

**DEPARTMENT OF HOMELAND SECURITY  
STRATEGIC SUSTAINABILITY  
PERFORMANCE PLAN**



**June 2010**

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## **Executive Summary**

In Executive Order (EO) 13514 - Federal Leadership in Environmental, Energy, and Economic Performance – President Obama made sustainable practices the policy of the United States Government. Sustainability is the multidisciplinary integration of mission and environmental considerations, in which an activity and its phases are viewed on a full life-cycle basis. The sustainable approach balances economic and environmental performance, from beginning to end, and how they integrate with cost, schedule, operations, maintenance, and worker/employee considerations.

To comply with the order, the Department must adhere to sustainable principles and implement sustainable practices throughout the DHS. Sustainability must also align with the Department's Efficiency Review Initiative to improve current and future business practices to save resources.

## **Sustainability and the DHS Mission**

The Department of Homeland Security is responsible for preventing terrorism and enhancing security; securing and managing the borders; enforcing and administering immigration laws; safeguarding and securing cyberspace; and ensuring resilience to disasters. Based on these mission areas, the Department is well positioned to develop a new business model for sustainable practices in law enforcement operations and integration of sustainability into its everyday business practices. Sustainability defines a consistent and coherent set of values and goals for all projects and processes, stimulates innovation and excellence, and serves as a unifying concept for One DHS.

## **Informing Sustainability at DHS**

The Sustainability and Efficiency Task Force of the Homeland Security Advisory Committee recently provided a report on the current state of sustainability in the Department as well as future courses of action required for DHS to become nationwide leader in sustainability. In order to meet sustainability objectives established by President Obama and the Task Force, the Department must develop a Sustainability Plan that establishes clearly defined goals and metrics to measure progress. Each component and functional area must participate in a significant and viable manner to fully integrate sustainable principles into business processes and projects.

## **Strategic Sustainability Performance Plan**

The Strategic Sustainability Performance Plan (Sustainability Plan) reflects the department's strategic vision for doing business in a more efficient way. The next step following the plan will be a series of tactical implementation plans to be developed by DHS Components called Operational Sustainability Performance Plans. These Component level plans will follow a template developed by DHS headquarters, and will outline a series of milestones and objectives that will accomplish the goals of the EO 13514.

## Section 1: Department Policy and Strategy

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### I. Department Policy Statement

DHS is committed to becoming a leader in sustainability to ensure its operations and actions are carried out in an environmentally, economically and fiscally sound manner. Incorporating sustainable practices into our mission conserves energy and natural resources, reduces pollution and contamination releases, enhances the workplace through less exposure to hazardous materials and chemicals and strengthens our national defense by encouraging energy independence. Employees at all levels must be responsible and accountable for integrating environmental stewardship into their day-to-day activities to reduce the environmental impact of their activities and to protect natural resources. These precepts are integral aspects of all Departmental activities. Incorporating sustainability into day-to-day business processes and decision-making is an important step in enhancing mission performance and demonstrating our commitment to compliance with environmental and energy statutes, regulations and Executive Orders and protecting the nation's natural resources.

To this end, sustainability is emerging as a central, organizing concept for the Department of Homeland Security. This common thread ties together a diverse number of mission-related operations, projects, stakeholders, and issues. Added to this is the need for responsible expenditure of taxpayer dollars and the need to deliberately evaluate sustainable alternatives for everything we do. Sustainability therefore represents a value system embraced by DHS leadership, which guides mission operations and supporting projects as well as the business processes for contracting, acquisition, financial planning, information technology, and project/program execution.

DHS defines sustainability as the multidisciplinary integration of mission and environmental considerations, in which an activity and its phases are viewed on a full life-cycle basis. The sustainable approach balances economic and environmental performance, from beginning to end, and how it integrates with cost, schedule, operations, maintenance, and worker/employee considerations. To accomplish mission integration with sustainability considerations, we hold the following as Strategic Objectives:

- **Strategic Transformation** toward sustainable business processes. One of the most important aspects of sustainability is accounting for life cycle costs and return on investment in budget analysis and decision-making, and building the infrastructure for data collection to ensure accurate, defensible metrics. Because the Department lacks much of the infrastructure to implement many of the goals of EO 13514, it must take iterative steps to transform its business models and establish short-, mid-, and long-term goals for promoting sustainability;
- **Human Capital Investment** to raise awareness of sustainable practices and how they can support DHS missions. By training every employee, the Department will empower its workforce to promote sustainability in daily operations; and
- **Leadership in Sustainable Law Enforcement** for the federal government. The Department will leverage best practices and seek out new innovations to make its law enforcement and emergency response operations more sustainable without compromising mission capabilities.

The Sustainability and Efficiency Task Force (SETF) of the Homeland Security Advisory Committee recently provided a report on the current state of sustainability in the Department as well as recommended future courses of action required for DHS to become nationwide leader in sustainability. The SETF is composed of industry members who are recognized experts in the fields of construction and design, environmental projects, and sustainability.

To ensure the Department's sustainability efforts are well coordinated across the functional lines of business in the Department, the Secretary has tasked the Management Directorate with developing the program. On October 3, 2009 Secretary Napolitano appointed the Chief of Staff for the Directorate, Chris Cummiskey, to serve as the Senior Sustainability Official for the Department.

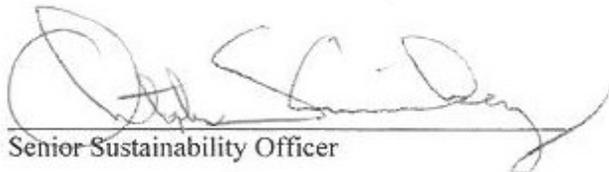
Executive Order 13514 (EO), *Federal Leadership in Environmental, Energy, and Economic Performance*, offers the opportunity to develop successful initiatives to strengthen the Department's sustainability and efficiency goals, while helping to further secure the nation. The EO requires the Department to develop a *Strategic Sustainability Performance Plan* (SSPP) to guide its implementation efforts toward the goals.

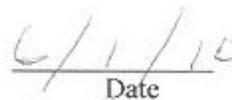
To lead this work the Department has established a cross-functional Sustainability Council. Council membership includes the Departmental Senior Sustainability Officer, Chief Administrative Officer, Chief Financial Officer, Chief Human Capital Officer, Chief Information Officer, Chief Procurement Officer, Chief Security Officer and the Components' Member of the Management Council. The SSPP assigns the lead for implementation to the appropriate CXO. A Sustainability Working Group was established to perform work on the behalf of the Sustainability Council. The Sustainability Council is composed of representatives from each of the CXO offices and the operational components.

We will plan and budget for the success of these efforts. We will develop systems to assist in measuring and reporting our progress. We will initiate course corrections when we are not meeting our goals. In supporting these goals, the Department will comply with all environment and energy laws, regulations, and executive orders.

To ensure the success of our efforts awareness training will be presented to every employee and they will be encouraged to contribute. We will inform the public about our efforts and provide for their involvement.

