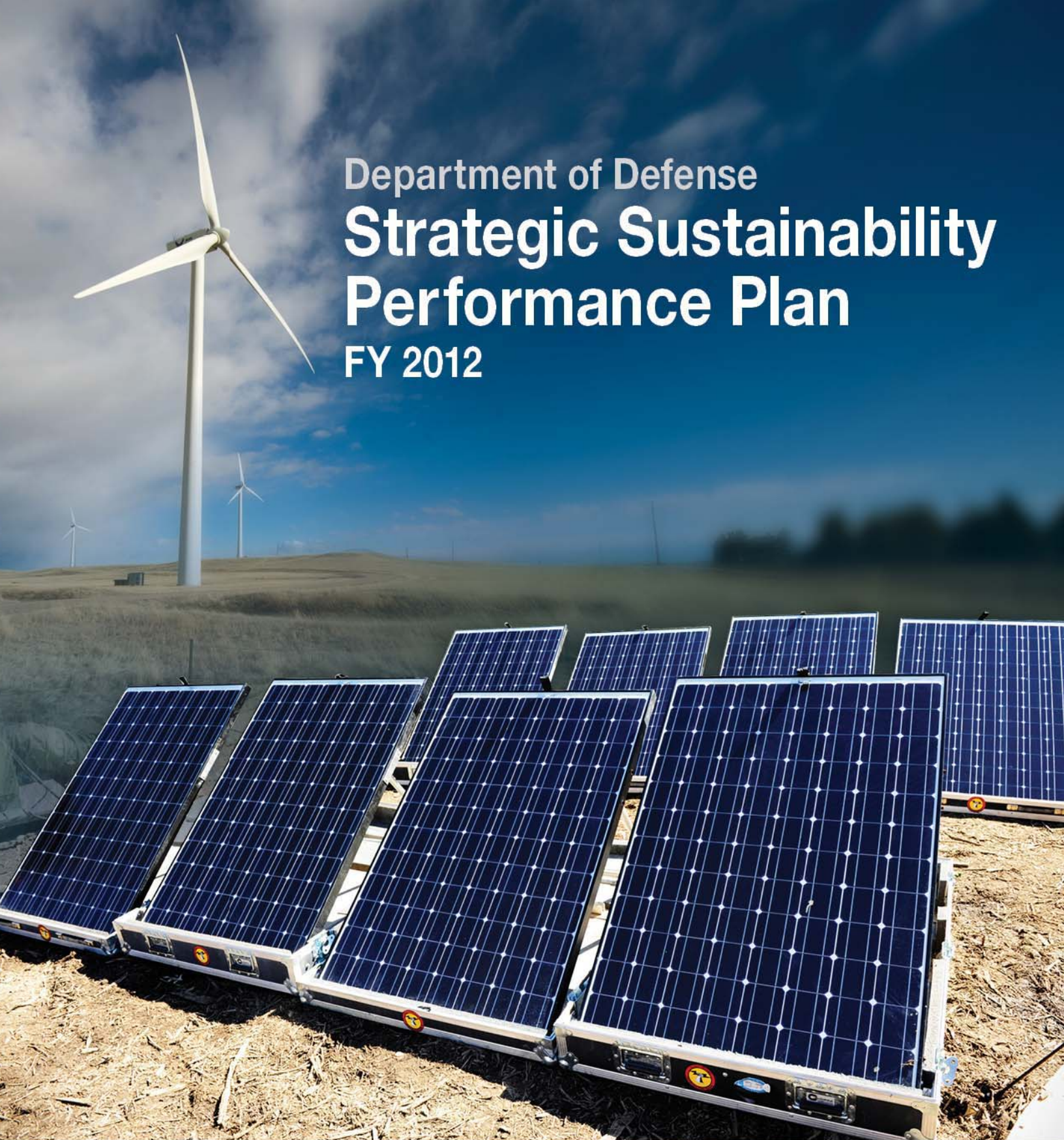


Department of Defense  
**Strategic Sustainability  
Performance Plan**  
FY 2012







SEP 20 2012

The mission of the Department of Defense (DoD) is to provide the military forces needed to deter war and protect the security of our country. To successfully execute the DoD mission, our Military Departments must have the energy, land, air, and water resources necessary to train and operate, today and in the future, in a world where there is increasing competition for resources. Sustainability provides the framework necessary to ensure the longevity of these resources by addressing energy, environmental, safety, and occupational health considerations. Incorporating sustainability into DoD planning and decision-making enables us to address current and emerging mission needs and consider future challenges.

This annual update of the DoD Strategic Sustainability Performance Plan (SSPP) lays out our goals and sustainability performance expectations through FY 2020, establishing the path by which DoD will improve our mission, lower life-cycle costs, and advance technologies and practices that further the sustainability goals of the Nation. In FY 2011, the Department continued to drive progress on sustainability by integrating it into the everyday course of DoD business. We did this by embedding sustainability concepts and requirements into our high-level strategies, policies, and guidance documents across the Military Departments.

We are committed to integrated risk management practices that advance our mission while protecting the environment and promoting sustainability. The Department is addressing sustainability concepts in our acquisition and procurement processes, as well as in the planning and management of our installations. For every DoD program, the Department actively seeks opportunities to continually improve its full range of operations through improved analysis, informed decision-making, and appropriate budgets to address sustainability.

DoD sustainability goals are aggressive, especially in energy and greenhouse gas emissions. In FY 2012 and 2013, our primary sustainability focus will be to reduce energy costs and improve the energy security of our fixed installations through energy efficiency and renewable energy. In support of this focus, the Department plans to execute roughly \$465 million in performance-based, third-party contracts in FY 2012 and approximately \$718 million in FY 2013.

The Department will meet or exceed the FY 2012 targets of many of its SSPP sub-goals. We will leverage sustainable technology development with other agencies and industry, and by doing so, will jump start commercial adoption and achieve payoffs that extend well beyond the defense sector. Although we still have much to do, the Department is committed to making the transformation necessary to continue our culture of excellence in environmental and fiscal stewardship while also improving national security. We are steadfast in achieving the transition needed to be ready for the challenges of tomorrow.

A handwritten signature in black ink, appearing to be "D. M. E.", written over a horizontal line.

DoD Senior Sustainability Officer  
Under Secretary of Defense for Acquisition,  
Technology and Logistics

# Executive Summary

## Sustainability as an Overarching, Cross-Cutting Paradigm

The Department of Defense (DoD) vision of sustainability is to maintain the ability to operate into the future without decline—either in the mission or in the natural and man-made systems that support it. DoD embraces sustainability as a critical enabler in the performance of our mission, recognizing that it must plan for and act in a sustainable manner now in order to build an enduring future. The DoD Strategic Sustainability Performance Plan (SSPP) is framed around four mission-oriented objectives whose successful implementation will make the Department more effective:

- 1) Ensuring the Continued Availability of Resources Critical to the DoD Mission
- 2) Maintaining Readiness in the Face of Climate Change
- 3) Ensuring the Ongoing Performance of DoD Assets by Minimizing Waste and Pollution
- 4) Continuously Improving the DoD Mission through Sustainability Management and Practices

All of the objectives, along with the six goals under them, relate to one another in synergistic ways.

Sustainability is not an individual Departmental program; rather, it is an organizing paradigm that applies to all DoD mission and program areas. For this reason, many DoD efforts to drive improved sustainability cut across topical and organizational boundaries, in keeping with the cross-cutting, interdisciplinary and synergistic nature of sustainability. The fact that so many aspects of sustainability are interrelated is reflected in recent actions by the Military Departments to embed sustainability into critical documents and take a more holistic approach to environmental and energy issues. For example, the Army conducted a comprehensive review of environmental programs in FY 2011, including an evaluation of environmental staffing levels across the Army, to ensure that Army organizations are successfully postured to support both the mission and sustainability goals. The Army also merged its energy and sustainability governance structures in October 2011 into a single Senior Energy and Sustainability Council that serves to institutionalize energy and sustainability in doctrine, policy, training, operations and acquisitions across the entire Army enterprise. The Army incorporated sustainability as a “foundation” concept embedded across the Army Campaign Plan strategy map, where one of the objectives is to “achieve energy security and sustainability objectives.” Finally, the Army launched its cross-cutting Net Zero Initiative in April 2011, a holistic approach to energy, water, and waste that directly supports the Army's energy security and sustainability objectives.

In the Navy, the Chief of Naval Operations (OPNAV) Energy and Environmental Readiness Division was created in May 2010, combining the existing OPNAV Environmental Readiness Division and the Navy's Task Force Energy. Since then, the division has developed many cross-cutting sustainability initiatives, such as the incorporation of sustainability considerations into ship and weapons system design processes and promoting sustainability through Navy outreach efforts. The Department of the Navy (DON) is in the process of revising its Environmental Readiness Program Manual (OPNAV Instruction 5090.1C) to specifically include information on sustainability and the DoD SSPP. The revision is expected to be published in FY 2013.

The Air Force has moved to Sustainable Infrastructure Assessments, which combine energy and water audits, facility condition assessments, space optimization assessments, and High Performance and Sustainable Building assessments into a single activity. In October 2011, the Air Force issued its *Environmental Management System Standardization Methodology and Approach* policy memo, and in November 2011 updated its Environmental Management Instruction. These actions formally establish environmental management systems (EMSs) across the enterprise as the core framework for continual program and process improvement to achieve and attain sustainability and compliance goals. Later in FY 2012, the Air Force will issue a policy on achieving a “net zero” posture for Air Force installation water, energy and solid waste. The net zero actions will build upon and complement the new EMS policies and

other existing Air Force strategic sustainability policy and goals, providing a systemic, cross-cutting blueprint that embeds sustainability into Air Force operations.

## By the Numbers

DoD's FY 2011 performance on the sub-goals in its SSPP, relative to the FY 2011 planning targets, is compiled in Table ES.1. (Progress toward the employee air travel sub-goal is not shown because its baseline year is FY 2011.) The table also shows which sub-goals are on track for FY 2012 and which are not. In four areas, the Department greatly exceeded the targets, by one-third or more. In seven other areas, DoD met the targets or came within 10%, and is well placed to meet or exceed the FY 2012 targets. DoD is not on track at this time for meeting six of its sub-goal targets by FY 2012.

Looking ahead to FY 2013, the Department has a high degree of confidence that it will meet targets for the nine sub-goals pertaining to: biogas recovery, water intensity, paper, solid waste (both sub-goals), toxic chemicals, electronics disposition, and pesticides (both sub-goals). In addition, DoD is tentatively on track for meeting FY 2013 targets for six other sub-goals: facility water use, vehicle petroleum use, Scopes 1 and 2 greenhouse gas (GHG) emissions, stormwater management, employee teleworking and sustainable procurement, if complete data is available.

Table ES.1 also shows sub-goals for which complete data is not yet available. DoD expects the issues relating to collecting accurate teleworking data to be resolved in time for complete FY 2013 reporting. The Military Services continue to make progress developing and deploying tracking systems for stormwater runoff compliance, and they expect close to 100% implementation of the systems in FY 2012. The availability of data is also an issue for the sub-goal pertaining to irrigation and industrial water, for which DoD cannot project performance with high confidence until enough meters are installed to better estimate a Department-wide quantity of irrigation and industrial water consumption separate from indoor use. Until more complete systems are available to rigorously track compliance with sustainable procurement requirements, DoD is estimating performance by conducting random audits on a large number of contract actions (987 of them in FY 2011). Meanwhile, system and process improvements are in progress at both the federal level and within DoD.

**Table ES.1. Summary of DoD Performance in FY 2011**

	Result	Target
<b>Exceeded FY 2011 Target</b>		
Biogas Recovery	2	0
Facility Water Intensity	10.7%	8%
Use of Printing Paper	4	1
Solid Waste Diversion (C&D Debris)	77%	52%
<b>Met FY 2011 Target or On Track for FY 2012<sup>a</sup></b>		
Vehicle Petroleum Use	12%	12%
Scope 3 GHGs <sup>b</sup>	-0.1%	0%
Solid Waste Diversion (Non-Hazardous)	40%	42%
Toxic Chemicals	2.5%	5% by FY15
Electronics Disposition	100%	100%
Certified Pesticide Applicators	99.2%	100%
Integrated Pest Management Plans	90.2%	100%
<b>Not On Track for FY 2012</b>		
Renewable Energy	8.5%	12%
Facility Energy Intensity	13.3%	18%
Scopes 1 and 2 GHGs	4.4%	5%
Sustainable Buildings	0.1%	7%
Sustainable Procurement <sup>c</sup>	82.6%	95%
Environmental Management Systems	red	green
<b>Complete Data Not Yet Available</b>		
Industrial and Irrigation Water Use	n/a	2%
Stormwater Runoff	n/a	100%
Employee Teleworking	n/a	10%
Air Travel GHG Emissions	Baseline is FY 2011	

<sup>a</sup>Considered on track if less than 10% from the target.

<sup>b</sup>Includes credit for hosting renewable energy facilities.

<sup>c</sup>Based on random audit of 987 contract actions in FY 2011.



There are three sub-goals for which DoD is not on track for FY 2013:

- **Facility Energy Intensity:** DoD anticipates difficulty meeting its FY 2013 target for reducing the energy intensity of its facilities. The annual planning targets ramp up by 3 percent per year through FY 2015, while a more realistic progression would have lower targets in the early years to provide time for projects to be funded, designed, launched and completed. The Department expects to meet the FY 2020 goal for facility energy.
- **Environmental Management Systems:** For the implementation and maintenance of Environmental Management Systems (EMSs), DoD's performance has been improving, with 52 percent of EMSs scoring green in FY 2011, up from 48 percent in FY 2009, although the portion of red EMSs rose slightly over that period, from 14 percent to 15 percent. Since an overall green score for DoD requires that more than 80 percent of all EMSs be green and fewer than 5 percent be red, DoD is unlikely to score green by FY 2013, but it expects to do so by FY 2020 if not sooner.
- **Sustainable Buildings:** The greatest challenge for DoD will be meeting the sustainable buildings goal. DoD currently has almost 52,000 buildings larger than 5,000 square feet, meaning that approximately 7,800 buildings would have to be renovated by FY 2015 – often extensively – in order to meet the Guiding Principles criteria. Aside from the sheer magnitude of the challenge, another issue is the Guiding Principles threshold. DoD has a rapidly increasing number of high performance, sustainable buildings that have LEED Silver certification or higher. However, these buildings often do not meet 100 percent of the criteria in the Guiding Principles, and therefore do not count toward the metric. The Department's facility investment strategy is focused on mission needs, not on upgrading buildings that already meet a mission need to meet the Guiding Principles. The Department is committed to ensuring our limited investments in new construction and major renovation are meeting the Guiding Principles and lowering life-cycle costs, although this is expected to yield only modest gains in the Guiding Principles metric. However, the steps described in the Vision section below will accelerate DoD's progress in improving the performance of its buildings.

## Successes with Potential for Widespread Adoption

Notable successes from FY 2011 are highlighted throughout the SSPP. Four are briefly summarized here for their potential to be widely adopted by other federal agencies, as well as within the Department.

### Installations as Test Beds for Next-Generation Energy Technologies

DoD's fixed installations offer an ideal test bed for next-generation energy technologies developed by industry, the Department of Energy (DOE) and university laboratories, filling the gap between research and broad commercial deployment. Emerging energy technologies hold the promise for dramatic improvements in energy performance but face major impediments to commercialization and deployment. DoD's built infrastructure and lands encompass a diversity of building types and climates in the United States, affording an exceptional opportunity to assess the technical validity, operating costs and environmental impact of advanced, pre-commercial technologies. As both a real and a virtual test bed, our facilities can serve as a sophisticated first user, evaluating the technical validity, cost and environmental impact of advanced, pre-commercial technologies. The Department is applying the energy test bed concept to improve the energy efficiency of buildings, improve renewable energy technologies on or in proximity to installations, and develop smart microgrids. The test bed approach is key to meeting the Department's needs, allowing DoD to leverage technology advances from the private sector while benefiting from the lower costs that occur once the private sector commercializes the technologies. Through its energy test bed program, DoD is helping create a market for emerging technologies that prove effective and reliable, accelerating the availability of next-generation energy technologies for other federal agencies.

### Power Purchase Agreements for Large-Scale Renewable Energy

A critical path for DoD to meet its energy and GHG reduction goals is through large-scale renewable energy. The most time- and cost-effective approach for doing so is to partner with the private sector using creative financial mechanisms that require no upfront costs on the part of DoD. One example is a new solar photovoltaic (PV) array at Naval Air Weapons Station China Lake. Construction on the 13.8 MW PV array – the Navy’s largest solar installation – began in January 2012. Under a 20-year power purchase agreement (PPA), a financier purchased the solar system that a private solar company designed and built, and will operate and maintain. The role of the installation is to provide the land for the project and purchase electricity from it, at a rate that is locked in for 20 years below the current retail utility rate. The 20-year term for the PPA – the first PPA of this duration with the federal government – gives the Navy a significantly better rate than 10-year PPAs. The Navy incurs no upfront costs. The array is projected to meet approximately 30 percent of the installation’s annual energy needs and reduce its energy costs by about \$13 million over the 20-year life of the contract. The components of the solar system are shipped in pre-assembled power block kits to facilitate rapid installation on the site.

