> <li>• VA recognized successes in green purchasing and other sustainability efforts through an internal awards program, and promoted participation in external award programs recognizing achievements in biobased and other sustainable procurement.</li> </ul>	<ul style="list-style-type: none"> <li>• FY 2017 data is from FPDS-NG and represents virtually all VA contracts and contract dollars. VA's top three product service codes (PSCs) by contract \$ value are "Drugs and Biologicals," "Medical-Other," and "Medical and Surgical Instruments, Equipment, and Supplies." These PSCs, which represent over 91% of all VA contracts by number and over 51% by \$ value, are very unlikely to be eligible for sustainable acquisition requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct training and outreach, and explore potential revisions to procurement policy and guidance to address EO 13834.</li> <li>• Work with the interagency Sustainable Acquisition and Materials Management (SAMM) Workgroup on EO 13834 implementation and improving data quality.</li> <li>• Promote VA participation in awards programs to recognize achievements in sustainable acquisition.</li> </ul>

**ELECTRONICS STEWARDSHIP**

FY 2017 Status: 98% equipment acquisition meeting EPEAT requirements, 90% equipment with power management, & 100% compliance with disposal guidelines

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• "98%" and "90%" as reported February 2018 in MAX Integrated Data Collection. "100%" managed in an environmentally sound manner, per best available internally reported data.</li> <li>• 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. Among other options, VA utilizes a Memorandum of Understanding with UNICOR.</li> <li>• In 2018, for the fourth year in a row, VA received an EPEAT Purchaser Award from the Green Electronics Council (GEC), for excellence in procurement of sustainable</li> </ul>	<ul style="list-style-type: none"> <li>• The healthcare environment presents a set of unique challenges when it comes to electronics stewardship. For example, patient care may require certain equipment be powered on 24/7, such as in</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize UNICOR to recycle VA end-of-life electronics.</li> <li>• Work with the Federal Electronics Stewardship Working Group (FESWG) to clarify and explore options for implementation of EO 13834 electronics stewardship requirements.</li> </ul>

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<p>electronics. VA issued Acquisition Policy Flashes reminding VA acquisition workforce of FAR requirement to procure EPEAT and recognizing achievements in procuring and using EPEAT. Featured EPEAT and GEC awards in GPN articles.</p>	<p>surgical suites, patient rooms, and nursing stations.</p>	<ul style="list-style-type: none"> <li>• Conduct internal outreach efforts on EPEAT requirements and achievements in electronics stewardship.</li> </ul>
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**GREENHOUSE GAS EMISSIONS**

FY 2017 Status: 23.3% reduction in Scope 1 & 2 emissions since FY 2008

<i>Implementation Status</i>	<i>Operational Context</i>	<i>Priority Strategies &amp; Planned Actions</i>
<ul style="list-style-type: none"> <li>• VA continues building efficiency upgrades, energy investments, and employee awareness campaigns to achieve both energy intensity and GHG emissions reductions.</li> </ul>	<ul style="list-style-type: none"> <li>• Since FY 2008, VA has seen a significant increase in patient visits (35 percent) and demand for benefit services. To meet these expanding mission needs, VA hired additional full-time equivalent (FTE) employees (43 percent growth since FY 2008) and expanded its building footprint (28.5 percent since FY 2008), improving the quality of service that VA provides to Veterans and their families</li> </ul>	<ul style="list-style-type: none"> <li>• VA will continue building efficiency upgrades, energy investments, and employee awareness campaigns where practical, particularly through the use of energy performance contracts.</li> </ul>

**4. Agency Identified Priorities**

VA is always focused on the mission of serving Veterans. VA’s efforts in energy performance contracting are a path to improve facility energy and water infrastructure to better serve Veterans, as well as reduce energy use and provide guaranteed annual savings. VA’s Fleet Management Program is also actively working with GSA to improve GSA’s interagency fleet management information system, as well as improving internal VA tools, and providing training to facility and regional fleet managers. VA also continues to assess energy project opportunities, seeking opportunities that are beneficial to the VA mission, cost-effective, and incorporate innovative financing strategies such as energy performance contracting.

**Notable Projects and Highlights**

- VA’s Program Contracting Activity Central (PCAC) was recognized for innovative energy performance contracting efforts with the “Contracting” category award in the highly competitive Department of Energy Federal and Water Management Awards.

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## PROGRAM CONTRACTING ACTIVITY CENTRAL

U.S. Department of Veterans Affairs  
Independence, Ohio

In FY 2017 the team awarded \$174 million of ESPCs and utility energy service contracts (UESC) while also developing new authority in line with the Department's mission and business requirements—to create the federal government's first set-aside ESPC procurement for service-disabled Veteran-owned small businesses.

*From the Department of Energy, Federal Energy & Water Management Awards, Contracting Category, 2018*

- Every year, the VA Energy Management Program recognizes projects with contributions to sustainability. This year's winners include individuals in a wide variety of positions, from food services to engineering, with projects reducing water use, saving energy, reducing waste, and more.
- In 2018, VA won a fourth consecutive, three-star EPEAT Purchaser Award for sustainable electronics purchasing. The Green Electronics Council recognized VA for its purchases in three IT product categories: PCs and displays, imaging equipment, and televisions.
- VA's efforts on fleet training have culminated with a comprehensive course with four separate modules on VA's learning management system website. This training covers key issues across fleet management, such as managing fleet data and reporting, vehicle safety, and vehicle ordering.

### Vehicle Inspection Checklist

**Ready, check, go!** Complete the following preventative maintenance checks daily, to detect problems before they become serious. These inspections can reduce the amount of unscheduled maintenance and repair, as well as the inconvenience associated with vehicle downtime.



**Exterior/Interior Damage** Check vehicle for any damage incurred while parked and unattended. Report any damage promptly to your local fleet manager.



**Tires** Check tire pressure for all tires before driving on them. Also, examine the tire treads for excessive or uneven tread wear.



**Engine Oil Level** Remove the engine oil dipstick, wipe it clean, reinsert it, and ensure the oil is between the minimum and maximum lines.

*Excerpt from VA's online fleet management training*

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- VA continued its active participation in the interagency SAMM Workgroup and co-chaired the SAMM Training subgroup, which developed and maintains the Sustainable Acquisition Training Resources spreadsheet, and co-led a review of draft revisions to the Federal Acquisition Institute's Green Purchasing Civilian Acquisition Course (FAC 018) to ensure current sustainability content.
- VA has successfully incorporated renewable energy and combined heat and power systems into several of its energy performance contracts. For example, a 528 kilowatt solar photovoltaic system that became operational in FY 2017 was installed at the El Paso VA Health Care System as part of an energy savings performance contract (ESPC), and is now generating 16.5% of the facility's electricity needs.



*El Paso VA Health Care System, Solar PV system (528 kW)*