The signature below indicates approval and commitment for the goals of the Sustainability Plan:

  
Senior Sustainability Officer

  
Date

**Major sustainability successes:**

- DHS developed a preliminary Greenhouse Gas (GHG) inventory for Scope 1 and 2 emissions using a FY 2008 baseline. This effort will facilitate the creation of the inventory required by EO 13514;
- DHS reduced its energy consumption in FY 2009 by 13.6 percent compared to the 2003 base year and is on track for a 30 percent reduction by 2015;
- Since 2007, DHS has conducted 5 US Green Building Council Leadership in Energy and Environmental Design (LEED®) training courses, educating a total of 125 individuals;
- DHS teamed with General Services Administration (GSA) to develop a sustainable plan for consolidating key headquarters and Component executive leadership at the St. Elizabeth's site. Sustainable practices will be incorporated into the construction. Specific details are listed below:
  - Reuse 52 of 62 historic buildings contributing to the National Historic Landmark status (8 of the 10 buildings to be demolished are dilapidated greenhouses with little reuse potential);
  - New construction is placed to minimize impacts to the contributing landscapes and view sheds;
  - Walking campus design consistent with historic use. Parking is on the exterior;
  - Rehabilitate existing pedestrian tunnel connections between buildings where possible and provide on-campus electric shuttle to assist employees if necessary;
  - Meet or exceed the 30% energy savings of ASHRAE 90.1 per the Energy Act of 2005;
  - The campus is being designed to LEED Silver (minimum) under the US Green Building Council Leadership in Energy and Environmental Design;
  - Create a co-generation Central Utility Plant capable of providing up to 25% of electrical demand at full build-out. Waste heat from the CUP will provide 15% energy savings for building heating/cooling and boiler reduction;
  - Provide electric and alternate fuels (natural gas) fueling stations; and.
  - Purchase electric carts for on-campus security activities.
- Working with GSA, DHS has a 1.1 million square feet US Coast Guard Headquarters building for the St. Elizabeth's campus is under design. Currently the design will achieve a Silver rating under the US Green Building Council Leadership in Energy and Environmental Design and efforts are being made to achieve Gold. The new building will include:
  - Green Roof (approximately 8 acres);
  - Energy efficient lighting;
  - Demolition of existing concrete warehouse on project site will crush and reuse concrete as a base for construction haul road;
  - Harvesting rainwater for irrigation; and
  - Bio-retention of storm water for irrigation (2/3 of campus storm water drains through the USCG site).

- DHS obtains 4.1 percent of its electricity from renewable energy sources;
- DHS reduced water intensity 5.5 percent and is on track for a 16 percent reduction by 2015;
- DHS has been following the Guiding Principles for all new construction and major renovations and has built 4 LEED® certified or higher buildings with 9 awaiting certification, 16 under construction 12 in design and 45 in planning;
- DHS acquired approximately 125 hybrids electric vehicles and over 800 Alternate Fuel Vehicles (AFV's) through General Services Administration (GSA) leasing during the 2010 ordering cycle. A total of 300 AFV's and 140 hybrids were acquired through the American Recovery and Reinvestment Act program in 2009; and.
- DHS placed 600 E85 vehicles in locations where E85 fueling stations are available.

**Significant challenges and opportunities:**

*Strategic Transformation:*

- To date, sustainability has been the responsibility of the environment and safety communities. The shift to sustainability will require greater attention from all functions in DHS. Over the years, other DHS functions have largely relied on the environment and safety functions to address those areas of concern. For DHS to be successful, every employee needs to understand, participate in and contribute to the attainment of sustainability goals. This culture shift will require years to be fully imbedded in all government agencies, including DHS. To ensure the highest level of participation, DHS must engage the commitment of all employees, and managers, through proper training and incentives. Sustainability goals also should be incorporated into job descriptions and employee performance reviews. Extensive employee involvement will facilitate employee-driven innovation.
- DHS will need to implement organizational changes to realign existing functions to integrate sustainable practices into all Departmental processes and procedures. DHS should provide the staff and systems needed to manage Executive Order 13514 compliance, establish accountability measures and report regularly on sustainability benchmarks. (See the short, medium and long term tasks listed throughout the document.)
- DHS needs to create a data Information Management System that is capable of capturing all of the data required to measure and report performance under the EO. It will take two to four years to either acquire or build an operational system capable of performing this function and implement processes to capture the data. In the interim, manual data collection will be used to obtain the information required for reporting. This will likely be a significant drain on existing resource levels.

The Department of Homeland Security identified short-, medium- and long-term tasks to take advantage of the opportunities listed above. These tasks are located throughout this Plan and are necessary for overcoming or adapting to the challenges present in the opportunities listed above.

*Mission Expansion and Tactical Requirements:*

- Mission requirements have increased with subsequent increases in people, materials and vehicles. This makes it increasingly difficult to achieve the required GHG, energy reduction targets and fuel reduction goals. A large percentage of the DHS fleet is used for law enforcement which is excluded according to section 12 of EO 13514. Meeting the 2% petroleum reduction target will continue to be a challenge. Additionally, the lack of alternative fuel infrastructure impedes meeting the goals.
- As a result of increased mission and operational changes over the past few years, DHS facilities are now expending considerable efforts and resources on revamping or creating new operational controls (such as hazardous materials pharmacies) required for activities that pose risks to the environment, safety or to the mission. To the maximum extent possible these operational controls are being created and integrated into the facility-level environmental management systems that are currently being developed and implemented. Nonetheless, this is a significant, labor intensive and sometimes costly endeavor for the facilities.
- In some cases, security interests related to locating facilities may be in conflict with the goal of increased regional and local planning coordination. DHS will strive to accommodate sustainable building location while ensuring the security of its facilities, employees, and the public.
- The challenge of implementing the open government directive and a sustainable culture of open government for DHS is striking a just balance between the release of appropriate and timely information while ensuring the protection of national security, privacy and civil rights. To achieve these goals and improve the process for providing a full spectrum of end-users with the information they seek, the Department must expand partnerships at all levels and improve methods of communication.

The Department of Homeland Security identified short-, medium- and long-term tasks to take advantage of the opportunities listed above. These tasks are located throughout this Plan and are necessary for overcoming or adapting to the challenges present in the opportunities listed above.

## **II. Sustainability and the Department Mission**

The Department of Homeland Security is responsible for preventing terrorism and enhancing security; securing and managing the borders; enforcing and administering immigration laws; safeguarding and securing cyberspace; and ensuring resilience to disasters. Sustainability defines a consistent and coherent set of values and goals for all projects and processes, stimulates innovation and excellence, and serves as a unifying concept for One DHS. DHS sees uncertain and unsustainable supplies of energy, water, and other resources, and the unpredictability of natural disasters and terrorism, as having a major impact on the nation's security. DHS is in a unique position to set the paradigm for a sustainable, secure, and resilient future by demonstrating how efficiency and sustainability will enhance America's national security. Successful E.O. implementation will produce a pragmatic, flexible, and strategic DHS that is a leader in efficiency among the executive agencies, and a model to state, local, private sector, and citizen sustainability efforts and increase the nation's security.

The implementation of distributed energy projects at DHS facilities will increase their operational security by making them less dependent on grid supplied power. This is especially important for our operations and data centers which must maintain 24-7 operations. Use of domestically produced biofuels and products can also decrease dependency upon imported oil and could help to stabilize costs.

### **III. Greenhouse Gas (GHG) Reduction Goals**

The Department is committed to creating a clean energy economy that will increase American prosperity. Reducing GHG emissions supports the Department mission through promotion of energy security, protecting the interest of taxpayers and safeguarding the public health and the health of the environment. Heads of Components will identify and prioritize actions to achieve these goals and annually evaluate their performance.