### **Energy Efficiency Counteracts Increased Computing Density due to Data Center Consolidation**

The Computing Services Directorate (CSD) of the Defense Information Systems Agency consolidated over 100 data centers down to 14. As a result, however, the remaining data centers became more densely loaded with equipment. To avoid the increased energy costs that would normally go with this increased computing density, CSD significantly improved the energy efficiency of its remaining data centers. CSD deployed a large range of energy efficiency strategies at the 14 remaining data centers, successfully preventing a significant increase in utility costs. The measures included the following, which are in keeping with Federal Energy Management Program (FEMP) recommendations for efficient data center best practices:

- A three-dimensional computational fluid dynamic software program called “TileFlow” to optimize the configuration of racks and other equipment.
- Airflow management devices, to better direct cooling air to the equipment that needs it and prevent cool air from mixing with the hot exhaust air from equipment.
- Hot aisle/cold aisle layout, where the rows of servers are oriented so the fronts of server racks always face one another (cold aisles) and backs of the racks always face one another (hot aisles).
- Outdated equipment – such as computer room air conditioners, uninterruptible power supplies, power distribution units, lighting, chillers and boilers – replaced with new, energy-efficient models.
- Building automation system improvements, such as controls for chillers and lighting.
- Electricity meter installation.
- Variable speed drives installed on pumps.

### **Approaches to Maximize the Diversion of Construction and Demolition (C&D) Debris**

The Department diverted 77 percent of C&D debris from disposal in FY 2011. One proven approach DoD used in FY 2011 was to write the requirements for cost-effective and innovative C&D debris diversion into the contracts for construction projects, and make them apply to all contractors, vendors and suppliers involved. Another winning approach for diverting large portions of C&D debris away from disposal – which DoD repeatedly demonstrated in FY 2011 – is to find high value uses for it. In some cases DoD did this through market research, raising awareness among contractors of ways they can make use of recycled or repurposed debris, and reaching out to local recycling facilities. The most common way DoD repurposes C&D materials in DoD is to use crushed concrete and asphalt for building materials. Installations across all four Military Services regularly reuse crushed concrete and asphalt from demolitions for a wide variety of projects, including foundations for buildings and pavement, curbs and gutters, roads and highways, airport runways, clean fill, landscaping and stormwater retention basins.

Joint Base Lewis-McChord, one of the Army's eight Net Zero Waste pilot installations, set aside an area on the installation to handle C&D debris on an ongoing basis. The base collects and stockpiles waste concrete and asphalt generated from in-house projects, and then reclaims the material to provide high-quality aggregate to Department of Transportation specifications for other projects on the base. The cost of this reclaimed material is generally around half the cost of new crushed rock and aggregate, and it eliminates the costs and pollution associated with transporting virgin material from the source. Another example is Naval Support Facility Diego Garcia, which developed a win-win solution by making landfill covers out of C&D debris mixed with pulverized recycled glass and clean sandblasting grit. This not only saved landfill space, but reduced the cost of importing fill material and reduced the risk of inadvertently importing non-native species in imported fill.

### **Vision for FY 2012 and FY 2013**

The DoD SSPP applies across the Department as a whole, encompassing the Military Departments, Defense Agencies and DoD Field Activities, each with a distinct mission. The Office of the Secretary of Defense manages DoD's sustainability efforts on behalf of the Department as a whole, but in practice the individual Components realize most of the tangible progress. To provide the Components with a common sustainability vision and policy across the entire Department, DoD is in the process of developing a high-level Department of Defense Instruction (DoDI) titled *Sustainability in DoD*. The DoDI will state that sustainability is a mission imperative for all Components and that it is DoD policy for the Department to integrate sustainability into its day-to-day course of business. It will clearly define what sustainability means to DoD in practice. Although many elements of the DoDI already exist in policy, guidance and programs elsewhere within the Department, the DoDI will provide unambiguous, overarching policy and direction to ensure that everyone in the Department understands the high-level sustainability objectives toward which they are striving.

Within the realm of sustainability, the Department's near-term focus is on facility energy. DoD is pursuing an ambitious facility energy strategy to reduce its \$4 billion annual facility energy bill and improve the energy security of its installations. The Department's facility energy strategy, designed to reduce energy costs and improve the energy security of our fixed installations, has four inter-related elements:

- reduce the demand for fossil fuels through conservation and improved energy efficiency;
- expand the supply of renewable energy and other forms of distributed (on-site) energy;
- enhance the energy security of our installations directly (as well as indirectly, through the first two elements); and
- leverage advanced technology.

The Department budgeted more than \$1.1 billion in FY 2013 for energy conservation and efficiency, almost all of which will be directed to retrofits on existing buildings, such as more energy efficient lighting, double-pane windows, energy management control systems, new roofs, and high-efficiency heating, ventilation and air-conditioning systems. Included in these investments is the Energy Conservation Investment Program (ECIP), which DoD is reshaping to support projects that will have a major impact on the Services' energy efficiency and/or security, but that may not be justified under their internal funding strategies. The Department is also changing the way it will award ECIP funding: in the future, Services will be required to compete with one another for these funds. In addition to direct funding, the Department plans to rely heavily on third parties to finance its investments in energy and water efficiency. DoD set a goal to execute roughly \$465 million in energy savings performance contracts and utility energy service contracts in FY 2012 and \$718 million in FY 2013.

Another critical step in improving facility energy efficiency is to greatly increase the number of buildings that DoD meters for energy. By deploying a large network of advanced meters, DoD can gain a more accurate understanding of where its facilities energy budget is being consumed, identify under-

performing buildings, and develop investment strategy based on actual energy use data. Toward this end, DoD will issue an updated policy on metering this summer that will increase the number of buildings that Components must meter, and establish guidelines to ensure that installed meters securely deliver data to energy professionals in the field. Another significant development is a new set of building standards the Department is developing, to be issued in late 2012, to ensure DoD compliance with all federal requirements on high-performance, sustainable buildings. It will apply to all new construction, major renovations, existing buildings and leased facilities. Finally, in May the Department issued an updated Unified Facilities Criteria (UFC) titled [Installation Master Planning](#) to ensure that consistent planning processes are applied at all military installations. DoD expects implementation of the UFC to result in lower upfront and lifecycle costs, improved energy and land efficiency, improved safety and enhanced protection of DoD forces.

DoD has decided to focus on developing renewable energy on its own installations in lieu of the common past practice of purchasing renewable energy credits. Each of the Military Departments has set a target to develop one gigawatt of renewable energy by FY 2025. At the heart of the Department's vision for greatly expanding its renewable energy capacity – especially on military installations with their thousands of acres of land compatible with large scale renewable energy development – is a reliance on alternative financing. Another central theme of the Department's vision for facility energy is advanced microgrid technology. Advanced microgrids are a “triple play” for DoD's installations: they will reduce installation energy consumption and costs, facilitate the incorporation of renewable and other on-site energy generation, and – combined with energy storage – allow an installation to shed non-essential loads and maintain mission-critical loads if the grid goes down. Finally, the DoD budget in FY 2013 for the Installation Energy Test Bed is \$32 million. The program helps firms overcome the barriers that inhibit innovative technologies from being commercialized and/or deployed on military installations by using installations as a distributed test bed to demonstrate and validate the technologies in a real-world environment.

Operational energy is the energy required to train, move and sustain forces, weapons and equipment for military operations. It accounts for approximately 75 percent of all energy used by the Department. Although operational energy is exempt from the SSPP sub-goals, it is vitally important for DoD to minimize the risk and maximize the capability that results from changing its use of energy. In 2010, the Department created the Office of the Assistant Secretary of Defense for Operational Energy Plans and Programs (OEPP) to strengthen the energy security of U.S. military operations. The mission of the office is to help the military services and combatant commands improve military capabilities, cut costs and lower operational and strategic risk through better energy accounting, planning, management and innovation.

In June 2011, OEPP released DoD's first [Operational Energy Strategy](#), followed by a detailed [Operational Energy Strategy Implementation Plan](#) in March 2012. The strategy sets the overall direction for operational energy security for DoD, with the goal of assuring reliable supplies of energy for 21st century military operations. Secretary Panetta's top priority for DoD today is to support current operations. OEPP has, therefore, focused on identifying and promoting the technologies, techniques, tactics, and procedures that can best support deployed men and women, especially in Afghanistan. For FY 2013, OEPP will continue to focus on supporting current operations, including the documentation of lessons learned in Afghanistan, and continue to support efforts at the Pacific Command to integrate operational energy into command priorities, plans, and programs.

DoD has made considerable progress in the two short years since it issued the first version of its SSPP for the decade spanning FY 2011 through 2020. With the dual approach of high-level institutional changes that lay the foundation for a sustainable future, combined with actions and ever evolving innovations on the ground, the Department looks forward to a decade of continuous improvement on the path to a stronger and more sustainable DoD.

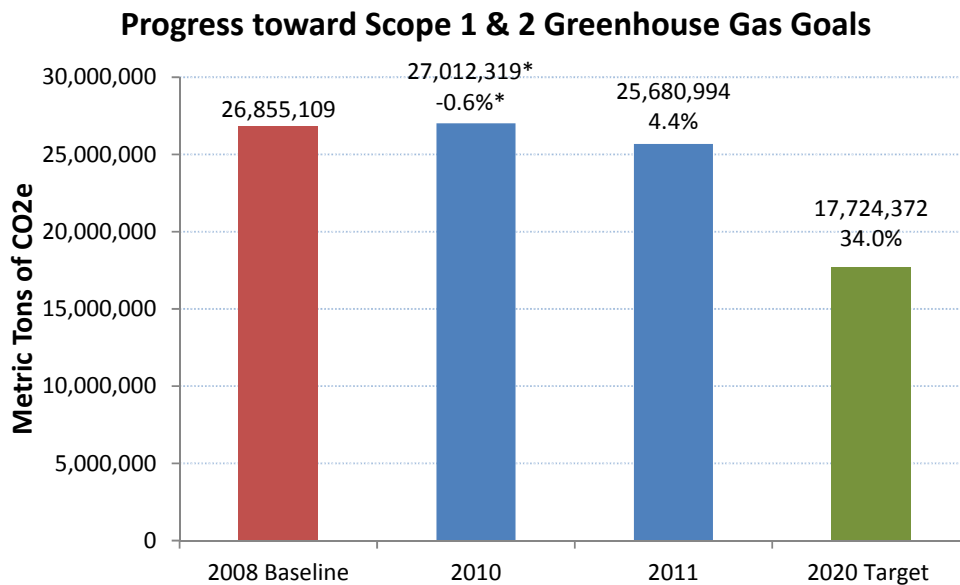


**TABLE 1: SIZE AND SCOPE OF AGENCY OPERATIONS**

<b>Agency Size and Scope</b>	<b>FY 2011</b>
Total Number of Employees as Reported in the President's Budget	2,330,178
Total Acres of Land Managed	28,504,343
Total Number of Facilities Owned	201,939
Total Number of Facilities Leased (GSA and Non-GSA lease)	9,053
Total Facility Gross Square Feet (GSF)	1,905,276,000
Operates in Number of Locations Throughout U.S.	4,214
Operates in Number of Locations Outside of U.S.	661
Total Number of Fleet Vehicles Owned	54,051
Total Number of Fleet Vehicles Leased	72,406

## GOAL 1: GREENHOUSE GAS REDUCTION AND MAINTENANCE OF AGENCY COMPREHENSIVE GREENHOUSE GAS INVENTORY

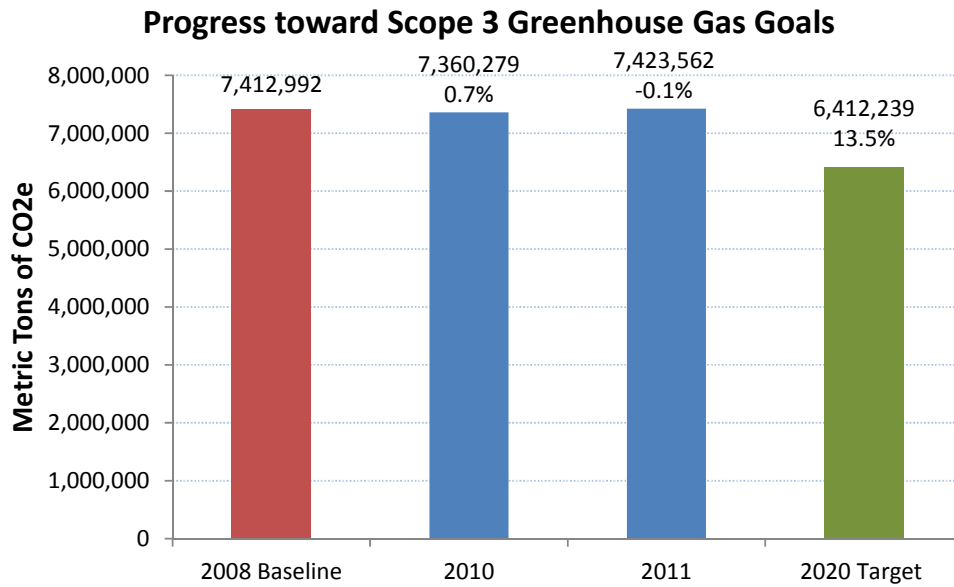
### Agency-Specific Performance Metrics for Scope 1 & 2 GHG Emissions Reduction:



Note: E.O. 13514 requires each agency to establish a scope 1 & 2 GHG reduction target for FY2020. The target for this agency is 34% compared to FY2008. The red bar represents the agency's FY2008 baseline. The green bar represents the FY2020 target reduction. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2008 baseline. A negative percentage reflects an increase in scope 1 & 2 emissions.

\* FY2010 data and progress are measured from a prior baseline. FY2011 data and progress are calculated from a revised baseline established in FY2011.

**Agency-Specific Performance Metrics for Scope 3 GHG Emissions Reduction:**

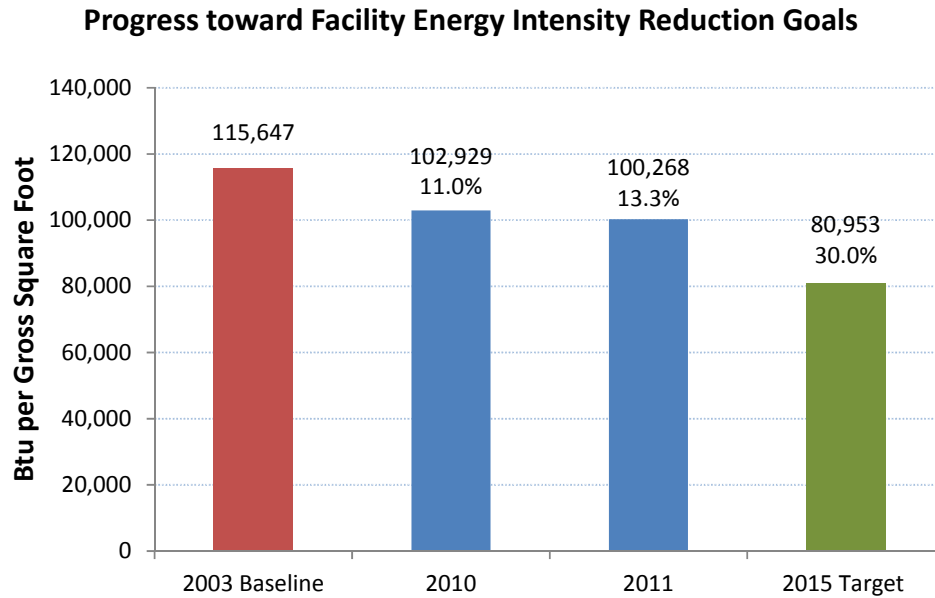


Note: E.O. 13514 requires each agency to establish a scope 3 GHG reduction target for FY2020. The FY2020 target for this agency is 13.5% compared to the FY2008 baseline. The red bar represents the agency’s FY2008 baseline. The green bar represents the FY2020 target reduction. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2008 baseline. A negative percentage reflects an increase in scope 3 greenhouse gas emissions.



## GOAL 2: BUILDINGS

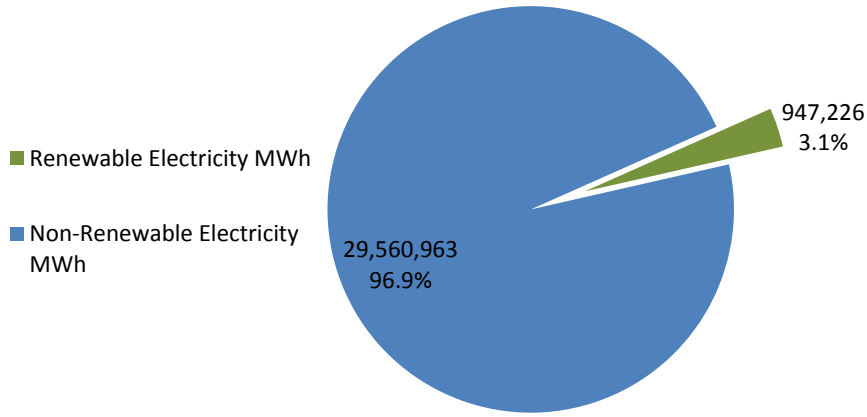
### Agency-Specific Performance Metrics for Facility Energy Intensity Reduction:



Note: EISA requires agencies to reduce energy intensity by 18% for FY2011, compared to an FY2003 baseline; a 30% reduction is required by FY2015. The red bar represents the agency's FY2003 baseline. The green bar represents the FY2015 target reduction. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2003 baseline.

**Agency-Specific Performance Metrics for Renewable Energy:**

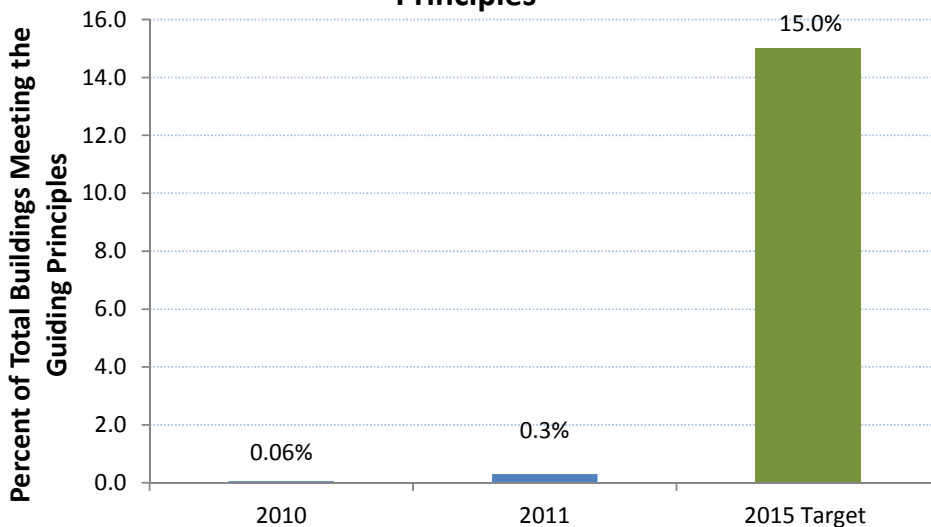
**Use of Renewable Energy as a Percentage of Electricity Use**



Note: EPO requires agencies to increase the use of renewable energy as a percentage of electricity use to 5% by FY2010-2012 and 7.5% by FY2013 and beyond.

**Agency-Specific Performance Metrics for Total Buildings Meeting the Guiding Principles:**

**Progress toward Total Buildings Meeting the Guiding Principles**

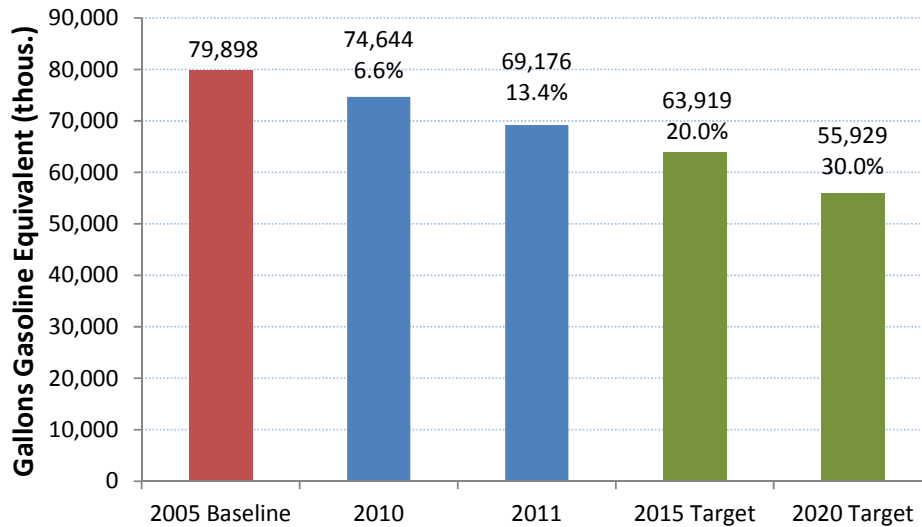


Note: E.O. 13514 requires that by FY2011 agencies have 7% of new, existing, and leased buildings >5,000 square feet meet the Guiding Principles; the requirement increases to 15% by FY2015. The green bar represents the FY2015 target. The blue bars show actual progress toward the target.

## GOAL 3: FLEET MANAGEMENT

### Agency-Specific Performance Metrics for Fleet Petroleum Reduction:

Progress toward Fleet Petroleum Use Reduction Goals

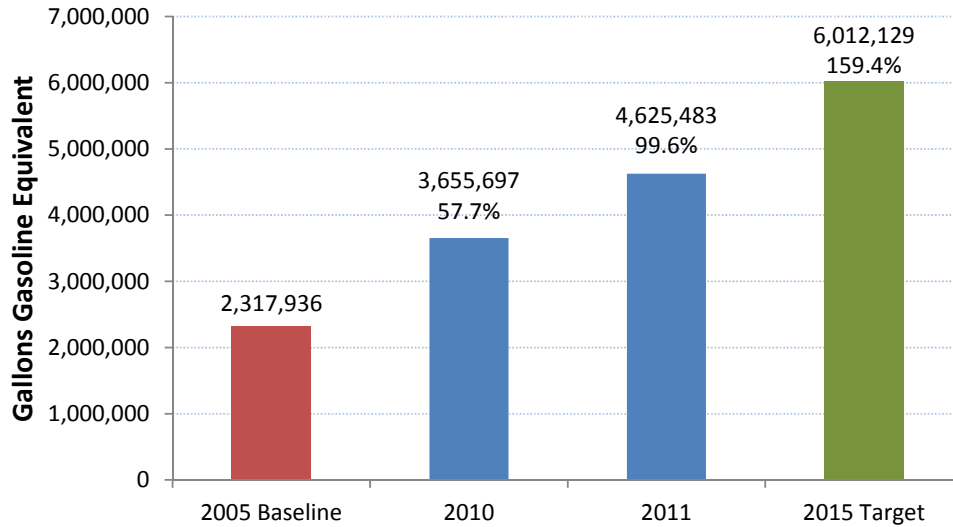


Note: E.O. 13514 and EISA require that by FY2011 agencies reduce fleet petroleum use by 12%, compared to an FY2005 baseline. A 20% reduction is required by FY2015 and a 30% reduction is required by FY2020. The red bar represents the agency's FY2005 baseline. The green bars represent the FY2015 and FY2020 target reductions. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2005 baseline.



## Agency-Specific Performance Metrics for Fleet Alternative Fuel Use:

### Progress toward Fleet Alternative Fuel Consumption Goals

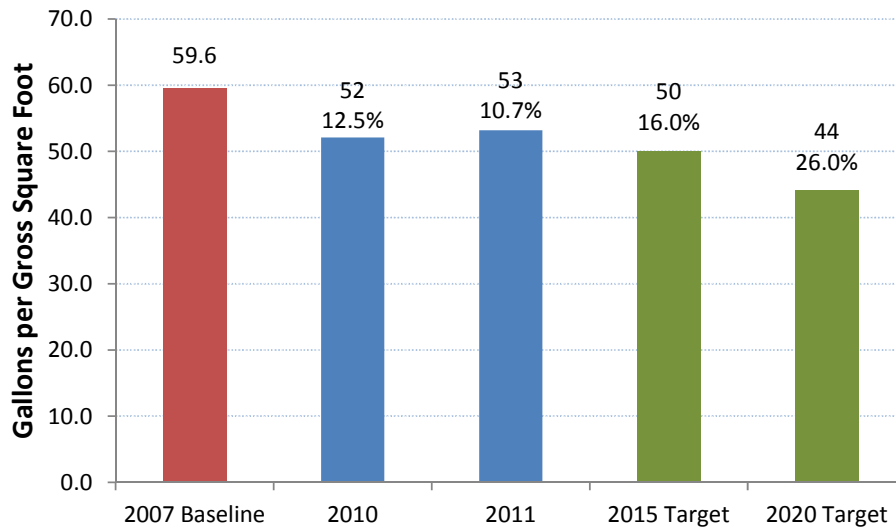


Note: E.O. 13423 requires that agencies increase total non-petroleum-based fuel consumption by 10% annually compared to an FY2005 baseline. Consequently, by FY2011 agencies must increase alternative fuel use by 77%, compared to an FY2005 baseline. By FY2015, agencies must increase alternative fuel use by 159.4%. The red bar represents the agency's FY2005 baseline. The green bar represents the FY2015 target. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2005 baseline.

## GOAL 4: WATER USE EFFICIENCY AND MANAGEMENT

### Agency-Specific Performance Metrics for Potable Water Intensity Reduction:

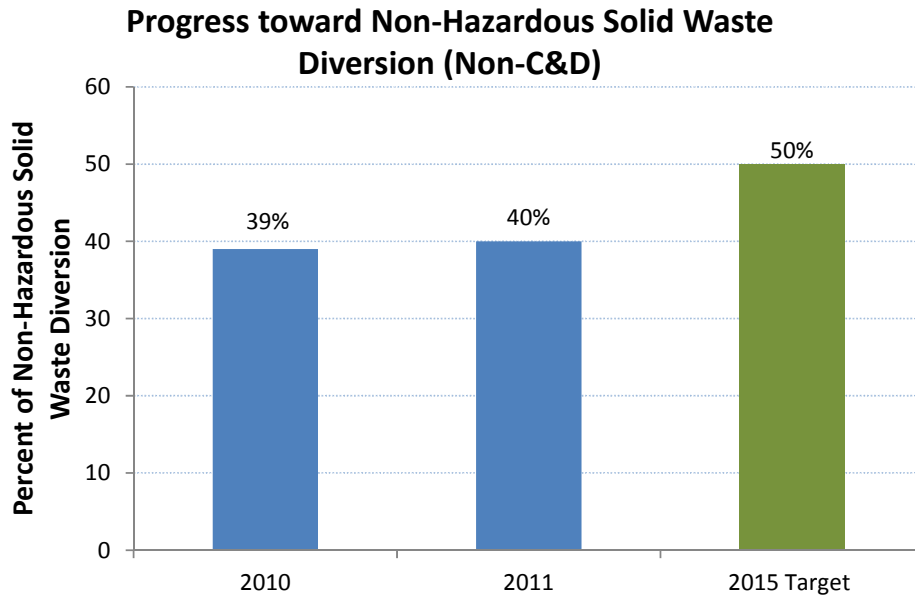
Progress toward Potable Water Intensity Reduction Goals



Note: E.O. 13514 requires agencies to reduce potable water intensity by 2% annually through FY2020, compared to an FY2007 baseline. Consequently, by FY2011 agencies are required to reduce potable water intensity by 8%, compared to an FY2007 baseline. A 16% reduction is required by FY 2015 and a 26% reduction is required by FY2020. The red bar represents the agency's FY2007 baseline. The green bars represent the FY2015 and FY2020 target reductions. The blue bars show actual status in relationship to the target. The percentage on each bar shows the reduction or increase from the FY2007 baseline.

## GOAL 5: POLLUTION PREVENTION AND WASTE REDUCTION

### Agency-Specific Performance Metrics for Non-Hazardous Solid Waste Diversion (Non-C&D):






Note: E.O. 13514 requires that by FY2015 agencies annually divert at least 50% of non-hazardous solid waste from disposal. The green bar represents the FY2015 target. The blue bars show actual progress toward the target.






## GOAL 7: ELECTRONIC STEWARDSHIP AND DATA CENTERS

EPEAT	POWER MANAGEMENT	END-OF-LIFE	COMMENTS
			EPEAT and Power Management compliance unknown.




### EPEAT:

	95% or more Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide
	85-94% or more Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide
	84% or less Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide

### Power Management:

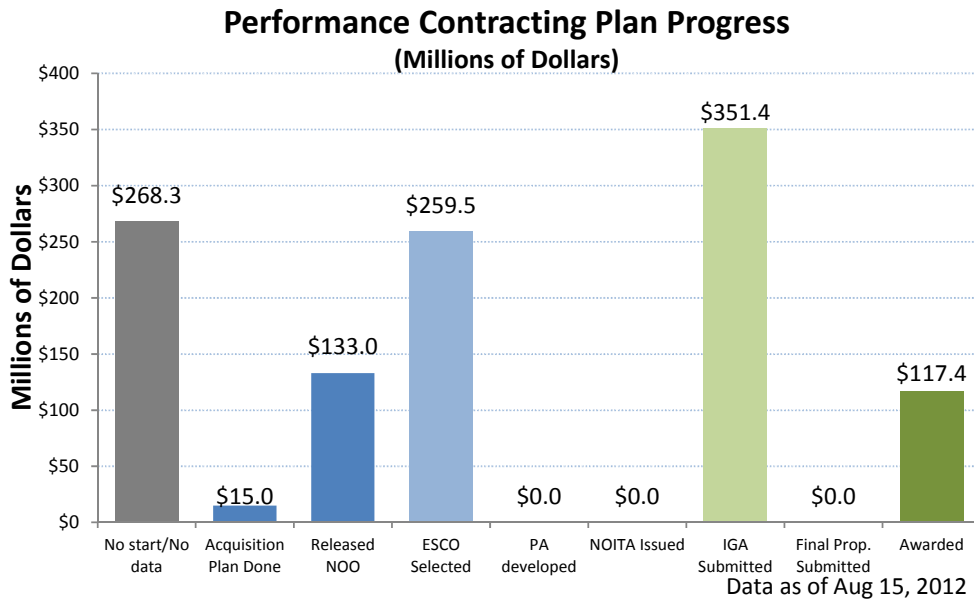
	100% Power Management Enabled Computers, Laptops and Monitors Agency-wide
	90-99% Power Management Enabled Computers, Laptops and Monitors Agency-wide
	89% or less Power Management Enabled Computers, Laptops and Monitors Agency-wide

### End-of-Life:

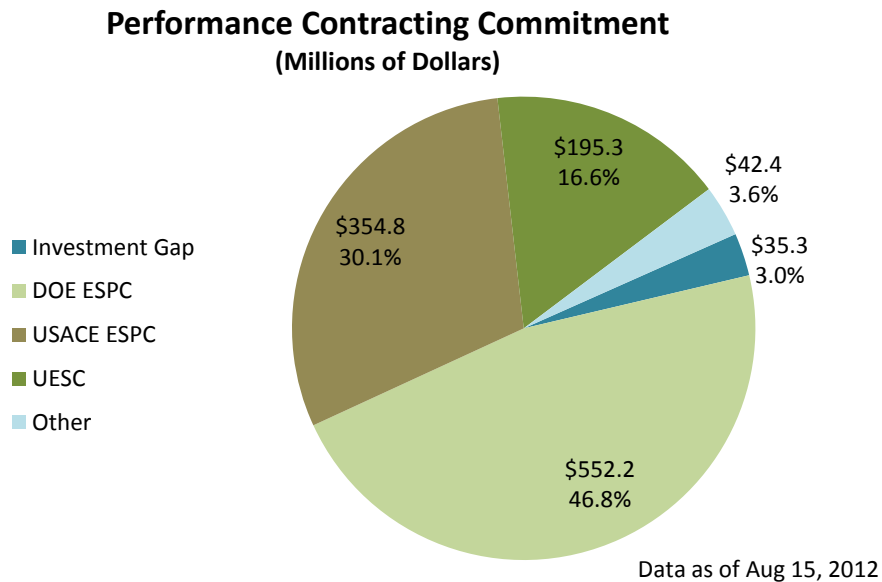
	100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicorn or Certified Recycler (R2, E-Stewards)
	100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicorn or non-Certified Recycler
	Less than 100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicorn or non-Certified Recycler

# PRESIDENT'S PERFORMANCE CONTRACTING COMMITMENT

## Agency-Specific President's Performance Contracting Commitment Metrics:



## Agency-Specific President's Performance Contracting Commitment Metrics:



# Department of Defense FY 2012 Climate Change Adaptation Roadmap

The Department of Defense (DoD) Climate Change Adaptation Roadmap (CCAR) fulfills a requirement of Executive Order 13514, *Federal Leadership in Environmental, Energy and Economic Performance*. All Federal Departments and Agencies should evaluate climate change risks and vulnerabilities to manage both the short- and long-term effect of climate change on the agency's mission and operations, and include an adaptation planning document as an appendix to its annual Strategic Sustainability Performance Plan.