#### **A. Scope 1 and 2 Targets**

Scope 1 GHG emissions are direct emissions from the operation of sources that are owned or controlled by DHS to include those emissions from:

- Stationary fuel combustion equipment such as boilers, furnaces, and emergency generators;
- Mobile sources such as vehicles, aircraft, and marine vessels; and
- Fugitive and process carbon emissions associated with current land use management practices and activities (e.g., forest management practices) and from the operation of refrigeration and air conditioning systems, electrical switchgear, and other equipment/systems.

Scope 2 GHG emissions are indirect emissions that occur as a result of DHS operations but are produced by sources owned or controlled by another entity. Scope 2 includes emissions from the consumption of purchased electricity and steam generated by other entities.

In accordance with the requirements in EO 13514, DHS submitted its Scope 1 and 2 GHG emissions reduction target to the Council on Environmental Quality (CEQ) and the Office of Management and Budget (OMB) on January 1, 2010. The Department's goal is to reduce by 2020 its combined Scope 1 and 2 GHG emissions 25 percent from a FY 2008 baseline inventory.

Below is a list of Component FY 2020 GHG Scope 1 and 2 emission reduction goals established by the SSO relative to a FY 2008 baseline. The Component goals will be used to assist in tracking progress towards achieving the Department's 25 percent reduction goal.

**Table 1: Component GHG Reduction Goals**

DHS Component	Scope 1 & 2 GHG Reduction Goal
Customs and Border Protection	28%
Federal Law Enforcement Training Center	28%
Federal Emergency Management Agency	20%
Immigration and Customs Enforcement	34%
Science and Technology Directorate	15%
Transportation Security Administration	2.6%
US Coast Guard	25%
US Citizenship and Immigration Services	2%
US Secret Service	20%
<b>DHS Overall Reduction Goal</b>	<b>25%</b>

**B. Scope 3 Targets**

Scope 3 GHG emissions account for all other indirect emissions not included in scope 2. These emissions are a consequence of the activities of DHS and come from sources not controlled by DHS. Scope 3 emissions represent an important opportunity for DHS to influence the behavior of its employees and suppliers toward behaviors that reduce greenhouse gas emissions and protect the climate.

In deciding which scope 3 emissions to include in the reduction target at this time, CEQ and OMB considered the availability of data, the existence of methodologies to accurately calculate emissions quantities, and the ability of agencies to measure changes in emissions as a result of their actions. OMB determined the following categories will be included in the initial scope 3 GHG emission reduction targets:

- Category 1 - Transmission and distribution (T&D) losses from purchased energy to include;
  - Purchased electricity T&D losses;
  - Purchased steam T&D losses; and
  - Purchased chilled water T&D losses.
- Category 2 - Federal employee travel to include;
  - Business air travel;
  - Business ground travel; and
  - Federal employee commuting
- Category 3 - Contracted waste disposal to include:
  - Contracted solid waste disposal; and
  - Contracted wastewater treatment

As required, DHS will establish a reduction target for each scope 3 category and an overall single goal that encompasses all three categories. The Department is currently using the CEQ approved calculation tool to estimate the DHS scope 3 reduction targets. This target is due to

OMB on June 2, 2010, the same date as the Sustainability Plan. The reduction goal is not yet available for inclusion in this version of the Sustainability Plan. Components are also developing their own scope 3 emission reduction targets using the same CEQ tool.

### **C. Baseline Efforts**

DHS prepared a GHG inventory in response to a specific request in H.R. 2638, Public Law 110-329, The Consolidated Security, Disaster Assistance, and Continuing Appropriations Act of 2009. This inventory provided an assessment of GHG emissions associated with DHS and Component activities, including a top-down emission estimate of the six internationally-recognized GHGs, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). It also contained an analysis of mitigation measures, including sequestration potential. The GHG inventory served as a first step in preparing an inventory that complies with the inventory requirements in EO 13514.

This was the first attempt, prior to the issuance of the E.O., by DHS to quantify GHG emissions from all DHS and Component operations. The GHG inventory was limited by the Department's data collection capabilities. Since direct measurements of GHG emissions are not part of DHS monitoring activities, the information was collected from the Components through a data call, the FY08 annual energy report, and from a real property database, and GHG emission measurements were obtained through indirect calculations. The inventory does not fully meet EO 13514 requirements for the following reasons:

- The inventory did not address the scope 3 emissions categories recently identified by OMB;
- The inventory included some emissions vehicles/vessels that are excluded by EO 13514; and
- The inventory included emissions from EO 13514 excluded facilities.

DHS will update this past inventory in accordance with the upcoming OMB and CEQ guidance for completing the inventory. This baseline inventory is due January 2011.

### **D. Overall Strategy to Meet Targets**

In order to achieve its GHG targets, DHS has developed a high level approach that includes short-term, medium-term and long-term activities/initiatives. These activities and initiatives build on existing efforts to reduce energy use, reduce the energy intensity of its operations, increase the utilization of alternative fuels, and purchase renewable energy.

#### *Short Term (FY2010-FY2012)*

- DHS will identify the resources necessary for acquiring the data to measure:
  - Transmission and distribution losses related to purchased electricity, steam, and heating/cooling;
  - Business air travel; and
  - Contracted solid waste.

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- CAO (Environmental Management) will establish a Scope 3 GHG reduction goal;
- CAO (Environmental Management) with support from CXOs and Components will finalize the baseline GHG inventory;
- CAO (Environmental Management) will update the sustainable practices directive to reflect the new requirements in EO 13514;
- CAO (Fleet Management) will issue guidance on EISA section 141 to improve awareness of the requirement to acquire low GHG emitting vehicles;
- CAO (Fleet Management) will establish a Department-wide committee to develop guidelines and requirements for defining and sizing vehicle fleets;
- The CHCO will develop and deploy an employee training program and employee commuting survey to calculate the FY2008 baseline inventory, reduction goal and annual progress;
- CSO will use more energy efficient security systems, equipment, lighting and infrastructure; and
- CSO will increase the use of automation and paperless processes in security administration functions that are currently done manually thus reducing energy and resource requirements and waste.

### *Medium Term (FY2013-FY2017)*

- The Sustainability Council will identify and deploy solutions for automating, collecting, collating, tracking and reporting GHG emission reduction results;
- The Sustainability Working Group will identify and prioritize opportunities and Department-level initiatives to reduce GHG emissions for Scopes 1, 2 and 3;
- CAO (Environmental Management) will coordinate any new OMB mandated scope 3 GHG reduction initiatives;
- CAO (Fleet Management) will begin an awareness campaign and review of the entire fleet to ensure optimal use of vehicles and right sizing the fleet;
- CAO (Fleet Management) will establish procedures to ensure all DHS vehicle orders will be reviewed by the Fleet Manager to ensure compliance with reduction efforts; and
- CAO (Fleet Management) will establish policy and procedures to ensure all motor vehicles operators consolidate trips and improving routing in order to reduce miles travelled.

### *Long Term (FY2018-FY2021)*

- The Sustainability Council will use the resulting from GHG emission collecting, collating, tracking and reporting systems to identify and correct problem areas and target opportunities for success;
- CAO (Fleet Management) will continue the awareness campaign and review of the entire fleet to ensure optimal use of vehicles and right sizing the fleet. Emphasis will be placed on replacing the fleet with low GHG vehicles wherever practicable;

#### **IV. Plan Implementation**

##### **A. Leadership & Accountability:**

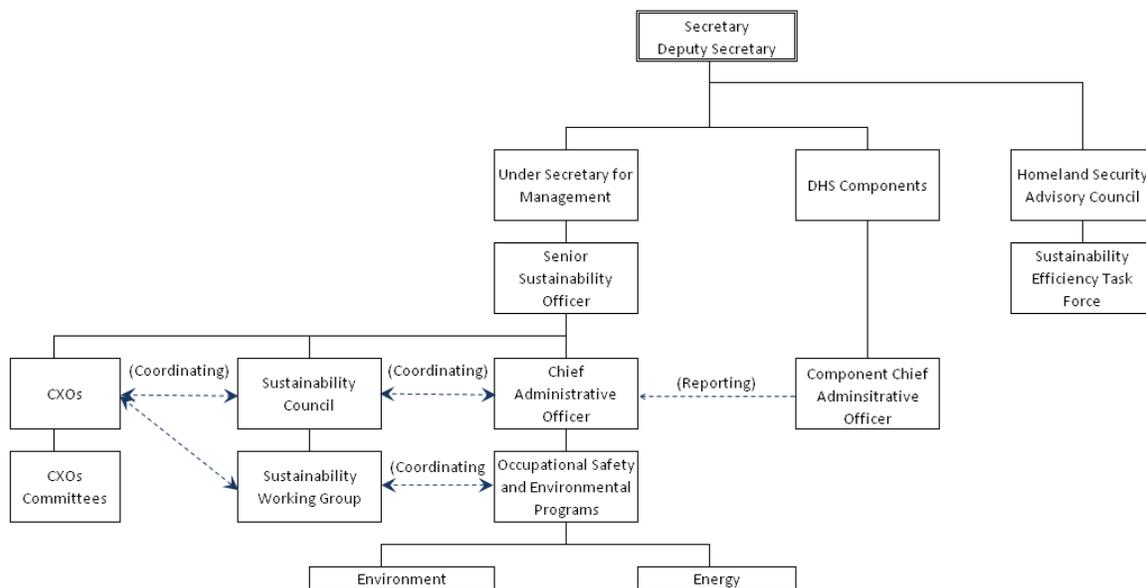
Once appointed, Secretary Napolitano reviewed the Department's strategic goals as a means to articulate her priorities for homeland security. The Secretary's priorities did not ignore the complementary safety, stewardship, and legislatively mandated responsibilities of various DHS Components. Those complementary activities currently include those designed to protect the environment. In support of sustainability, the Secretary established the Sustainability Efficiency Task Force (SETF) consisting of professionals outside of government. The SETF reviewed DHS policies and procedures and made recommendations to assist the Department in becoming a leader in sustainability. Recommendations from the SETF report were incorporated into the Sustainability Plan.

The Department leadership and accountability roles for the Sustainability Plan are defined below:

- The Deputy to the Under Secretary for Management (USM) is designated by Secretary to serve as the SSO for the Department and will be accountable for DHS conformance with EO 13514. The following key functions, referred to as the CXOs, report to the USM and are responsible for implementing the Sustainability Plan;
  - Chief Administrative Officer (CAO) with responsibility for fleet, energy and environmental management;
  - Chief Financial Officer (CFO);
  - Chief Human Capital Officer (CHCO);
  - Chief Information Officer (CIO);
  - Chief Procurement Officer (CPO); and
  - Chief Security Officer (CSO).
- The Management Council consisting of the CXOs and Component Management Officials serves as the Sustainability Council and guides EO 13514 implementation efforts;
  - The Sustainability Work Group was established by the Sustainability Council to perform technical analysis and work for the Sustainability Council. Representatives from the CXOs, Components and other technical advisors as needed are assigned to this work group to address specific tasks from the Sustainability Council.
- The CAO provides coordination and management for the SSO over the Sustainability Plan and performs the following:

- Maintains the Sustainability Plan and coordinates inputs from the Sustainability Council, Sustainability Work Group, CXOs and Components;
  - Report progress on the Sustainability Plan to the SSO, Sustainability Council, Sustainability Work Group and others as required;
  - Monitors and reports on EO 13514 compliance; and
  - Prepares required reports and metrics for submittal to OMB and CEQ.
- CXOs are responsible for defining their role and specific CXO actions and initiatives for the Sustainability Plan and provide updates as required to the CAO; and
  - Components are responsible for preparing an Operational Sustainability Performance Plan (OSPP) that implements the goals, targets and objectives of the Sustainability Plan. Components will provide updates and metrics to the CAO as requested.

The leadership roles are graphically displayed in the flow chart below.



## B. Internal Coordination and Communication

Each CXO is responsible for driving the change to sustainability through their functional area and support integration of sustainability across the Department. This requires communicating sustainability policies, goals, objectives and targets to their staff and developing the initiatives and tasks for implementation. Each of the CXO chiefs must establish and enforce standards that ensure their aspects for implementing sustainability are carried out, reported accurately and updated to reflect changing circumstances. Metrics must be established, tracked and reported. This action takes leadership and the ability to make hard choices during a period when resources are already stretched thin.

Existing internal coordination processes will be used to modify, update and revise the Sustainability Plan. The CAO is charged with maintaining the most current copy of the approved and signed Sustainability Plan and will be responsible for coordinating it through the Sustainability Council, Sustainability Work Group and Departmental offices. CXOs are

responsible for coordinating the Sustainability Plan through appropriate offices and Committees. CXOs are also responsible for coordinating the Sustainability Plan through Component level CXOs. CXOs will submit Sustainability Plan information, updates, status and required reports to the CAO for appropriate review and coordination. CXO's Committees will supply information to the appropriate CXO.

The SSO challenges all DHS employees to work towards sustainability goals and encourages employees to solve tough sustainability challenges. Supervisors and managers must work to enable employee solutions to have an appropriate impact on the resolution of those challenges. In order to facilitate this action, the Sustainability Plan must be communicated to all employees. This is a continuous activity as employees need to receive updates on new issues, progress towards attaining objectives and targets and recognizing the achievements of individual groups and functions within DHS. Sustainability awareness training must be conducted periodically to remind existing employees and educate new ones on the DHS Sustainability Policy, the existence of the Sustainability Plan, the sustainability objectives and targets, and what they can do to participate and contribute to the attainment of those objectives and targets. Competency training addresses the specific competency that certain individuals need to exhibit when they are given roles and responsibilities that impact sustainability goals and objectives. DHS must develop and implement the appropriate systems, methods and standards to support the management of a department-wide sustainability program and ensure optimal outreach to DHS employees.

**C. Coordination and Dissemination of the Plan to the Field:**

The signed and approved Sustainability Plan will be shared with Components through the Sustainability Council, Sustainability Work Group and CXO committees. Components will use the Sustainability Plan to develop their Operational Sustainability Performance Plans. Informational and awareness articles will be developed for *DHS Today*, the *CAO Pathways*, and other CXO or Component newsletters. Progress reports will become a standing item for the Management Council. Specific tasks include:

- CAO will coordinate posting the plan on the DHS intranet; and
- CAO (Environmental Management) will develop awareness materials for distribution to Components and field locations.