## 1. Policy Framework for Climate Change Adaptation Planning

The foundation for DoD's strategic policy on climate change adaptation began with the publication of the Quadrennial Defense Review (QDR) in 2010 by the Secretary of Defense. The QDR is a principal means by which the tenets of the National Defense Strategy are translated into new policies and initiatives. The QDR sets a long-term course for DoD as the Department assesses the threats and challenges that the nation faces and re-balances DoD's strategies, capabilities, and forces to address today's conflicts and tomorrow's threats. The QDR acknowledged that climate change has national security implications and must be addressed by DoD and its partners.

The QDR recognized that climate change will affect DoD in two broad ways.

- First, climate change will shape the operating environment, roles, and missions that the Department undertakes. It may have significant geopolitical impacts around the world, contributing to greater competition for more limited and critical life-sustaining resources like food and water. While the effects of climate change alone do not cause conflict, they may act as accelerants of instability or conflict in parts of the world. Climate change may also lead to increased demands for defense support to civil authorities for humanitarian assistance or disaster response, both within the United States and overseas.
- Second, DoD will need to adjust to the impacts of climate change on its facilities, infrastructure, training and testing activities, and military capabilities. DoD's operational readiness hinges on continued access to land, air, and sea training and test space, all of which are subject to the effects of climate change.

Through its planning and adaptation actions, DoD will be better prepared to effectively respond to climate change and to ensure continued mission success, both in the near term and in the future.

As climate science advances, the Department will need to regularly reevaluate climate-related risks and opportunities in order to develop policies and plans that manage climate change's impacts on the Department's operating environment, missions, and facilities. Managing the national security implications of climate change will require DoD to work collaboratively, with both traditional allies and new partners.

"Our mission at the Department is to secure this nation against threats to our homeland and to our people. In the 21st Century, the reality is that there are environmental threats which constitute threats to our national security. For example, the area of climate change has a dramatic impact on national security: rising sea levels, to severe droughts, to the melting of the polar caps, to more frequent and devastating natural disasters all raise demand for humanitarian assistance and disaster relief."

*Secretary Leon E. Panetta, May 2, 2012*



## 1.A Vision and Goals

As articulated in the Department's Strategic Sustainability Performance Plan, DoD's sustainability vision is to maintain our ability to operate into the future without decline, either in the mission or the natural and man-made systems that support it. Including climate change and climate variability considerations in our planning processes will enhance operational and infrastructure resilience.

Four broad goals support the Department's vision, as detailed below; implementation is discussed in Section 3.

1. Define a coordinating body to address climate change.
2. Utilize a robust decision making approach based on the best available science.
3. Integrate climate change considerations into existing processes.
4. Partner with Federal agencies and allies on the challenges of climate change.

"Our ability to advance constructive cooperation is essential to the security and prosperity of specific regions, and to facilitating global cooperation on issues ranging from violent extremism and nuclear proliferation, to climate change, and global economic instability-issues that challenge all nations, but that no one nation alone can meet." (pg 11)  
--- 2010 National Security Strategy

## 1.B Responsible Senior Agency Official

The Department's Senior Sustainability Officer (SSO) is the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(ATL)) and is responsible for overseeing the implementation of the requirements of Executive Order 13514, including climate change adaptation efforts. The Deputy Under Secretary of Defense for Installations and Environment (DUSD(I&E)) is the Department's Senior Climate Official and reports progress to the SSO. Given the broad range of potential impacts to the Department's operational, training, and test and infrastructure capabilities, the Department will analyze how climate change adaptation measures can be incorporated into the full scope of its missions and operations.

## 2. Agency Vulnerability: Analysis of Climate Change Risks and Opportunities

Climate change is expected to play a significant role in DoD's ability to fulfill its mission in the future. Climate-related effects already are being observed at DoD installations throughout the U.S. and overseas. The physical changes are projected to include rising temperature and sea level and increases in both heavy downpours and the extent of drought. These will cause effects such as more rapid coastal erosion, shifts in growing seasons, and changing water tables.

The direction, degree, and rates of the physical changes will differ by region, as will the impacts to the military's mission and operations. By taking a proactive, flexible approach to vulnerability assessment and adaptation planning that recognizes uncertainty and incorporates the best available science, the Department can keep pace with changing climate patterns and minimize their impact on operations.

The military is potentially vulnerable to climate change in many of the same ways as the rest of society, and in ways that are unique due to its operations and mission. The following table summarizes the potential high-level climate change impacts to the Department's mission and operations. More comprehensive and region/installation-specific vulnerability assessments are needed to determine what adaptive responses are the most appropriate.

**Table 1. Climate Phenomena and Potential DoD Mission Vulnerabilities**

Climate Change Phenomena	Potential Impacts	Potential Mission Vulnerabilities
<b>Rising temperatures</b>	Rising mean temperatures; seasonal temperature increases; increased number of cumulative days with temperatures exceeding 95°F; opening of Arctic waters; melting permafrost and ice sheets; lengthening ice-free seasons; human health effects ; vegetation transition (species and biome shifts); changes in incidence/distribution of vector-borne diseases; wildfire risk; soil warming; electrical grid stress; equipment performance	Increased occurrence of test/training limitations due to high heat days; reduced military vehicle access (e.g., melting permafrost); degrading infrastructure and increased maintenance costs for roads, utilities, and runways; reduced airlift capacity; reduced live-fire training; potential degradation or loss of cold weather training venues; increased energy costs for building and industrial base operations; increased operational health surveillance and risks; change in operational parameters for weapons and equipment development and testing; increase in seasonal Arctic commerce and transit
<b>Changes in precipitation patterns</b>	Seasonal increases and decreases in precipitation; increases in extent and duration of drought; increases in extreme precipitation events; changes in number of consecutive days of high or low precipitation; change in form of precipitation (i.e., snow-ice-rain); increased wildfire risk; altered burn regimes; impacts to air quality; stream bank erosion and gulying of vegetative cover; impacted soil function and resilience (desertification); soil loss; infrastructure damage; water supply constraints; impacted groundwater quality; increased dust; protected species stress and potential for more species placed at risk; spread of invasive species; changes in incidence/distribution of vector-borne diseases; land management impacts; competing non-military land use	Reduced land carrying capacity for vehicle maneuvers; increased maintenance costs for roads, utilities, and runways; limits on low-level rotary wing flight operations; icing on aircraft; increased regulatory constraints on training land access; reduced live-fire training; reduced water availability and greater competition for limited water resources; reduced training land access; reduced training carrying capacity; operational health surveillance and risks; increased flood control/erosion prevention measures
<b>Increasing storm frequency &amp; intensity (coastal and inland)</b>	Flooding; water quality issues; soil and vegetation loss; impact to soil function and carbon/nutrient cycling; wind damage	Military personnel safety; temporary or prolonged disruption of military operations or test and training activities due to intense storms and resulting storm damage; inundation of and damage to coastal infrastructure; reduced access to military water crossings and river operations; reduced off-road maneuver capacity; increased maintenance costs; increased flood control/erosion prevention measures; transportation infrastructure damage

Climate Change Phenomena	Potential Impacts	Potential Mission Vulnerabilities
<b>Rising sea levels &amp; associated storm surge</b>	Loss of coastal land; damage to physical infrastructure (roads, targets, ranges) and protected ecosystem resources; saltwater intrusion; reduced capacity of protective barrier islands and coastal wetlands	Degradation or loss of coastal areas and infrastructure; increased cost of infrastructure reinforcement to withstand increased storm intensities; increased cost of infrastructure modification (e.g., raising pier heights); impacts to littoral and shore training and ranges; increased regulatory constraints on training land access; impacts on supply chain from potential shipping interruptions; increased demand for freshwater resources and associated increased cost of saltwater intrusion countermeasures; impact to future land availability and siting of new construction
<b>Changes in ocean temperature, circulation, salinity, and acidity</b>	Potential greater change to global climate system; negative impacts to general populations that rely upon fish as their main source of protein; coral reef losses that may impact ocean productivity and storm surge/wave dampening benefits	Exacerbation of conditions and mission impacts discussed above; coastal installation vulnerability; regional instability; increased potential for conflict or humanitarian assistance

### 3. Process for DoD Adaptation Planning and Evaluation

The QDR provides broad direction for future DoD strategies that will define plans and policies. Prompted by the QDR, the Department is prudently considering how to factor climate impacts into its mission areas. Given the diversity and complexity of DoD’s mission and operations, there is an equally wide array and magnitude of planning processes across DoD. The Department recognizes that both operational and infrastructure plans and processes present opportunities to integrate climate change risks and opportunities to enhance the resilience of our mission, at home and abroad.

DoD is well-versed in employing systematic methodologies and modeling frameworks in order to assess potential threats and risks to national security. The use of these risk assessment tools is an essential element of accomplishing the DoD mission. The Department anticipates employing a similar risk-based approach to evaluate multiple scenarios of potential climate change effects on the DoD mission. Many of the Department’s current efforts are focused on assessing potential climate change impacts to, and adaptation strategies for, facilities, built infrastructure, key ecosystems and protected species, and capabilities where military training is conducted or supported, and evaluating potential actions DoD can take to respond to these impacts. Sections 4 and 5 discuss specific efforts.

DoD intends to move forward with the previously stated goals for adaptation planning and evaluation. Goal implementation is described below.

“Preventing wars is as important as winning them, and far less costly.” (pg 7)  
 --- 2011 National Military Strategy

**Goal 1: Define a coordinating body to address climate change.**

The Department intends to define an appropriate structure utilizing existing bodies and organizations within DoD to guide the development, implementation, and evaluation of climate-related policy, guidance, and practice. The Senior Sustainability Council (SSC) is currently responsible for coordinating climate change adaptation efforts. The SSC will establish a technical advisory committee or working group to take direction from and provide advice to the council regarding the state of climate science, vulnerability and impact assessment, and adaptation science and practice. The advisory committee will analyze technical constraints and considerations related to climate change-related policy, guidance, and practice. The advisory committee will focus on ensuring that the Department has access to the climate-related information necessary to make informed decisions that support the Department’s mission. This structure would identify those offices and existing forums, with authority in this area, those that would assist in coordination and guidance, and those that would be involved in support and implementation.

The advisory committee, once established, will:

- Optimize use of existing plans and processes and identify gaps where new policies could be developed;
- Stress the importance of the science-policy interface;
- Foster sound vulnerability and impact assessment;
- Emphasize iterative and adaptive policy and planning approaches; and
- Monitor assessment and adaptation implementation effectiveness, learn from these experiences, and adjust action when needed.

The DSB recommended the Secretaries and Chiefs of the Services should: better integrate climate change and disaster risk reduction consideration into exercise, training, and educational materials; establish metrics focused on risk reduction to minimize the impact of climate change on military and support operations, forces, programs, and facilities; ensure climate change resilience by incorporating climate change risk in design standards for facilities and installations, with an emphasis related to energy- and water-intensive uses.

--- Defense Science Board "Trends and Implications of Climate Change for National and International Security," Oct 2011

**Goal 2: Utilize a robust decision making approach based on the best available science.**

Assessing climate change vulnerabilities, impacts, and adaptive responses requires a deliberative and iterative approach. The Department intends to develop appropriate assessment tools for use across all affected DoD Components. In developing its approach to assessment, adaptation planning, and implementation, the Department will strive to:

- Establish a process to obtain updated scientific data on potential future climate conditions and potential impacts;
- Use commonly accepted future climate scenarios that are based on the best available science, recognize uncertainties, and updated as the science changes;
- Provide guidance so that assessments consistently apply science that is appropriate in terms of location, resolution, and timeframe; and
- Use pilot approaches to develop decision frameworks for assessment and adaptation planning that attempt to match decisions to available and appropriately down-scaled climate information and other data.



**Goal 3: Integrate climate change considerations into existing processes.**

Climate change and climate variability will affect many of the Department’s activities and decisions related to future operating environments, military readiness, stationing, environmental compliance and stewardship, and infrastructure planning and maintenance. Climate change also will interact with other stressors that the Department now considers and manages. As a result, adaptation to climate change and variability should not be a separate decision-making process, but rather an aspect of overall management. DoD intends to fully integrate climate change considerations into its extant policies, planning, practices, and programs. Some stand-alone policy and guidance may be needed to help direct specific assessment activities and adaptation implementation; however, by and large the Department will use existing mechanisms to implement policy and guidance and to ensure mission and environmental sustainability.

**Goal 4: Partner with Federal agencies and allies on the challenges of climate change.**

Partnerships will be needed to fully ensure DoD’s mission is sustainable under climate change. The Department cannot assess its vulnerabilities and implement adaptive responses at its installations if its neighbors and stakeholders are not part of the process. Decisions made by outside communities will affect DoD and DoD’s decisions will also affect outside communities. Moreover, aspects of our mission such as force deployment may be affected by assets outside DoD control, such as transportation infrastructure.

The requisite scientific and practical understanding needs to be obtained in concert with the rest of the Federal community. This can occur through partnerships with individual agencies such as the National Oceanic and Atmospheric Administration or through the Department’s continued participation in forums such as the National Climate Assessment and informal forums such as the Interagency Forum on Climate Change Impacts and Adaptations.

“In combination with U.S. diplomatic and development efforts, we will leverage our convening power to foster regional and international cooperation in addressing transnational security challenges.” (pg 15)  
--- 2011 National Military Strategy

Internationally, the Department will continue its collaboration with the State Department and foreign militaries on vulnerability assessment and adaptation efforts. The Department has already started to assess potential climate change impacts and begin initial adaptation planning. Efforts to partner with foreign defense force counterparts are coordinated through existing planning processes. Climate change presents a unique opportunity to work collaboratively in multilateral forums, promoting a balanced approach that will improve human and environmental security in the region. The Department’s disaster response programs will continue to provide domestic and international response, but should adapt its response planning based on plausible climate change scenarios.

**4. Actions to Better Understand Climate Change Risks and Opportunities**

DoD is already working to foster efforts to assess, adapt to, and mitigate the impacts of climate change. The Military Services are considering potential climate change vulnerabilities and impacts to their activities and infrastructure in light of their Service-specific missions and plans.

The Department looks to the Strategic Environmental Research and Development Program (SERDP), a joint effort among DoD, the Department of Energy, and the Environmental Protection Agency, to develop climate change assessment tools for DoD’s installations. The DoD Legacy program can be

used in transitioning these tools for natural and cultural resources management applications. The Navy's Arctic and Climate Change Roadmaps also outline specific action items which contribute to DoD's understanding of how a changing climate can pose risks and opportunities to its mission and operations. The Air Force 2010-2030 Strategic Environmental Assessment includes discussion of climate change as a strategic consideration for Air Force strategic planners. The Army is investigating climate risks to installation lands and facilities in its Environmental Quality Technology research program, and the Army Climate Change Workgroup is developing a framework for integrating climate change considerations into existing planning processes. The Sustainable Ranges Integrated Product Team, led by an Office of the Secretary of Defense and tasked to address test and training encroachment and sustainability issues, also includes consideration of climate change as an emerging encroachment issue. As discussed earlier in this roadmap, such nascent DoD initiatives will benefit significantly when an overarching DoD policy framework can be put in place to help guide and focus such efforts.

The sections that follow summarize activities currently underway to understand the risks and opportunities to DoD operations. Some of these assessments are general and high-level, while others are specific to certain subject matter areas and/or locations.

"Our diplomacy and development capabilities must help prevent conflict, strengthen weak and failing states, lift people out of poverty, combat climate change and epidemic disease ..." (pg 11)  
--- 2010 National Security Strategy

#### **4.A General Assessments**

DoD is working to overlay regional climate models with installation locations, in order to appropriately downscale climate variables for individual locations and develop an analytical tool that can be used to generate climate projections at the regional level. DoD is involved in high-level climate and weather data gathering efforts, as the Air Force 14<sup>th</sup> Weather Squadron collects, stores, and characterizes earth-space environmental data, receiving nearly 500,000 weather observations and satellite-derived wind profiles each day and sharing these data with the National Climatic Data Center and the Navy's Fleet Numerical Meteorological and Oceanographic Detachment. DoD collaborates with the National Oceanic and Atmospheric Administration on the development and operational implementation of a national Earth System Prediction Capability.

#### **4.B Coastal Risks and Opportunities**

Many of DoD's military installations are concentrated in coastal regions of the continental United States. As a result, DoD is undertaking multiple projects to assess climate change impacts to these installations and areas. Several of these projects focus specifically on sea level rise and storm surge, developing the necessary methodologies and/or tools that might inform decision making processes, including where to build and how to update coastal installations. Other projects deal with climate impacts on coastal ecosystems, as the military's long-term use of coastal installations is, in part, dependent on the ability to maintain the continued functioning of coastal ecosystems. Projects that specifically address coastal ecosystems can help educate natural resource managers and enhance their decision making processes related to managing these ecosystems for their training/testing value, storm protective functions, and species diversity. The Department, drawing on the lessons learned from the preceding studies, has identified the key technical considerations to consider when conducting assessments of climate change impacts on coastal military installations. This effort will assist the Department in developing its approach to coastal assessment.

#### **4.C Arctic Risks and Opportunities**

The Department has also begun to assess and plan for changes to our operating environment. For example, preliminary assessments have been conducted for the Arctic where measurable climate change impacts are already occurring. These efforts have focused on assessing the Department's Arctic observing, mapping, and environmental prediction capabilities, as well as identifying science and technology needs. The Department has completed two Capabilities Based Assessments for Arctic surface and environmental prediction capabilities and a Fleet Readiness Assessment. The Department is developing cooperative partnerships with interagency and international Arctic stakeholders to collaboratively address future opportunities and potential challenges inherent in the projected opening of the Arctic.

#### **4.D Permafrost in Alaska**

The change in permafrost in Alaska is impacting both the built and natural infrastructure. The Department held, as early as 2009, workshops to better understand affected defense assets and military missions in Alaska. The melting permafrost will impact foundations, utilities, runways and roads. This is a challenge for operation and maintenance especially when considering 80% of the infrastructure that will exist in 2050 is already in place today. The melting permafrost influences on training lands and natural ecosystems can significantly affect the types and timing of training activities. The potential ecosystem responses in interior Alaska to climate change could have severe ramifications on how, where, and when the DoD can train in Alaska. To address concerns related to climate change's impact on permafrost freeze and thaw processes and other ecological factors in interior Alaska, DoD initiated a suite of projects in FY 2011 focused on understanding and predicting these changes and the implications for Alaskan training land sustainability. These efforts will fill knowledge gaps relative to how climate change is affecting permafrost and the overall system dynamics, informing decisions on the development of future training and installation management plans.

#### **4.E Arid Ecosystems**

Long-term use of military installations and ranges in the southwestern United States depends, in part, on the condition of local ecosystems. Changes to local ecosystems can adversely impact natural resources and affect the use of certain locations for training, and/or increase the possibility of wildfires. DoD has initiated several projects to assess changes to ecosystems in the southwestern United States, including the intermittent and ephemeral stream systems that harbor much of the region's biological diversity, and the interaction of land-use activity, altered water sources, the introduction of invasive species, and altered fire regimes.

#### **4.F Pacific Islands**

In FY 2013, DoD anticipates initiating climate change studies to assess the impacts on DoD facilities in the Pacific. Changes in sea level, precipitation, and storm patterns can have significant impact on the island infrastructure that supports DoD missions in the region.

## 5. Actions to Address Climate Change Risks and Opportunities

In addition to the activities outlined in Section 3, DoD's current efforts to integrate, partner, and undertake pilot activities to address climate change risks and opportunities include the following.

DoD is already beginning to incorporate climate considerations into installation-level planning, as well as training plans. The Department is starting to incorporate climate change science and strategic considerations into formal training and education. The Military Services are beginning to explore incorporating climate risk/vulnerability factors into installation development planning processes. At the DoD level, United Facilities Criteria (UFC) 2-100-01, paragraph 3-5.6.2.3 requires master planners to consider climatic changes (including but not limited to: changes in land use and population density in the vicinity of installations; changes in climatic conditions such as temperature, rainfall patterns, storm frequency and intensity and water levels) when crafting long-range installation infrastructure master plans. UFC 2-100-01, paragraph 3-5.6.2.3 specifically calls out the National Climate Assessment as a source for reliable and authorized climate change scenarios. The Department's Natural Resources Conservation Program Instruction (DoDI 4715.03) requires installation natural resources management plans (INRMP) to assess the potential impacts of climate change on natural resources and to adaptively manage such resources to minimize adverse mission impacts.

As part of its Sustainable Ranges Initiative, DoD has conducted research and completed an initial study of potential climate change vulnerabilities affecting DoD training and potential adaptive measures. Additional research and coordination is ongoing, and several workshops have been held to engage with DoD offices and Federal agencies on possible avenues to foster a more adaptive individual and organizational culture that is better prepared to respond to mission stressors such as climate change. DoD is also actively engaged with regional partnerships in the Southeastern and the Southwestern U.S. Both regions are very significant to DoD, and host a number of major military installations and ranges. The aim of both the Southeast Regional Partnership for Planning and Sustainability and the Western Regional Partnership is to strengthen regional coordination and advance the missions and land use objectives of DoD and the other state and Federal agencies involved. Both partnerships are actively assessing the climate change challenge, along with a number of other often interrelated issues (habitat and species protection, land use planning, energy development, coastal zone management, fire management and disaster preparedness, and sustainable land use) as they work on cooperative policy and planning initiatives. DoD expects cooperation on climate change issues to continue and likely grow in importance within both partnerships in coming years.

"We must, therefore...design structures and systems that can withstand disruptions and mitigate associated consequences, ensure redundant systems where necessary to maintain the ability to operate, decentralize critical operations to reduce our vulnerability to single points of disruption, develop and test continuity plans to ensure the ability to restore critical capabilities, and invest in improvements and maintenance of existing infrastructure." (pg 27)  
--- 2010 National Security Strategy

Through SERDP, DoD has initiated pilot projects intended to develop and test assessment approaches and decision-making frameworks for climate adaptation appropriate for military installations. These pilot efforts will help DoD identify appropriate processes for matching climate information with DoD decision processes, understanding data needs for vulnerability assessments, and developing adaptation tools with installations across the country.

## Appendix 3: Fleet Management Plan

There is no DoD-wide Fleet Management Plan because each DoD Component prepares their own. The plans for the Military Departments and Defense Logistics Agency are provided here. All plans have incorporated the recommendations GSA made based on its review of the Component's Vehicle Allocation Methodology submissions.

The Air Force, Navy and Army plans are attached below, while the plan for DLA can be found at the following link:

<http://www.dla.mil/InstallationSupport/InstallationManagement/Documents/DLAFleetManagementPlan16FEB2012.pdf>.

Apart from the Military Departments, the DLA Fleet Management Plan is used as an example for the remainder of DoD, since the plans of the other Components will follow the DLA pattern. Plan highlights for the Military Departments include the following:

### **Army**

- Army expects to reduce its fleet size by ~ 5,000 vehicles over the FY 2012 and FY 2013 time frame.
- Army has issue guidance regarding the annual GSA leased vehicle replacement policy to transition the fleet from a fossil fuel fleet to an alternative fuel fleet.

### **Navy**

- Navy is working towards reducing its fleet size by ~1,100 vehicles by FY 2015.
- Navy is developing policy mandating the purchase of 100% AFVs to meet the President's memo suspense of Dec 15, 2015.

### **Air Force**

- Air Force has procedures in place to achieve the minimum most fuel efficient, economical to maintain fleet inventory to accomplish the mission.
- Since FY 2010, Air Force has increased its number of AFVs by 1,356.
- Air Force has a plan in place for acquiring all AFVs starting Dec 31, 2015.



# United States Air Force

## Vehicle Fleet Management Plan



Developed by  
Vehicle and Equipment  
Management Support Office (VEMSO)  
300 Exploration Way  
Hampton, VA 23666

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## **Executive Summary**

### **Statutory Authority**

Presidential Memorandum – Federal Fleet Performance states that the Federal Government owes “a responsibility to American citizens to lead by example and contribute to meeting our national goals of reducing oil imports by one-third by 2025 and putting one million advanced vehicles on the road by 2015.” This memorandum requires the United States Air Force to develop a management plan with recommendations for improving the administration and operation of the USAF fleet.

### **Plan Scope**

The Vehicle Fleet Management Plan applies to all USAF-owned, General Services Administration (GSA) leased vehicles, and commercial lease vehicles. The plan addresses:

- Procedures to achieve the minimum smallest most fuel efficient, economical to maintain inventory to accomplish the mission.
- The number and types of vehicles owned/leased and the purpose each vehicle serves.
- Plans for acquiring all Alternative Fueled Vehicles (AFVs) by December 31, 2015.
- Vehicle sourcing decisions for vehicle acquisitions, compared to leasing vehicles through GSA Fleet or commercially.

The USAF will only acquire fleet vehicles authorized through the budget process, in the most cost effective manner available, that meet mission requirements. Focus on achieving an optimized inventory through conflict drawdowns, targeting underutilized vehicles and authorized vacancies.

The 6,137 vehicles listed in the “Exempt Vehicle Summary” of our optimum attainment plan includes are War Reserve Materiel assets and are not reported in the covered fleet inventory.

### **VEMSO**

The Vehicle and Equipment Management Support Office (VEMSO) on behalf of Headquarters United States Air Force/Logistics Materiel Support Division, Fuels (HQ AF/A4LE); will:

- Maintain and revise Air Force Instruction – 23-302, Vehicle Management
- Collect, draft, create, monitor and report on vehicle issues to HQ AF/A4LE

- Provide enterprise fleet management support via direct interface with Air Force units
- Analyze vehicle authorization policy for compliance with vehicle fleet policies
- Craft annual Office of Management and Budget (OMB) forecasts for vehicle procurement and sustainment
- Maintain centralized baseline fleet inventory profile
- Ensures Warner Robins – Air Logistics Center (ALC) maximizes the procurement of alternative fuel vehicle (AFV), a hybrid or electric vehicle, compressed natural gas, or biofuel vehicle technologies and will consider mission requirements with base-specific demands and vehicle availability with emphasis on alternative fuel use, fuel efficient hybrid technology, and reducing greenhouse gas emissions.
- Ensure vehicle sourcing decision(s) for purchasing/owning are compared with leasing through GSA Fleet or commercially are in the best interest of the USAF
- Ensure compliance with EPAct of 1992 (Public Law 102-486), Title VII of EPAct of 2005 (Public Law 109-58) and Executive Order (EO) 13423 “Strengthening Federal Environment, Energy and Transportation Management”

## **Air Force Fleet Management Tools**

### **LIMS-EV**

Provides a single-source business intelligence environment that delivers information and capabilities to agencies’ fleet managers. Data available in LIMS-EV includes but not limited to:

- Unique vehicle identifier
- Manufacture
- Model
- Type
- Size
- Year
- Acquisition cost/sustainment costs
- Vehicle ownership
- Mileage
- Fuel type
- Passenger capacity
- Cargo capacity
- Installed equipment beyond original equipment
- Garaged location
- Service date

- Mission
- Historical/expected miles or hours of use per vehicle
- Vehicle condition
- Age
- Retention cycle
- Vehicle down time

## **FMDSS**

FMDSS utilizes LIMS-EV data through use of web based business intelligence technology to determine an optimum fleet size. FMDSS processes four major parts: determines what the base needs, matches computed requirement to existing authorizations, adjudicates differences, and updates authorizations as required. Questions built into FMDSS include but not limited to:

- What tasks does organization accomplish with the vehicle?
- Does the vehicle need special equipment to accomplish tasks?
- How important is the vehicle to accomplishing the mission?
- How many people will be transported per trip on a regular basis?
- How much and what type of cargo will the vehicle haul on a regular basis?
- Is the vehicle shared with other employees or other base organizations?
- Is there access to alternative fuel within 5 miles or 15 minutes of the vehicles garaged location and if so, where is it located and what type of alternative fuel is available?
- Age
- Ratio of employees to vehicles?
- Frequency of trips per vehicle?
- Vehicle function?
- Operating terrain?
- Climate?

## **New Vehicle Requirement**

### **Inputs**

- Request from base fleet manager

### **VEMSO Activities**

Analyze base fleet/mission composition using LIMS-EV and FMDSS data, for most fuel efficient, size vehicle to validate vehicle requirement



## **Outputs**

- Report recommendations for realignment or authorization of new vehicle requirement is established in LIMS-EV for prioritization

## **Right sizing Fleet/Utilization Survey**

### **Input**

- LIMS-EV and FMDSS data

### **VEMSO Activities**

Apply utilization criteria to each vehicle, and collect additional information about each vehicle. Use all information to help achieve performance goals, and to ensure that The United States Air Force is in compliance with Executive Order 13514, “Federal Leadership in Environmental, Energy, and Economic Performance”. Identify target reductions and right-size opportunities, standardizes approach decisions, and exploit technology. Consolidate or pool vehicles that are required for infrequent mission support into U drive it fleet. This allows units to sign out or share vehicles to accomplish mission requirements that otherwise authorized and assigned to unit would have low utilization. Pooling vehicles decreases requirements and increases utilization.

### **Output**

- Generate report with multiple columns displaying validated authorizations, suspect authorizations, and recommend deletions.
- Publish findings derived from the vehicle needs evaluation to articulate metrics via LIMS-EV, which will display target reductions.

## **Acquisitions**

### **VEMSO Activities**

LIMS-EV prioritized requirements are sent to Warner Robins ALC for procurement

### **Alternative Fuel Vehicle Acquisition Strategy**

The Air Force’s AFV acquisition strategy allows the flexibility for the USAF to make the decision to procure smallest either an alternative fuel vehicle (AFV) or a hybrid electric vehicle to meet mission requirements. The USAF now has 10,051 E-85 and 1058 hybrid electric vehicles, a total increase of 1356 AFV’s from FY10. Note: The number of hybrids that the Air Force receives is limited by the availability and types of hybrids available through the GSA that

meet mission requirements. To aid in continuously improving these numbers, the AF became a key member of the Tank-Automotive Research, Development & Engineering Center, (TARDEC) Hybrid truck Users Forum (HTUF) with goals of increasing hybrids on GSA schedule for heavy duty applications. Furthermore, the Air Force is attempting to comply with the new requirement to procure low greenhouse gas (GHG)-emitting vehicles as defined by Section 141 of the Energy Independence and Security Act of 2007. Specifically, the Air Force is drafting an internal policy memorandum that will help identify those vehicles that will be exempt based on mission requirements. As part of a cultural change to right-size the vehicle fleet, the USAF instituted an internal policy on strict restrictions for acquiring Class III/IV sized vehicles.

Alternative fuel infrastructure is established by DLA. The following AF website [https://afkm.wpafb.af.mil/Database/oo-lg-af-66/altfuelloc\\_js/Locator.htm](https://afkm.wpafb.af.mil/Database/oo-lg-af-66/altfuelloc_js/Locator.htm) and DOE site <http://www.afdc.energy.gov/afdc/locator/stations/> displays alternative fueling stations available throughout the US.

The Air Force uses an automated tool to align AFV's with alternative fuel infrastructure to maximum use of alternative fuel.

EPAct Goal: Ensure **75** percent of acquisitions and leases of light duty covered vehicles are alternative fuel capable. Use alternative fuels in non-waivered AFVs.

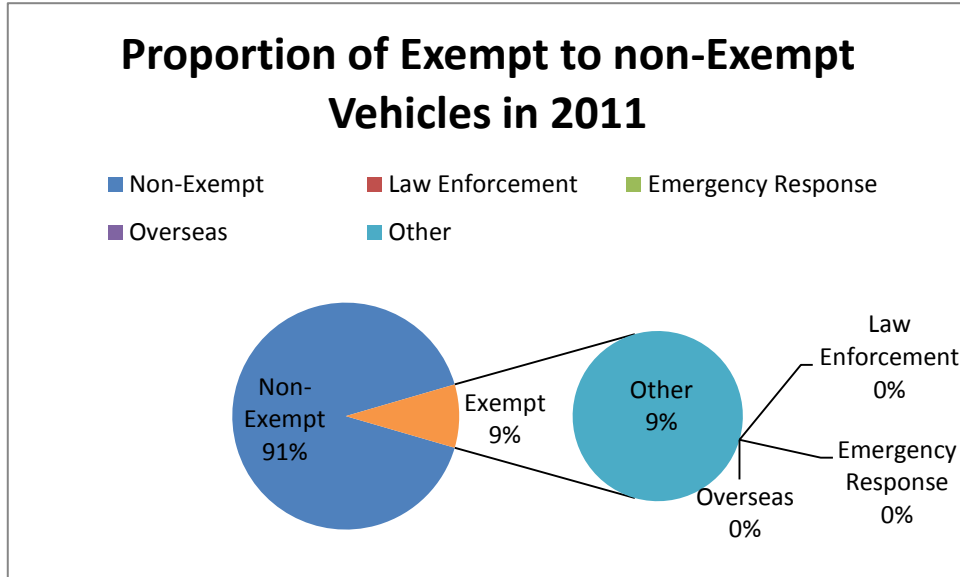
USAF Goal: Ensure **100** percent of acquisitions and leases of light duty covered vehicles are alternative fuel capable. Use alternative fuels in non-waivered AFVs.