**D. Department Policy and Planning Integration:**

DHS will issue an overall sustainability policy letter signed by the Secretary. Components have the option to issue a separate policy letter. The DHS policy letter will establish and promote sustainable practices and creates a culture for achieving our sustainability goals at all levels of the organization. Tasks include:

*Short Term (FY2010-FY2012)*

- The Secretary will sign and issue a Sustainability Policy;
- CAO (Environmental Management) will update Directive 025-1, *Sustainable Practices for Environmental, Energy and Transportation Management*, to reflect the requirement of the new EO and issue a companion Sustainable Practices Manual;

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- CAO (Environmental Management) will develop a gap analysis tool for CXOs to use to determine if policy, guidance, procedures and reporting processes address sustainability requirements;
- CXOs will update the plans and documents listed in Table 2 Critical Planning Coordination;
- CXOs will perform a gap analysis to identify shortfalls with sustainability compliance in their policy, guidance, procedures and reporting mechanisms and develop corrective plans for the Sustainability Plan; and
- CXOs will identify opportunities to incorporate sustainability into day-to-day operations and modify operation to address EO requirements; and
- The DHS Climate Change Adaptation Task Force will forward recommendations to the Sustainability Council for prioritization in the SSPP.

### *Medium Term (FY2013-FY2017)*

- Sustainability Council will prioritize the DHS Climate Change Adaptation Task Force recommendations; and
- CXOs will be executing their sustainability corrective action plans;

### *Long Term (FY2018-FY2021)*

- Sustainability Council will execute DHS Climate Change Adaptation Task Force recommendations according to the schedule.

## **E. Department Budget Integration:**

DHS envisions sustainability incorporated in day-day-activities. In order to achieve this vision, sustainability must be fully integrated into the budget process. OMB will review the Sustainability Plan and compare the status and tasks to current budget submittals. Sustainability should not be a separate line-item in a budget rather each budget item should fully integrate and address sustainability requirements. The following tasks have been identified to facilitate sustainability and budget process integration:

### *Short Term (FY2010-FY2012)*

- The CFO will issue supplemental guidance to the Components on developing and justifying budget initiatives to support EO implementation;
- CFO will provide guidance to include lifecycle costs in the budget analysis and budget decision-making; and
- CPO (Cost Analysis Division) will provide guidance to include lifecycle costs in the budget analysis and budget decision-making during the rewrite of the PPBE sections.

**F. Methods for Evaluation of Progress:**

DHS will develop and maintain a series of metrics consistent with the upcoming OMB metrics. The current quarterly environmental metric reporting system managed by the CAO will be used to complete OMB metrics and determine DHS progress. Under the CAO process each Component is evaluated and rated for status and progress scores. The CAO will also review Component level Plan and use the information in these plans for updating the Sustainability Plan. The CAO also developed an EO 13514 dashboard for a quick assessment of DHS status towards achieving the goals of EO 13514. Results of the metrics and dashboard are used to update the SSO and Sustainability Council.

DHS must develop the capability to efficiently and effectively gather data and report progress on sustainability metrics, including energy consumption, waste production, and water usage. If DHS cannot accurately account for its consumption, it will not be able to effectively reduce consumption in compliance with the EO. Currently the data is collected manually on an infrequent basis in response to DHS data calls to meet OMB reporting requirements. New reporting requirements will rely on data that has not been collected in the past.

An enterprise-wide Sustainability Performance Management System is needed that will support the Department's information needs to adequately manage environmental and energy efforts to meet Administration requirements. These requirements include but are not limited to greenhouse gas emissions (Scopes 1, 2 and 3), acquisition data, inventory data, utility (energy) consumption data, fuel data, operations and maintenance data, program costs (direct and indirect), and disposal data. Each of these overarching data requirements will enhance the Department's ability to better manage its assets, reduce costs (near and long-term), provide mandatory reporting, minimize fraud, waste and abuse, enhance oversight, and ensure transparency of effort and cost. In addition, the knowledge gained from this information will allow the Department to make informed and educated decisions about environmental and energy management that will reduce operating costs through reduced energy consumption, better operations and maintenance programs, and overall portfolio management. Additionally, the Department would be better positioned to reduce costs related to carbon emission credits.

DHS is working to implement a Headquarters higher-tier environmental management system that provides the overarching construct that brings all DHS activities into a framework designed to achieve the sustainability objectives and targets of the Sustainability Plan. The environmental management system would aggregate and analyze data from many individual program areas such as energy, water, waste management, recycling, and environmentally-preferable purchasing.

Table 2 below indicates whether the EO goal is relevant to and has been fully integrated into listed reports or plans listed. A "Yes" response indicates that the EO goal has already been integrated. A "No" indicates that the EO Goal has not yet been fully integrated, is only partially integrated or no effort has yet begun on integrating the EO Goal into the plan. "n/a" indicates that the EO Goals are not applicable to the listed report or plan. "P" indicates that the EO goal has been partially integrated, integration is underway or the fully integrated report or plan is awaiting official approval. "E" indicates the report or plan is being evaluated for an opportunity to integrate the EO goal. The results indicate the current status of incorporating sustainability into the originating report and/or plan.

**Table 2: Critical Planning Coordination**

Originating Report / Plan	Scope 1 & 2 GHG Reduction	Scope 3 GHG Reduction	Develop and Maintain Departmental Comprehensive GHG Inventory	High-Performance Sustainable Design / Green Buildings	Regional and Local Planning	Improve Water Use Efficiency and Management	Pollution Prevention and Waste Elimination	Sustainable Acquisition	Electronic Stewardship and Data Centers	Departmental Specific Innovation
GPRA Strategic Plan [DHS Strategic Plan]	E	E	n/a	E	E	n/a	n/a	n/a	n/a	E
Departmental Capital Plan [Capital Investment Plans(CIP)]	n/a	n/a	n/a	P	E	E	n/a	n/a	E	E
A-11 300s	n/a	n/a	n/a	E	E	E	n/a	n/a	E	E
Annual Energy Data Report	P	P	P	Yes	n/a	Yes	Yes	Yes	Yes	Yes
EISA Section 432 Facility Evaluations/Project Reporting	E	E	E	E	n/a	E	n/a	E	n/a	E
Budget	E	E	E	E	n/a	n/a	n/a	n/a	n/a	E
Asset Management Plan / 3 Year Timeline	E	E	n/a	P	n/a	n/a	E	E	E	E
Circular A-11 Exhibit 53s	n/a	n/a	n/a	n/a	n/a	E	n/a	E	E	E
OMB Scorecards	P	P	P	Yes	n/a	Yes	Yes	Yes	Yes	n/a
DOE's Annual Federal Fleet Report to Congress and the President	E	E	E	E	n/a	E	E	E	n/a	E
Data Center Consolidation Plan	n/a	n/a	n/a	No	n/a	n/a	n/a	n/a	Yes	n/a
EMS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Affirmative Procurement Plan for Green Purchasing	E	E	n/a	n/a	n/a	Yes	Yes	Yes	Yes	E
Directive 025-01	P	P	No	Yes	P	Yes	Yes	Yes	Yes	No
NEPA Documents (EAs and EISs)	E	E	n/a	E	P	E	E	E	E	E

## V. Evaluating Return on Investment

### A. Economic Lifecycle Cost / Return on Investment:

When evaluating initiatives and construction of new buildings, DHS will conduct lifecycle cost analyses and seek to fund projects with a high return on investment (ROI). Using this approach recognizes the full service life of buildings and building systems by assessing the long-term effects of renovations or operational changes. Full lifecycle cost analyses help to ensure that federal dollars are spent wisely and energy savings are maximized. As a general guideline, for energy and water efficiency and conservation projects, DHS will pursue implementation of projects with a 10-year or shorter simple payback. However, as stated above, the ROI relative to the full life cycle of the project or system will be taken into account. Thus, in some cases, the payback period for a project may be longer than 10 years, but if it is shorter than the expected life of the asset; such projects will also be considered.