## **GSA Recommendations**

### **A. VAM Exemptions:**

**The USAF has included all law enforcement, emergency response, and overseas vehicles in its VAM studies.**

The Presidential Memorandum on Federal Fleet Performance states that the head of the agency may exempt vehicles used for law enforcement, protective, emergency response, or military tactical operations of that agency from the provisions of the VAM study.

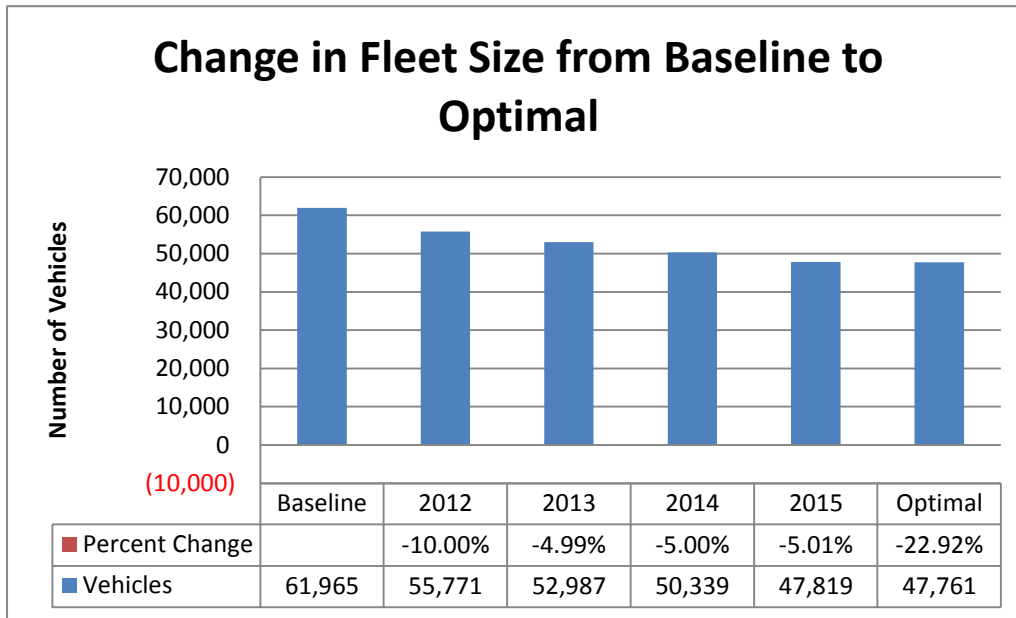


The USAF has exempted no law enforcement or emergency vehicles from the VAM study and has voluntarily included vehicle assets located overseas. The only vehicles not included in the VAM study are War Reserve Materiel assets.

**B. Fleet Size:**

*GSA commends the USAF on its planned fleet reduction of 23%.*

USAF will have reduced its baseline fleet inventory by an impressive 23% upon reaching its projected optimal inventory.



This is one of the largest vehicle reductions planned for any Federal fleet and sets the example for other Federal agencies to follow.

Planned reductions in fleet size and petroleum consumption should be coordinated with, and sufficient for, achieving the agency's scope 1 & 2 GHG reduction target by 2020.

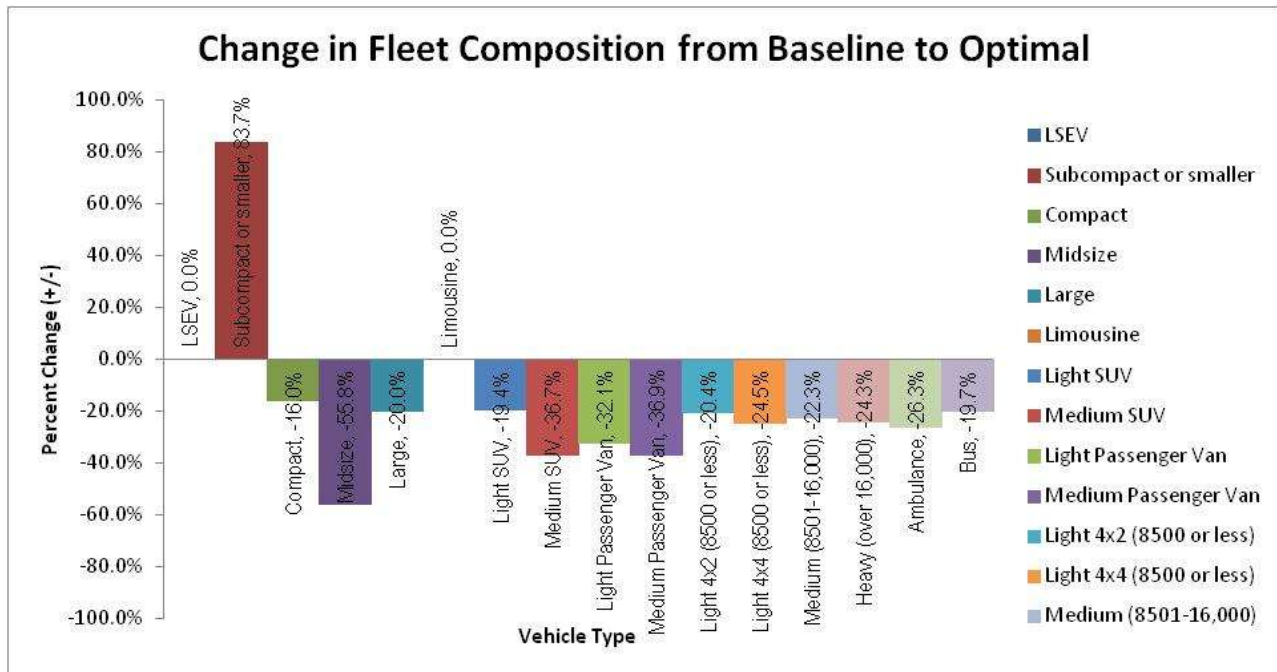
**C. Vehicle Type Composition:**

*GSA recommends that where possible, the USAF should eliminate larger vehicles in favor of smaller, fuel-efficient vehicles.*

USAF projects an 85% increase in sub-compact sedan inventory from the baseline fleet to the optimal fleet while all other vehicle categories decrease. This movement to more fuel efficient, smaller sedans will reduce petroleum use and reduce GHG emissions. Even with these improvements, USAF will still have a large inventory of medium trucks upon reaching its optimum inventory. GSA recommends that the USAF re-examine its larger vehicles, such as medium trucks, and ensure that they can't be replaced with smaller, more fuel efficient vehicles.

**Agency Response:**

USAF Fleet Management Plan addresses procedures to achieve the minimum, smallest, most fuel efficient and economical to maintain inventory to accomplish the its mission.



As cited in the Presidential Memorandum on Federal Fleet Performance, pursuant to motor vehicle management regulations, set forth at 41 C.F.R. 102-34.50, executive fleets are required to achieve maximum fuel efficiency; be limited in motor vehicle body size, engine size, and optional equipment to what is essential to meet agency mission; and be midsize or smaller sedans, except where larger sedans are essential to the agency mission.

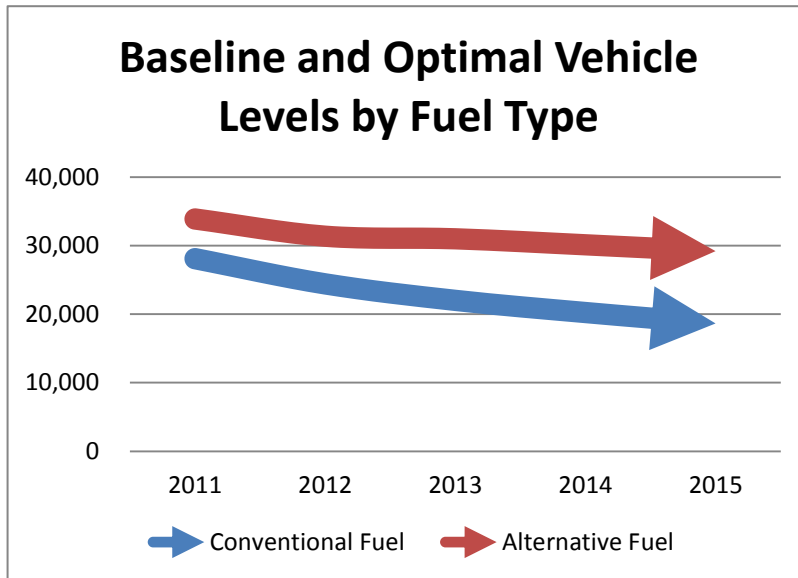
**D. AFV Vehicles Composition:**

*GSA notes the USAF’s projection to have far more AFV vehicles than conventionally fueled vehicles by 2015 and requests re-examination of the remaining conventionally fueled vehicles to ensure that all possible vehicle requirements are replaced with AFVs.*

The USAF has indicated plans to decrease a large amount of its conventionally fueled vehicle inventory (34% reduction) and retain a large majority of the alternative fuel vehicle inventory (14% reduction) through 2015.

By December 31, 2015, all new light duty vehicles leased or purchased by agencies must be alternative fueled vehicles, such as hybrid or electric, compressed natural gas, or biofuel. The USAF's AFV acquisition plans will position the agency to easily meet this mandate.





In locations where biofuel (e.g., E85 or biodiesel) is available, acquiring biofuel-capable AFVs and fueling them with the biofuel is the most effective way to reduce fleet petroleum consumption. In locations where biofuel is not available, the fleet should consider acquiring AFVs that operate on other alternative fuels (e.g., electricity, natural gas, or propane), including hybrids and other low GHG-emitting vehicles that operate on petroleum. Within the preceding general parameters, the fleet should aim to acquire the most fuel-efficient vehicles available to fulfill a given vehicle mission. Dual-fueled vehicles capable of operating on either petroleum or alternative fuel should be placed in locations where the alternative fuel is available (to avoid the need for EPC Act 2005, section 701 waivers) and be operated on the alternative fuel (to be compliant with EPC Act 2005, section 701 requirements).

#### **E. AFV Infrastructure:**

##### ***GSA recommends the use of DOE tools to increase utilization of alternative fuels***

The USAF has indicated plans to acquire increasing percentages of alternative fuel vehicles, including E-85 fueled vehicles and has E-85 infrastructure installed on many bases, but has not discussed the infrastructure needs in its fleet plan. The USAF is reminded that, alternative fueled vehicles must, as soon as practicable, be located in proximity to fueling stations with available alternative fuels, and be operated on the alternative fuel for which the vehicle is designed. GSA recommends that the USAF continue its effort to install or encourage commercial development of alternative fuel infrastructure in areas where needed and to document these accomplishments in its annual sustainability plan.

The Department of Energy has a number of tools available on its website, including an interactive map showing Federal vehicles for which waivers for the use of non-alternative fuel have been granted, which may be useful in finding partners: [http://federalfleets.energy.gov/performance\\_data/2012\\_waivers](http://federalfleets.energy.gov/performance_data/2012_waivers). GSA also encourages the USAF to ensure that drivers are aware of and use the Alternative Fueling Station Locator at: <http://www.afdc.energy.gov/afdc/locator/stations/>. If alternative fuel is not already available in proximity to fleet locations, DOE offers strategies for developing or attracting new alternative fuel infrastructure in chapter 6 of its Comprehensive Federal Fleet Management Handbook at [https://federalfleets.energy.gov/sites/default/files/static\\_page\\_docs/eo13514\\_fleethandbook.pdf](https://federalfleets.energy.gov/sites/default/files/static_page_docs/eo13514_fleethandbook.pdf). USAF can also examine the potential to use low-GHG vehicles in areas without alternative fuel infrastructure, which it does not address in its Management Plan.

GSA also recommends that USAF consult with the GSA Office of Motor Vehicle Management for assistance in identifying and facilitating the placement of GSA Fleet AFVs, as soon as practicable, in proximity to fueling stations with available alternative fuels, so that the vehicles can be operated on the alternative fuel for which the vehicle is designed.

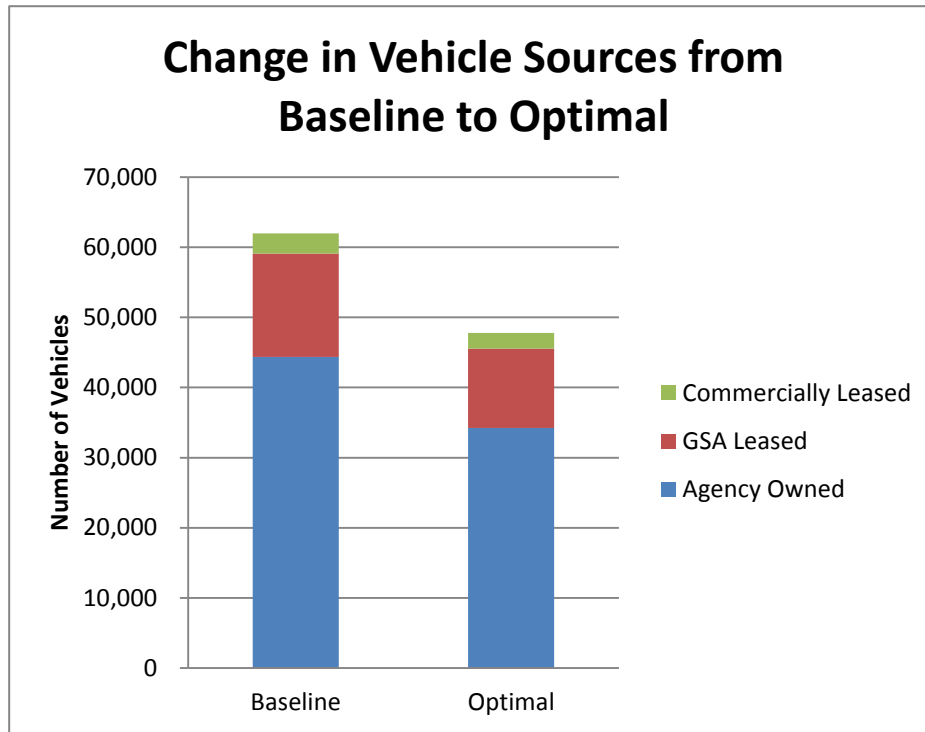
**Agency Response:**

USAF Fleet Management Plan includes a hyper-link and the DOE site that displays alternative fueling stations available throughout the continental U.S. We also utilize an automated tool to align AFV's with alternative fuel infrastructure to maximum the use of alternative fuel. Additionally, we will continue to partner w/GSA during the acquisition process to ensure our leased AFVs are aligned properly.

**F. Vehicle Sourcing/Cost:**

***GSA recommends the elimination of large, expensive, commercially-leased vehicles***

Some of the USAF's fleet consists of specialized agency-owned vehicles that are not easily replaced with less costly GSA Fleet leased vehicles. However, it is recommended that the USAF continue to examine all agency-owned vehicles throughout the fleet to ensure that less costly vehicle sourcing is not feasible. The USAF's commercially-leased vehicles cost 3 times as much as a GSA fleet vehicle. Every effort should be made to eliminate them.



**Agency Response:**

USAF Fleet Management Plan includes right-sizing activities and has instituted internal policy on strict restrictions for acquiring Class III/IV sized vehicles. To date, we have 14 vehicles that meet criteria for Executive Fleet vehicles to be posted to the AF public website. We recommend that OSD/AT&L update policy contained in DoD 4500.36-R, Management, Acquisition, and Use of Motor Vehicles to reflect the guidance outlined in the 24 May 2011 Presidential Memorandum.

**G. Fleet Data:**

***GSA commends the USAF for its acquisition and use of a centralized management system***

Federal executive agencies are required by Sections 15301 and 15302 of the Consolidated Omnibus Budget Reconciliation Act of 1986 (Pub. L. No. 99-272) (40 U.S.C. Sec. 17502 and 17503) to have a centralized system to identify, collect, and analyze motor vehicle data with respect to all costs incurred for the operation, maintenance, acquisition, and disposition of motor vehicles. The USAF has a robust agency-wide vehicle management information system (LIMS-EV) that compiles the following data: Unique vehicle identifier, Manufacture, Model, Type, Size, Year, Acquisition cost/sustainment costs, Vehicle ownership, Mileage, Fuel type, Passenger capacity, Cargo capacity, Installed equipment beyond original equipment, Garaged

location, Service date, Mission, Historical/expected miles or hours of use per vehicle, Vehicle condition, Age, Retention cycle, and Vehicle down time.