**B. Social Costs & Benefits:**

Most DHS facilities are not open to the public so there is little potential for recreational value, except for the employees at the facility. However, there are many other opportunities for consideration of social costs and benefits. This will be demonstrated through seeking to address geographically localized challenges or social benefits to personnel. For example, water conservation projects near high-drought areas will be more highly prioritized than in non-drought-prone areas.

Currently, DHS employs a review process pursuant to the National Environmental Policy Act (NEPA) for all proposed construction projects and major actions. The NEPA process is currently used to evaluate the social benefits and costs of new construction projects. Environmental justice issues are an integral part of these analyses. Other social costs and benefits are also considered, such as cultural, historical and socioeconomic impacts (e.g., local employment). While these analyses are typically more qualitative than quantitative, DHS will strive to streamline the NEPA review process and ensure these aspects of the NEPA review are robust.

Future efforts within DHS can focus on ensuring the purchase of products from socially responsible vendors such as those who employ disabled persons and ensuring a fair living wage in contracts.

**C. Environmental Costs & Benefits:**

DHS will continue to integrate environmental considerations into the Department's planning and budgeting processes. As stated above, DHS employs a NEPA review process for all proposed construction projects and major actions to consider potential environmental impacts. DHS will continue to strive to ensure robust NEPA reviews and to minimize environmental impacts and costs. At this time, DHS identifies the cost of sustainability initiatives and measures quantitative benefits in terms of emission reductions, gallons of water saved, reduction in vehicle miles traveled, etc. Not all of the benefits can be translated into dollar figures.

DHS has not tracked environmental cost and benefits for non-environmental projects. And therefore DHS can only produce qualitative information about the benefits of its environmental program. Capturing environmental costs within these projects would enable DHS to better identify the benefits of its environmental program. Costs could be identified in terms of dollars spent on the environmental portion of projects, disposal costs, fines and penalties for non-compliance, and/or environmental response to incidents.

**D. Mission-Specific Costs & Benefits:**

Sustainability offers DHS the opportunity to reduce mission operational costs by reducing energy costs in facilities and vehicles. Increasing mileage in vehicles provides opportunities to extend the range of mission activity before filling the tank. Employing sustainable products provides benefits through enhanced operations, reduced maintenance and improved performance. The Federal Law Enforcement Training Center began synthetic oil instead of petroleum based oil. This process extended the life of the fluid reducing oil changes by one third, reduced the amount of hours dedicated to oil changes and freed up maintenance personnel for other tasks and reduced the amount and therefore the cost to dispose of the used oil. Mechanics also report that engines are lasting longer.

Practicing sustainability improves operational performance. Sustainable buildings provide better temperature and lighting control, are typically visually pleasing and perform better than non-sustainable buildings. Occupants of sustainable buildings typically display pride and ownership of the building. All this leads to increased productivity from occupants working in these buildings.

The United States Coast Guard (USCG) recently completed a project that extracts methane gas from a landfill and burns it for energy production. Once fully operational this project turns a previous waste pollutant into a source of energy that will eliminate the need for the USCG to purchase electricity and sell excess electrical power to the grid.

The United States Secret Service (USSS) established a recycling program for spent brass from firing ranges. Rather than pay for disposal of brass, USSS now has a source of revenue for sustainability projects. This indicates that sustainability can be self-sustaining.

#### **E. Operations & Maintenance and Deferred Investments:**

The CAO is developing a process for assessing a facility's condition to determine repair needs in operations & maintenance and deferred maintenance. In addition, a Decision Support Tool (DST) is also under development. DST will aid in prioritizing investments to address repair needs, including deferred maintenance. The prioritization process utilizes Federal Real Property Category Council defined Performance Measures, including sustainability.

#### **F. Climate Change Risk and Vulnerability:**

Climate change has the potential to accelerate and intensify extreme weather events which threaten the nation's stability and security. DHS will implement its own cost-effective strategies to address these concerns by focusing on energy efficiency, conservation, and renewable energy sources; GHG reduction; and resilience and adaptation. This includes but is not limited to: transitioning to high-performance buildings; using all resources more efficiently; and incorporating resiliency measures to potential changes in the natural environment into mission plans. These strategies can save taxpayer dollars, safeguard public health and the environment, and create new domestic jobs.

Costs and benefits resulting from climate change impacts are currently not addressed or quantified. Climate change could have significant mission and cost impacts for DHS. Possible factors relevant to the Department include the following:

- Increased frequency and intensity of adverse weather would tax Federal Emergency Management Agency's ability to respond to concurrent events;
- Many USCG and Customs and Border Protection facilities, by their mission, are located in the coastal zone which will be adversely impacted by sea level rise. Costs will increase for protecting existing facilities from the impacts of sea level rise and some facilities might have to be abandoned in the longer term;
- Flood hazard maps could require further updating;
- Ships and aircraft may need to be designed to handle larger storm conditions;

- Life-saving and response equipment may be required to address more intense conditions; and

DHS will take a proactive approach in evaluating climate change risks in the planning, design, construction, renovation of its facilities. DHS will consider the following strategies for addressing and prioritizing considerations involving climate change risks and vulnerabilities:

- As part of other facility security, vulnerability, and/or condition assessments, include evaluations related to climate change vulnerabilities;
- Develop a climate change adaptation plan at the Department and Component level; and
- Address sea level rise in new and existing facility design and renovations. Possible strategies include elevating existing facilities or building with larger setbacks to accommodate the rise.

## **VI. Transparency**

DHS has a goal to improve the way government and the public interact, fostering a renewed partnership and public trust. The Department views information sharing as a critical success factor for DHS to meet its many missions including: protecting against and preventing terrorism, responding to emergencies of all kinds, and investing in response and recovery capabilities. The common thread throughout the Department and throughout the mission areas is the critical need to share accurate and appropriate information in a timely manner. In many cases, sensitive information held by the Department is inappropriate for public release; however, it may need to be shared with other government entities entrusted with protecting public safety. Other types of information provide the public with valuable insights into how the Department carries out its missions and promote a public dialogue on departmental operations.

All efforts for transparency will follow the DHS Open Government Plan. This document describes current resources that support Open Government, shares insights received from public feedback, and identifies best practices to redefine relationships between the Department, other government agencies, private sector organizations, and citizens.

## Section 2: Performance Review & Annual Update

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### VII. Summary of Accomplishments

DHS has made significant progress toward the goals of the EO 13514 through activities to accomplish similar requirements under EO 13423. DHS had issued implementing guidance for environment, energy, and transportation management and initiated programs that directly support EO 13514. From FY 2003-2009 DHS had reduced energy consumption by 13.6 percent compared to the 2003 base year and is on track for 30 percent reduction by 2015. DHS has been following the Guiding Principles for all new construction and major renovations and has built 4 LEED® certified or higher buildings with 9 awaiting certification, 16 under construction 12 in design and 45 in planning. Since 2007, DHS has conducted 5 US Green Building Council Leadership in Energy and Environmental Design (LEED®) training courses, educating a total of 125 individuals. In FY 2008, DHS won the President's Award for Leadership in Federal Energy Management. DHS has exceeded the targeted alternative fuel increase goal set for 2009 by over 250,000 gallons. To ensure that we continue in this direction, DHS acquired approximately 125 hybrids electric vehicles and over 800 AFV's through GSA Leasing during the 2010 ordering cycle. A total of 300 AFV's and 140 hybrids were purchased through the American Recovery and Reinvestment Act program in 2009.