#### **H. Shared Fleet-on-Demand Services:**

**GSA recommends that the USAF look for opportunities to use Shared Fleet-on-Demand Services.**

Short-term vehicle needs, such as vehicles for seasonal workers, could be met with rental vehicles under a recent policy change that permits rental up to 120 days. In its Management Plan, the USAF does not mention consideration of vehicle sharing, on-demand service, or public transportation. GSA recommends that the agency specifically address these options in the agency's annual Strategic Sustainability Performance Plan beginning with the June 2012 submission; otherwise, OMB has indicated to GSA that it may consider withholding funding for future fleet purchases.

#### **Agency Response:**

USAF Fleet Management Plan now includes our standard policy to consolidate or pool vehicles that are required for infrequent mission support into the Air Force's U- Drive it fleets. This allows units to sign out or share vehicles to accomplish mission requirements that otherwise authorized and assigned to individual units would have low utilization. We agree pooling vehicles decreases requirements and increases utilization. This update was included in our June 2012 submission.

#### **Annual Strategic Sustainability Performance Plan**

The Air Force will incorporate its fleet management plan into its Annual Strategic Sustainability Performance Plan (as required by Executive Order 13514).

# Army Fleet Management Plan

## **SUMMARY:**

In order to comply with the POTUS Memo – Federal Fleet Performance and Executive Order 13514, the Army has conducted a structured Vehicle Allocation Methodology process. By adhering to a standard methodology, with input from all stakeholders, an acquisition plan to attain optimum fleet composition was developed.

The resultant acquisition plan is based on several assumptions:

1. The Army budget will support the programmed replacement of fossil fueled Army owned and General Services Administration (GSA) leased vehicles with alternative fuel vehicles (AFVs).
2. Manufacturers will manufacture AFVs in passenger and light duty truck body styles that will meet Army needs and be made available through GSA .
3. GSA will reevaluate its business case model to determine if AFVs, which incur an incremental cost to maintain the monthly lease cost equal to a comparable conventional vehicle, can be amortized over a 5 to 7 year timeframe eliminating the incremental cost requirement.
4. Low Green House Gas vehicles, used in locations where E-85 fuel is not available, will be considered an AFV and amortized over a comparable period of time equal to that of other AFVs.

## **Plan and Schedule for attaining the Optimal Fleet:**

Army has been working steadily for the last three years to downsize and right size its nontactical vehicle fleet. Major improvements to the fleet composition have been made in the last two years with the elimination of over 1,000 large Sport Utility Vehicles used for passenger transport. Funding reductions and mission changes also are driving down the fleet size by approximately 5,000 vehicles over the FY12 and FY13 timeframe. Once these vehicles are removed from the fleet, the intent is not to grow the fleet, unless a mission change justifies the increase.

Attached, as an enclosure, is the Army Guidance that was provided to all stakeholders regarding the annual GSA leased vehicle replacement cycle. This guidance is meant to systematically transition the fleet from a fossil fuel fleet to an alternative fuel fleet.

The fleet will be downsized and right sized based on the acquisition and disposal plan submitted as part of the VAM. This will be done in coordination with GSA to ensure that

the residual cost of early turn-in is minimal since the Army budget will not be able to absorb non-mission supporting costs.

As per published guidance to all stakeholders, E-85 vehicles will not be ordered unless E-85 is available within 5 minutes or 15 miles of the vehicles garage location. All E-85 vehicles that are located in areas where E-85 is not available will be either attrited out of the fleet or relocated to fleets that have E-85 available to them by December 2014.

During each of the annual GSA replacement cycles only vehicles considered as alternative fuel vehicles (AFVs) will be requested as replacements, unless GSA cannot provide the that type of vehicle in an AFV configuration.

Army is working with DLA and other Federal entities to determine locations where E-85 dispensing stations can be established based on the density of the vehicle population, annual fuel consumption and availability and affordability of the fuel from an E-85 vendor. Where E-85 is not available the fleet will be transitioned to other alternative fuels to include low green house gas vehicles that will afford a large mile per gallon ratio.

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## **ADDENDUM TO THE ARMY NONTACTICAL VEHICLE FLEET MANAGEMENT PLAN**

### **ARMY RESPONSE TO GENERAL SERVICES ADMINISTRATION (GSA) RECOMMENDATIONS:**

**1. GSA recommends** that the Army review and validate its exemptions, include National Guard vehicles, and consider reduction of vehicles exempted from its Vehicle Allocation Methodology (VAM) studies.

**Army Response:** Army's guidance for the FY11 VAM, was to exempt only host country provided nontactical vehicles (NTVs). All Law Enforcement (LE) vehicles and all Army National Guard NTVs were to be reported as part of the VAM.

Guidance for the FY12 VAM (Encl 1), states all LE vehicles will be categorized as in accordance with Fleet Management Regulation, (FMR, B-33). A misunderstanding by the Army National Guard Bureau regarding VAM participation caused the reporting requirement not to be relayed to the individual States. This has been remedied through command emphasis to respond to future taskings and especially the FY12 VAM.

**2. GSA recommends** that the Army seek fleet reductions in excess of the 12.5% planned.

**Army Response:** Army has been and will continue to manage the size and composition of the Army NTV fleet with the end goal of having the minimal number of the correct size vehicles to perform the Army missions. Army guidance since 2008 has been to rightsize and downsize the NTV fleet. The FY11 VAM identified approximately 6,200 vehicles for elimination from the fleet. It is anticipated that the FY12 VAM will identify an additional 3,000 vehicles that will be eliminated from the fleet. The VAM will always identify the optimum fleet composition. The actual number of NTVs that are in the inventory will be directly related to the FY Execution Budget available to fund the GSA monthly lease and mileage costs.

**3. GSA recommends** that where possible, the Army should eliminate larger vehicles in favor of smaller, fuel efficient vehicles.

**Army Response:** Army guidance since 2008 has been to rightsize and downsize the NTV fleet, with accelerating success. As part of the Customer Acquisition Module (CAM) validation process, the Army NTV Program Manager (PM) reviews all requests for Class III and IV SUV replacement vehicles. Class IV vehicles (i.e. Suburban, Navigator, Tahoe, Excursion, etc.) are restricted vehicles and must be individually justified and approved by the Under Secretary of Defense, if the primary utilization is for passenger conveyance. In FY11, over 1,000 of these vehicles were downsized to more efficient NTVs. Army is requiring all replacement passenger vehicles to be compact vehicles unless an individual waiver is approved. Army has been and will continue to



manage the size and composition of the Army NTV fleet with the end goal of having the minimal number of the correct-size vehicles to perform the Army missions.

**4. GSA recommends** the Army should share its Alternative Fuel Vehicle (AFV) acquisition intentions with GSA Fleet, its primary vehicle supplier, so that GSA Fleet can appropriately adjust its own procurement plans.

**Army Response:** The Army NTV PM meets with GSA Fleet twice each week to discuss all aspects of the Army fleet, fleet management, the acquisition cycle and future impacts on GSA due to Army composition and missions. Every year written stakeholder guidance (Encl 2) is provided to all Army stakeholders and GSA for dissemination to the GSA Fleet Service Representatives for their knowledge.

The incremental cost of AFVs, currently funded through a vehicle surcharge during the acquisition year, needs to be absorbed by GSA via an increase in the amortization period for the vehicles. This only involves hybrid, plug-in electric (PEV), fully electric vehicles (EVs) and future technologies. GSA replacement criteria for hybrids should be increased to 5 years or 50,000 miles and for PEVs and EVs to 7 years or 70,000 miles. This would allow all GSA customers to transition to the latest AFV technologies at a more rapid pace since the monthly cost to the users would be equal to the monthly cost of a compatible fossil fueled vehicle.

**5. GSA recommends** the Army use the Department of Energy (DOE) tools to increase utilization of alternative fuels.

**Army Response:** The Army NTV PM has instructed all Army Commands to utilize the DOE tools for locating alternative fuel (AF) locations and attempting to coordinate with other Government activities for development of additional AF locations. Army has several installations requesting and waiting for the installation of AF tanks and pumps. Army is shifting its E85 fleet to Army installations that currently have E85 capability and will replace all other E85 vehicles with other AFVs to include Low Green House Gas vehicles.

**6. GSA recommends** the elimination of expensive commercially leased vehicles.

**Army Response:** Army has been proactive to identify commercially leased vehicles. In FY13, over 500 commercially leased NTVs that can be terminated without a penalty will be replaced with either Army-owned or GSA leased NTVs within the next 12 months. The remaining commercial leases will only be renewed if Army-owned or GSA leased vehicles are not available to replace the commercially leased vehicles. All commercial leases in excess of 25 vehicles for one year lease period or if the total lease exceeds \$150K must be approved by the Office of the Assistant Chief of Staff for Installation Management, DAIM-ISL.

**7. GSA recommends** that the Army obtain a centralized management system.

**Army Response:** Concur. Over the past six months, a concerted effort has been made to evaluate several Fleet Management Information Systems (FMIS) with the intent to recommend one of the systems for implementation throughout the Army. On 1 October 2012, the U.S. Army Sustainment Command (ASC) assumed operational control of all the Director of Logistics functions at all installations within the Army. ASC has conducted an analysis of the evaluated FMIS and are preparing to present their findings and recommendations to the ASC Command Group for a decision. Once an FMIS is selected, a phased implementation plan will be initiated with the goal of having the Army completely operational within 12 months.

**8. GSA recommends** that the Army look for opportunities to use Shared Fleet-on-Demand Services.

**Army Response:** Army does use the GSA short-term rental program and also commercially leases vehicles that are not available through GSA, for short durations to fulfill specific missions. We also coordinate with GSA to utilize vehicles that have been turned-in to GSA for sale on the secondary market, to supplement our on-hand fleet assets for cyclic missions such as Reserve Officer Training Corps summer camp and return them to GSA for sale immediately after the summer camp ends.

## NAVY FLEET MANAGEMENT PLAN

### INTRODUCTION

On May 24, 2011, the President issued Presidential Memorandum-Federal Fleet Performance. It requires that all federal agencies conducting an annual Vehicle Allocation Methodology (VAM) to determine the optimum fleet inventory to meet mission requirements and identify necessary resources. The expected outcome of implementing this bulletin is a Federal fleet that is comprised of smaller, more efficient, less greenhouse gas emitting vehicles that operate primarily on alternative fuels.

For the Navy, we based our VAM on our Transportation Review of Inventory Objectives (TRIO) process. The Product Line Management Office (PLMO) reviews activity transportation equipment IOs for shore activities on a continuing basis and also reviews and validates IOs during Transportation Review of Inventory Objectives (TRIOs) performed every three years and during Transportation Management Assistance Visits (TMAVs), which should be conducted every 18 months. As changes in mission, new functions, and/or functional transfers occur, the activity IO shall be revised. The IOs shall be based on the minimum number of units required to accomplish the activity's mission. Based on the VAM requirement we plan to validate the TRIO data once a year.

Transportation equipment shall be assigned only to those shore activities that have approved inventory objectives (IOs). Civil Engineering Support Equipment (CESE) shall be supplied by the regional Facilities Engineering Command (FEC) through new procurement, rental or lease, or by redistribution of excess equipment. Only that transportation equipment needed to accomplish the stated mission of an activity shall be assigned. Yearly assessments shall be made by the PLMOs to determine if adjustments are needed due to mission changes or new taskings.

CESE is received at an activity to replace current inventory or to fill an unfilled IO and is not to be retained when excess to IO. When new or used CESE is received at an activity to replace current inventory, a reasonable period of time is allocated for the changeover to report excess and process paperwork before transferring equipment to disposal.

Note: In certain situations, items excess to IO are considered mission essential and may be retained for a limited period of time. These situations shall be fully documented, approved by the PLMO, and kept on file at the activity. Examples of such situations include: Blood mobiles; on-hand assets are of less capacity than IO items, so additional units must be retained until IO items can be procured (i.e., two 5-ton dump trucks substituting for one 10-ton dump truck); a short-term need that must be met, but where an IO change would not be required (less than one year duration). In each such case, authorization for retention of excess vehicles shall be obtained from the PLMO in writing. The PLMOs are to review these temporary approvals during TRIOs and Transportation Management Assistance Visits (TMAVs).

The TRIO considers the following objective criteria:

- 1) Mission;
- 2) Historical/expected miles of use per vehicle;
- 3) Historical/expected hours of use per vehicle;
- 4) Ratio of employees to vehicles;
- 5) Frequency of trips per vehicle;
- 6) Vehicle function;
- 7) Operating terrain;
- 8) Climate;
- 9) Vehicle condition, age, and retention cycle;
- 10) Vehicle down time;
- 11) Needed cargo and/or passenger capacity;
- 12) Required employee response times; and
- 13) Greenhouse gas emission level of the vehicle

We plan to collect additional information about each vehicle through user surveys. Such subjective information could provide valuable insight into the objective criteria. For example, a fire truck may have low utilization as it is on standby, but it is necessary that it be available and prepared to respond to emergencies. The survey questions are listed below:

- 1) What tasks do you accomplish with the vehicle? Describe how those tasks support the agency's mission.
- 2) Does the vehicle need special equipment (aftermarket equipment not standard to commercial vehicles and trucks) to accomplish the tasks?
- 3) How important is the vehicle to accomplishing the mission? Describe critical need to the mission.
- 4) How many people will be transported per trip on a regular basis?
- 5) How much and what type of cargo will the vehicle haul on a regular basis?
- 6) Is the vehicle shared with other employees or other agency organizations?
- 7) Is there access to alternative fuel within 5 miles or 15 minutes of the vehicle's garaged location and if so where is it located and what type of alternative fuel is available?
- 8) If the vehicle is an AFV, does it have an approved waiver from the use of alternative fuel?
- 9) What type of driving conditions will the vehicle be in (exclusively on a base or campus setting, city, highway, off road, weather, etc.)?
- 10) Can the work be done via alternatives to owning or leasing a vehicle such as shuttle bus services, motor pool vehicles, sharing vehicles with other offices/agencies, public transportation, or short term rentals when needed, etc.?

## **SCHEDULE**

This section describes the schedule the Navy will follow to achieve its optimal fleet inventory, including plans for beginning to acquire all AFVs by December 31, 2015.

<b>TASK</b>	<b>DUE DATE</b>
Enter VAM data into FAST	17 Feb 2013
Enter Fleet Management Plan into FAST	17 Feb 2013
Incorporate Fleet Management plan with Annual Strategic Sustainability Performance Plans prepared	31 June 2013
Optimize Inventory based on VAM	31 Dec 2015
All new acquisitions will be AFVs	31 Dec 2015

Each year until 2015 starting in 2012, the Navy will analyze non-AFV acquisitions and determine if an AFV can meet this need.

NAVFAC HQ will work with CNO to come up with a policy mandating the purchase of 100% AFVs unless granted a waiver from NAVFAC HQ. EXWC (Navy purchasing agent) will notify NAVFAC HQ of all non-AFV purchases before they go through and ask for a justification and HQ can approve or deny the request.

The Navy replaces approximately 2,000 vehicles per year. We fund these replacements through the POM process. For the past 8 years we have exceeded the 75% AFV acquisition requirement. Purchasing 100% AFVs will not be a problem as long as GSA offers low incremental cost AFVs in sufficient quantities.

Based on the results of the VAM, each year the Navy will work towards optimizing its inventory by retiring vehicles when necessary, combining requirements and buying the smallest and most efficient vehicle that meets the mission requirement. We will work to ensure that our fleet is reduced to our inventory objectives shown in the “optimal fleet” section of the VAM worksheet. We have 1092 vehicles to reduce by 2015 assuming no change in mission. We will work to reduce 273 per year in order to achieve our optimal fleet by 2015.

Besides the TRIO process, the Navy is also using technologies such as Carshare to reach its optimal fleet. The Navy conducted follow-on pilot studies in 2011 of fleet-type car-sharing systems. The technologies have the potential to optimize fleet size and streamline vehicle dispatching. Prospective systems included automated (web-based) reservations, geographic tracking equipment, and keyless entry systems. Initial demonstrations at NAVSTA Norfolk VA and NAVSTA San Diego CA concluded in 2010. NAVFAC conducted follow-on demonstration of the fleet-type car-sharing technology used at NAVSTA Norfolk at two additional sites. NAVSTA Great Lakes launched an onboard computer and key management system in October 2010. In February 2011, NBK Bangor implemented a key management system to automate their

reservations and vehicle check out system. All three sites on the fleet-type system identified efficiency benefits and continued using the technology through FY2011. Savings from large scale implementation can enable reinvestment toward more advanced technology vehicles.

**AFVS IN PROXIMITY TO AFV INFRASTRUCTURE**

Table 1 is the most current list of AFV infrastructure on Navy Bases. The Navy has recently awarded the contract for the construction of 20 additional alternative fueling stations. These sites are shown in Table 2.