DHS prepared a top-down GHG inventory for FY 2008 in response to a specific request in H.R. 2638, Public Law 110-329, The Consolidated Security, Disaster Assistance, and Continuing Appropriations Act of 2009 as well as to prepare for future regulatory requirements to quantify and report GHG emissions. This inventory was the first attempt by DHS to quantify GHG emissions from all DHS and Component operations.

CSO, as part of physical security technical support, routinely salvages and recycles used security cameras, system components, locks, CPUs and other IT components. In the first two quarters of FY 2010, in-house CSO technicians handled 900 service calls (versus contracting them out) and in the course of their work, salvaged approximately 100-each high-dollar parts with a total estimated value of \$52,000. In addition, CSO routinely salvages significant quantities of small common equipment hardware (mounts, connections, wire, nuts and bolts, etc) and returns it to the inventory for later use.

### VIII. Goals

#### 1. GOAL 1: Scope 1 & 2 Greenhouse Gas Reduction

##### Goal Performance Review:

**a. Goal description:** The Department's target is to reduce GHG emissions from Scope 1 and Scope 2 sources by 25 percent by 2020 relative to a FY 2008 baseline. The Department calculated its reduction goal using CEQ approved GHG reduction tool called the Development of Agency Reduction Targets. Rather than push this Department goal onto each Component, the DART was also used by each Component to develop a Component specific GHG reduction goal. DHS used consumption data from the FY 2008 Department of Energy's Federal Energy Management Program (FEMP) annual energy reports, Federal Automotive Statistical Tool, assumptions based on Regulatory reductions in energy and fuel and input from each Component as inputs to the tool. Data from FY05 and FY08 could not

be validated completely due to the fact that the Department was stood up during that time frame and data was not consistent.

Specific scope 1 and 2 targets for the Department and Components are listed below in Table 3. The out year estimates have not yet been calculated. Components level plans due later this year will provide the input necessary to calculate the out year estimates.

**Table 3: Scope 1 and 2 GHG Reduction Targets and Goal**

Agency	Total Scope 1 & 2	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
DHS	25%	1%	1%	1%	1%	1%	2%	4%	4%	4%	3%	3%

**b. Department lead for goal**

The SSO will direct the activities of the Sustainability Council for target development, implementation and oversight.

The Sustainability Council will:

- Establish GHG emissions targets and other sustainability goals;
- Identify and prioritize implementation methods;
- Identify and prioritize opportunities to reduce GHG emissions;
- Assess the Department’s progress;
- Engage other functional leaders, as necessary;
- Coordinate with OMB and CEQ leadership on EO 13514/13423 issues, as necessary;

The Sustainability Workgroup (SWG) supports the Sustainability Council efforts. The SWG will:

- Review GHG emissions targets and other sustainability goals, and provide recommendations;
- Coordinate with CXO Committees, as necessary, to involve necessary experts, avoid duplication of effort, and communicate issues;
- Lead discussions to seek consensus decisions on issues and recommendations;

The CXOs will:

- Coordinate with Component CXOs and Sustainability Councils to support the Sustainability Council efforts;
- Coordinate activities with Committee members and evaluate progress;

- Communicate and coordinate with program managers to ensure rapid collection and dissemination of information; and
- Work with Components to identify and implement projects.

The CAO will:

- Update the Sustainability Plan and Table 2 with information received from the Components and CXOs.

Components will:

- Identify out-year targets for Table 2 in the Operational Sustainability Performance Plan;
- Develop, track and report GHG reduction initiatives and projects in the Operational Sustainability Performance Plan; and
- Provide necessary data to the CAO for updating the Sustainability Plan.

### ***c. Implementation methods***

The Department's scope 1 and 2 target will mainly be achieved through four approaches: energy efficiency, the use of renewable energy, reduced fossil fuel use by vehicle fleets and the capture and use of methane from a landfill. The following are initiatives already underway to reduce scope 1 and 2 emissions:

- Reduce Facility Energy Intensity in facilities where DHS pays utility bills separately (e.g., not included in lease payments);
- Utility Meter Installation - The Department recognizes the importance of measuring energy use and the value of the data; and plans to implement an advanced metering infrastructure that will provide a system for collecting, tracking and reporting monthly data at the facility level, consistent with EAct and EISA requirements. Advanced meters provide critical data on how and when facilities use energy that is crucial to attaining energy use reductions and associated cost savings. Installing energy meters is only an enabling step--in itself; it does nothing to reduce energy intensity or costs. Realizing cost and energy reduction benefits will require DHS to design and implement an effective metering data collection, analysis, and reporting system. Appropriate DHS personnel will require training in the evaluation and application of metering data;
- The Department has developed a Metering Implementation Plan to address opportunities to install and utilize meters and advanced electrical meters to reduce energy costs and improve operations throughout the Department. In the future, advanced metering will be applied towards natural gas and steam;
- DHS intends to meet and exceed Federal renewable energy requirements by purchasing renewable energy and installing on-site generation capacity. DHS will evaluate available technologies and our facilities to identify cost effective renewable

energy projects. Over time, the percentage of renewable energy produced on-site will increase, and DHS will use appropriate financing mechanisms to execute these projects;

- As part of the DHS Secretary's 120 Day Efficiency Review (ER) Initiative, policy was implemented instructing Components to acquire hybrid electric vehicles or alternative fuel vehicles (AFV's) when hybrids are not practicable. In addition, the ER will establish a pilot program to determine the feasibility of replacing law enforcement vehicles used for administrative purposes with AFVs;
- To ensure compliance with the Energy Policy Act of 1992 which states that 75% of light duty acquisitions not used for law enforcement be AFV's; all orders for DHS owned and leased vehicles will be reviewed by the Department Fleet Manager; and
- In FY09, as part of the Secretary's 60 Day ER Initiative, DHS implemented an electronic tracking tool for fleet usage data to identify opportunities for alternative fuel usage. This tool will be a critical element in bringing DHS closer to achieving the petroleum reduction goals.

DHS will address GHG emissions associated with energy consumption through a variety of strategies that align with Federal and DHS goals to reduce the energy intensity (Btu/square foot) of Federal buildings, construct high-performance Federal buildings and maximize the use of renewable (e.g., solar, wind) and alternative energy (e.g., combine heat & power), especially through on-site generation). The following are the two goals of the DHS Renewable Energy Plan:

- Renewable energy resources will supply 7.5 percent of DHS' annual energy requirements by FY 2010; and
- Renewable energy resources will supply 15 percent of DHS' annual energy requirements by FY 2015.