**Table 1: AF INFRASTRUCTURE NAVY-OWNED & NEX**

ACTIVITY	E85	Electric	CNG	B20
HAWAII	1	P	0	P
MIDLANT	3	P	1	5
MIDWEST	2/P	P	1	2/P
NORTHWEST	4	P	0	2
SOUTHEAST	1	P	0	1
SOUTHWEST	1/P	P	2	9
WASHINGTON	P	P	0	P
EURAFSWA	0	0	0	0
MARIANAS	0	0	0	0
FAR EAST	0	0	0	0
	12	0	4**	19
*P = Planned				
** The Navy has approximately 9 additional CNG stations are not operational				

During the TRIO VAM process we will try to ensure that all AFVs are in proximity to an AF station. However, since we are required to buy all AFVs starting in 2015 and have already been required to acquire 75% AFVs, some AFVs are located where no infrastructure exists. These are primarily E85 vehicles because they have the little to no incremental cost but require significant infrastructure investment. Now with low GHG vehicles counting as an AFV we will be able to minimize this effect. We are also trying to purchase hybrids and electrics for the areas without E85 but these are very expensive compared to low GHGs and flex-fuel (E85 compatible vehicles). During the TRIO/VAM process we will attempt to move current E85 vehicles in an area without any E85 infrastructure (also without any planned E85 infrastructure) to areas where infrastructure exists. This may present problems and will be a very labor intensive process. We will focus more on eliminating this problem in the future and correct it wherever possible.

**Table 2: AWARDED 2012 AF INFRASTRUCTURE**

<b>FEC</b>	<b>Site</b>	<b>Infrastructure Type</b>	<b>Planned Construction Completion</b>
WASHINGTON	NSF Dahlgren	E85/B20	12/1/2013
WASHINGTON	NSF Indian Head	E85/B20	12/1/2013
WASHINGTON	Anacostia	EV Charging Stations	12/1/2013
SOUTHEAST	NSB Kings Bay (upper base)	Solar Carport EV Charging	12/1/2013
SOUTHEAST	NSA Panama City	Solar Carport EV Charging	12/1/2013
SOUTHEAST	NAS Whiting Field	Solar Carport EV Charging	12/1/2013
SOUTHWEST	NAS Fallon	Solar Carport EV Charging	12/1/2013
SOUTHWEST	NBVC Port Hueneme	Solar Carport EV Charging	12/1/2013
SOUTHWEST	NB Coronado	Solar Carport EV Charging	12/1/2013
SOUTHWEST	NB San Diego	Solar Carport EV Charging	12/1/2013
NORTHWEST	NBK Bremerton	EV Charging Station	12/1/2013
NORTHWEST	NAS Everett	EV Charging Station	12/1/2013
NORTHWEST	NBK Bangor (lower base)	E85/ B20	12/1/2013
			12/1/2013
MIDLANT	PWD Philadelphia	E85/ B20	12/1/2013
MIDLANT	PWD Maine Portsmouth	E85/ B20	12/1/2013
MIDLANT	New London	E85/ B20	12/1/2013
MIDWEST	MW -- MidSouth	Solar Carport EV Charging	12/1/2013
MIDWEST	MW -- Crane	EV Charging Station / E85	12/1/2013
			12/1/2013
HAWAII	Pearl Harbor	Solar Carport EV Charging	12/1/2013
HAWAII	JBHickam	E85/B20	12/1/2013



## VEHICLE SOURCING DECISIONS

Before purchasing a vehicle, the Navy activity completes a buy vs. lease analysis determining which method is the most cost effective.

It compares the cost of ownership to leasing vehicles, compares all direct and indirect costs projected for the lifecycle of owned vehicles to the total lease costs over an identical lifecycle. A justification for acquiring vehicles from other than the most cost effective source is required and must be approved by NAVFAC HQ.

## NAVY RESPONSE TO GSA RECOMMENDATIONS

**1. GSA recommends** that the Navy exempt fewer vehicles from future VAM studies, and provide a copy of the exemption for the current VAM signed by the agency head.

**Navy Response:** The Navy has opted not to include its overseas fleet, and has also exempted 1,927 law enforcement and emergency vehicles from the VAM study. If there is an opportunity to revise the 2011 data the Navy will consider adding the foreign, law enforcement, and emergency vehicle fleet. The Navy already uses the 3-tier system of classifying law enforcement vehicles contained in FMR Bulletin B-33

**2. GSA requests** a copy of the Secretary's signed exemption from the VAM study of all law enforcement and emergency vehicles.

**Navy Response:** SECNAV has designation Commander of Naval Facilities Engineering Command (NAVFAC) the head of Agency for the Non-Tactical Vehicle Fleet. Navy will provide this to GSA.

**3. GSA commends** the Navy for controlling its fleet size prior to this VAM exercise, but notes that the VAM plan was not carried out to 2015 as instructed.

**Navy Response:** The Navy plans to include 2015 data in our 2012 submission. Because of our POM cycle, at the time of the original VAM, the Navy did not have data out to 2015 and did not want to provide inaccurate data.

**4. GSA notes** that while the overall composition of the fleet transitions toward smaller vehicles, there are significant exceptions that Navy should reconsider.

**Navy Response:** The Navy projects significant reductions in midsize and large sedans, with corresponding increases in compact sedans and LSEVs. Light SUVs and light passenger vans show significant reductions while heavier vehicles of these types are shown increasing. This is likely due to Navy's recent inclusion of new commands that relied heavily on large SUVs and trucks. Once Navy's VAM process is applied to these new requirements, it is expected that right-sizing will occur. Overall there is a movement to more fuel efficient, smaller vehicles which will reduce petroleum use and greenhouse gas emissions.

**5. GSA commends** Navy for its bold alternative fuel vehicle (AFV) transition plan, but notes that this will require a much faster rate of turnover than has been the case historically.

**Navy Response:** The Navy's non-exempt fleet is 30,296. Currently the Navy has 14,705 AFVs; 13,495 are in the covered fleet.  $30,296 - 13,495 = 16,801$ .  $16,801 / 3500 = 4.8$ . We believe GSA was not taking into account the fact that the Navy's covered fleet is already 45% AFVs. The Navy is aware that bio-fuel capable AFVs are the most cost effective way to reduce petroleum and continues to purchase these vehicles and build infrastructure where it is not commercially available. We are also continuing to purchase LSEVs, Hybrids and low-GHG vehicles in areas where there are no plans for E85. We are also a part of the GSA full size EV pilot.

**6. In addition to its ambitious plans to increase AFV use, GSA recommends** the use of Department of Energy (DOE) tools and consultation with GSA Fleet on the placement of AFVs.

**Navy Response:** The Navy already has significant alternative fuel infrastructure located on bases throughout the U.S., and is currently installing 20 additional stations. The Navy is also working with Naval Exchange and organizations such as clean cities to share infrastructure wherever possible. The Navy has started using the Fleet Sustainability dashboard in order to locate missed opportunities for alternative fuel use. We plan to use this information to increase our E85 use. The Navy also currently uses the Alternative Fueling Station Locator and encourages its use on the local level.

**7. GSA notes** Navy's failure to include vehicle sources in its VAM submission, which complicates analysis and planning.

**Navy Response:** The Navy does not segregate vehicles by source in future inventory planning. However, all vehicle acquisitions undergo a lease/buy analysis. GSA currently provides approximately 59 percent of the baseline fleet. The Navy plans to have a combination of Navy owned and GSA vehicles in the future.

**8. GSA notes** that Navy has a fleet management information system in place.

**Navy Response:** The Navy has a qualifying vehicle management information system covering all of the fleet.

**9. GSA recommends** that in addition to the efforts outlined in its Management Plan, Navy look for additional opportunities to use vehicle sharing and fleet-on-demand services.

**Navy Response:** The Navy plans to continue using vehicle sharing, on-demand service, and public transportation to the maximum extent possible when it is fiscally responsible.

## **ANNUAL STRATEGIC SUSTAINABILITY PERFORMANCE PLAN**

The Navy will incorporate its fleet management plan into the Annual Strategic Sustainability Performance Plan (as required by Executive Order 13514).

**Addendum to the 2012 Strategic Sustainability Performance Plan:  
Responding to the President's Memorandum on Promotion of Biobased Markets**

On February 21, 2012, President Obama signed a Memorandum, *Driving Innovation and Creating Jobs in Rural America through Biobased and Sustainable Product Procurement*. The memorandum requires all federal agencies to undertake a number of activities to increase their purchase of biobased products. The Department of Defense (DoD) is moving aggressively to implement the Presidential Memorandum requirements.

**Accomplishments in FY 2011 include:**

- The General Services Administration (GSA) and DoD conducted a workshop to facilitate ongoing collaborative discussions between GSA and DoD procurement staff on green acquisition. The workshop provided training which included U.S. Department of Agriculture Biobased products for acquisition personnel. Concluding the workshop, the participants identified the BioPreferred program as a specific area targeted for improving acquisition greening efforts.
- The Defense Logistics Agency (DLA) made a concerted effort to identify, test and incorporate biobased products into its supply chain. During the Fiscal Year (FY) 2011-12 timeframe, DLA established National Stock Numbers (NSNs) for 10 biobased products and modified one product specification. The DLA developed new biobased penetrating lubricants and sorbents as alternatives current petroleum-based products. Eight Tri-Service DoD installations successfully demonstrated the new products and found that they meet all requirements, as well provide enhanced health and safety benefits. The participating demonstration sites requested DLA to establish a biobased class of penetrating lubricants under the Commercial Item Description A-A-50493 (Class A Biobased Penetrating Lubricants). Now the Military Services can purchase the lubricants through DLA and receive credit on their environmental scorecard for buying sustainable/biobased penetrating lubricants. Finally, DLA established five new National Stock Numbers (NSNs) for biobased penetrating lubricants and two NSNs for the biobased sorbents, with more on the way.
- To help acquisition personnel track and report compliance with sustainable procurement mandates, DLA assisted with the development of data fields for four categories in Federal Procurement Data System (FPDS), including a category for BioPreferred. DLA also issued an Acquisition Directorate Procurement Letter establishing these fields for reporting. DLA began updating its Green Procurement Plan, which is used by all DLA acquisition offices, to ensure compliance with applicable procurement regulations. Furthermore, DLA instituted the use of the Integrated Acquisition Review Board process to verify the incorporation of BioPreferred and other sustainable procurement requirements into DLA Troop Support (pilot location) acquisitions.
- DLA Disposition Services issued a DLA Distribution Acquisition Directorate Policy and Procedure Memo that helps the acquisition workforce identify opportunities to incorporate sustainable procurement during acquisition planning. DLA Disposition

Services also developed a template, providing language, for use in procuring material handling and equipment and janitorial services.

- The Air Force issued a memorandum titled *Air Force Green Procurement Program*, which directs program managers and requirement owners in every mission area to consider and document green alternatives as they develop their requirement and product specifications for purchase. The memorandum also calls on managers to incorporate sustainable procurement language, including biobased products, in performance work statements, statements of work, and other product specifications for all new contracts. Key personnel involved in the acquisition process are now required to receive training on sustainable procurement requirements. The memorandum mandates updating Air Force instructions to promote sustainable green procurement practices.
- The Navy developed a new prototype training and awareness catalog titled *Buy It Green 2012: How to Buy Green for a Sustainable Navy*. The catalog includes background information and requirements for sustainable procurement, a listing of green products for high demand items, guidance for cardholders, and sample Federal Acquisition Regulation clauses and statements of work for contracting professionals.
- Washington Headquarters Services continues to provide recommendations to the Pentagon Storefront on making biobased and other sustainable purchases to ensure that all operations and maintenance materials are procured sustainably.
- The Army Net Zero pilot initiative has reinvigorated biobased and other green procurement activities across the organization.

### **Baseline for Biobased Contracting**

Prior to the issuance of the President's February 2012 Memo on Biobased Procurement, DoD's National Defense Center for Energy and Environment provided training to facilitate the fielding of newly validated technologies including biobased products. DoD intends to develop a standard contract language to reflect the need for products and services to be, among other green requirements, biobased. DoD is investigating the feasibility of revising the NSN system to distinguish those products that are biobased from non-biobased products. The Defense Intelligence Agency acquisition system provided provisions and contract clauses to help their personnel comply with sustainable procurement requirements, including biobased products.

DoD achieved a 92.7 percent rate of sustainable acquisition in the second two quarters of FY 2011, based on the review of 577 contract actions with values over \$3,000.

### **FY 2013 Target/Compliance Goal**

DoD annual planning targets for sustainable procurement are 95 percent by FY 2012 and annually thereafter.

### **Strategies for Improving Compliance**

DoD's objective for biobased procurement is the full incorporation of requirements and clauses for biobased products in relevant and appropriate contracts and follow-on activities to ensure compliance is achieved. The Department's strategy for achieving this objective includes the following elements:

- DoD will collaborate with GSA to leverage efforts to improve the identification, purchase, and use of biobased products. The partnership includes identifying appropriate Military Specifications (MIL-SPECs) to review for inclusion of biobased requirements, leveraging resources to demonstrate biobased product performance, and continuing to ensure sustainable products are included in DOD/GSA contracts.
- The Army plans to issue an updated sustainable procurement policy and develop a sustainable procurement 'quick guides'. The guides will educate the garrison and contracting staff on sustainable procurement requirements and how these requirements support the Army's mission.
- Naval Supply Systems Command Weapon Systems Support is partnering with DLA and GSA on a sustainable procurement initiative to identify green alternatives for high-demand consumable items the Navy uses daily, and make them available to acquisition professionals via electronic tools and catalogs. Weapon Systems Support is also leading a joint working group to develop more sustainable requirements for military and commercial packaging practices, such as increasing the use of biobased content in boxes, wrapping, and paper materials.
- The Marine Corps will increase sustainable procurement by educating contract writers, vendors, and product purchasers about sustainability requirements and mandates. The Marine Corps will continue to work with GSA and DLA to increase the procurement of sustainable products and remove all unnecessary products, such as Styrofoam, from the supply chain.
- The Air Force will implement new and updated green procurement policies, procedures, and guidance issued during FY 2011 and 2012.
- DLA plans to promote sustainable procurement through FY 2013. The methods include:
  - Issue exhortatory Procurement Letters detailing current requirements in FAR and DFARS pertaining to sustainable procurement.
  - Incorporate environmentally sustainable regulatory compliance as a special interest area into the Procurement Management Review process for applicable contracts.
  - Investigate the appointment of a sustainable procurement compliance advocate in the contract policy office at each DLA field activity and DLA contracting activity.
  - Expand the use of the Integrated Acquisition Review Board process to verify that sustainability is being addressed in every new, applicable acquisition.
  - Develop and gather sample contract language to aid contracting officers.
  - Perform periodic audits of contracts.
  - Revise reporting requirements for the DLA field activities to heighten the awareness and ensure compliance.

- Continue to analyze FPDS for potential system change requests to enable the identification of sustainable acquisitions.
- Investigate potential improvements to the DLA EProcurement contract writing system, used throughout the agency, to give it the ability to track compliance with environmental regulations.
- Washington Headquarters Services will complete a guidance document on conducting minor renovations sustainably, including sustainable procurement. In addition, Washington Headquarters Services will also work with applicable stakeholders to provide training and assist with sustainable procurement implementation.
- The Defense Intelligence Agency will have a revised contract management system in place by the end of FY 2013, which will enable contracting officials to indicate green product and service procurements on Award Contract Line Item Numbers.
- The Missile Defense Agency (MDA) intends to issue and implement a Green Procurement Instruction that will identify all federal green purchasing requirements and establishes MDA compliance guidelines. All MDA credit card holders and staff involved in procurement will complete green procurement training to ensure they understand green procurement requirements. For FY 2013, MDA plans on improving the electronic search system for contract information to make compliance audits more effective.

#### **Required Specification Reviews:**

The President's Memorandum requires that wherever possible and appropriate, agency specifications require the use of sustainable products, including USDA-designated biobased products, and that any language prohibiting the use of biobased products be removed. To meet MIL-SPECS review requirement for biobased content, DoD will follow the process identified in DoD Instruction 4120.24M, "The Defense Standardization Program Policies and Procedures," to conduct specification reviews.

More than 29,000 active DoD specifications must be reviewed on a five year cycle and either revised, validated as correct and up to date, or (if no longer needed) cancelled. Although it is not possible to review a significant number of these MIL-SPECS for biobased content by the end of calendar year 2012, DoD will use the established review process and its partnership with GSA to identify specifications affected by the BioPreferred designations, and assesses options for promoting the purchase of biobased products in those specifications.

In addition, DoD is investigating a modification to Military Standard 961, "Defense and Program-Unique Specifications Format and Content," to include a clause requiring all applicable specifications to include biobased requirements. The current proposed clause titled "Recycled, recovered, environmentally preferable or biobased materials" would state: "Recycled, recovered, environmentally preferable or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs." The modification will require Defense Standardization Council's approval.