DHS recognizes that appropriated funding for energy investments will not cover all Departmental priorities, and will employ a variety of financing mechanisms, as appropriate, to execute energy projects. These may include:

- Continued use of energy savings performance contracts (ESPCs);
- Utility energy services contracts (UESCs);
- Third party agreements such as Power Purchase Agreement;
- Enhanced Use Leases (EULs);
- Participate in demand response incentive programs offered by utilities and other organizations (such as regional transmission operators). These incentive programs include rebates or grants given for installing energy- or water-saving equipment or systems; and

- Reinvestment of Savings: Cost savings generated by alternative financing (including incentives) should be reinvested back into the Energy Program.

Other strategies and methods that may be used include;

- Capturing Fugitive Emissions;
- Reducing energy use excluded from energy reduction goals, such as: process energy loads, excluded mobility fuel use, and other energy use excluded from energy reduction goals;
- Using non-electrical forms of renewable energy (i.e., thermal, mechanical, biomass, landfill gas); and
- Maximizing building operations and maintenance through re/retro-commissioning programs.

Task for achieving target goals:

*Short Term (FY2010-FY2012)*

- CAO will procure software tools that evaluate GHG emissions from energy, fuel, petroleum, chemical use, and other sources within available budget guidance;
- CSO will research, identify, and evaluate systems, equipment, and lighting that require less energy without degrading effectiveness. This includes more energy efficient standalone systems as well as opportunities to combine multiple systems into fewer or single systems with a reduced energy requirement. Also research, identify, and evaluate security system infrastructure such as power and signal lines, cabling, connections, barrier materials, etc to determine those that require less energy, have less energy loss, or reduce energy needs;
- CSO will identify those functions suitable for automation and paper reduction, and determine new more efficient methods of performing;
- CAO will evaluate the implementation of advanced metering infrastructure and data collection and analysis approach within available budget guidance; this information will be used to target potential projects and measure results. Provide training on use of these data tools and protocols to appropriate personnel so the information can be effectively analyzed and applied;
- DHS will perform preliminary renewable opportunity analysis to target states/regions that offer renewable opportunities based on 1) DHS facility footprint 2) Resources availability 3) Economics (e.g., utility rates, state incentives);
- DHS will use available information to target facilities for retro-commissioning and/or energy audits. Facility re/retro-commissioning plans will be based on available data and prioritize facilities to be commissioned;

- Components will ensure annual energy audits are completed and are consistent with Federal mandates and include GHG analysis;
- CFO and CPO will ensure level 1 and 2 acquisitions capital and operating projects that affect energy usage will prepare lifecycle cost assessments. This approach recognizes the full service life of buildings and building systems by assessing the long-term effects of renovations or operational changes. These assessments ensure that federal dollars are spent wisely and energy savings are maximized;
- DHS will ensure facilities review existing Operations & Maintenance training and conduct gap analysis to identify potential improvement areas;
- CAO (Fleet Management) will establish a pilot program to determine the feasibility of replacing law enforcement vehicles used for administrative purposes with AFV's;
- CAO (Fleet Management) will continue outreach to privately owned alternative fuel stations to gain access for DHS vehicles;
- CAO will set mandatory targets for energy savings from retrofits and work with performance contractors and Energy Service Companies (ESCOs) to establish DHS retrofit performance rates to determine final department-wide percentage reduction; and
- DHS will enhance current energy outreach and awareness activities (e.g., October is Energy Awareness Month) to include information about GHG impacts. Educating employees regarding the energy and GHG impacts of their daily activities and simple changes they can make, for example:
  - Securing and turning off energy-consuming systems and equipment under their personal control when not in use, including lights, fans, personal computer equipment;
  - Securing and turning off appropriate common systems and equipment such as lighting, coffee pots, kitchen appliances, and copiers, at the end of the workday;
  - Switching off unnecessary lights and equipment;
  - Photocopying only what is needed and using double-sided printing as much as possible;
  - Where available, close blinds at appropriate times of the day to reduce energy loss through windows.
  - Unplugging equipment that drains energy when not in use (e.g., cell phone chargers, coffee makers, and radios); and
  - Using ENERGY STAR<sup>®</sup> products and ensuring that power-down features are activated.

*Medium Term (FY2013-FY2017)*

- CSO will deploy energy efficient systems, equipment, and techniques into new security modernization, renovation, construction, and replacement projects;

- CAO (Fleet Management) will conduct a fleet analysis to identify right-sizing and alternative fuel opportunities;
- CSO will establish and Implement new processes, measure effectiveness, make improvements and expand as possible;
- DHS and Components will conduct benchmarking analysis to assess facility performance over time and to compare like facilities. The outcomes will be used to prioritize target projects and investments;
- DHS and Components will evaluate renewable energy opportunities: DHS facilities have extensive land and rooftop area that can be used for land-intensive, alternative energy sources like solar, biofuels, geothermal, and wind – as the U.S. Coast Guard has already begun to demonstrate in its sustainability efforts. These installations can often be cost competitive and implemented with minimal upfront capital through lease arrangements on land or facilities already owned by DHS. The department should look for additional opportunities appropriate to local conditions such as availability of local natural resources, local utility rates, and other local factors. DHS should also periodically reevaluate opportunities as these technologies mature and the prices or trend downward;
- DHS and Components will continue to implement the DHS retro-commissioning plan, targeting facilities in priority order. Retro-commission DHS facilities to ensure they are operating at the highest levels of efficiency currently possible;
- DHS and Components will continue to update and enhance energy awareness and education activities. Develop an awards program to recognize individuals, teams and projects that have advanced DHS goals;
- CAO (Energy Management) will develop a plan for performance assessment and measurement of completed energy projects. The plan will include benchmarking and long-term measurement and verification (M&V) of cost, energy and GHG savings;
- CAO (Energy Management) will develop a plan for implementing preventative maintenance programs at appropriate facilities. The maintenance programs will focus on optimizing the efficiency of current systems. This program will incorporate the results of on-going building retro-commissioning. It will also include an approach for providing needed training to facility O&M staff:
  - Work with maintenance managers and key stakeholders to update and redefine, if necessary, specific maintenance procedures for the O&M staff targeted at improving the efficiency of operations; and
  - Develop training for the operations staff in the principles and technologies applicable to their buildings or systems and integrate that training into existing courses.
- CAO (Energy Management) will ensure that lighting retrofits typically are short payback investments. Accordingly, lighting upgrades have been and will continue to be a high priority investment for DHS. Similarly, proper lighting design offers

opportunity to improve the efficiency of new construction. DHS will continue to take advantage of high efficiency lighting technology such as:

- Spectrally enhanced lighting (SEL) - These lamps have a better CRI and color temperature, which translates to light that is perceived as being brighter and of better quality by the human eye. Energy savings are possible because enhanced lighting allows equal vision with lower lighting levels;
- Explore opportunities to establish daylight as primary daytime lighting source to offset reliance on electrical lighting systems; and
- Light Emitting Diodes (LEDs) for both interior task lighting and exterior sight lighting. LEDs are a rapidly evolving technology. The most appropriate application for LEDs is parking lot and exterior lighting. LED sight lighting is a relatively new technology that has proven to be successful. Although the upfront investment will be greater than conventional technologies, operational savings often make the LED life cycle cost effective;

*Long Term (FY2018-FY2021)*

- CSO will retrofit any remaining energy inefficient security systems, equipment, lighting, and infrastructure;
- CSO will establish and Implement new processes, measure effectiveness, make improvements and expand as possible;
- DHS and Components will implement renewable and clean energy options using land and facilities available to DHS;
- Components will Identify sites for the construction of large-scale renewable energy facilities that will help the department accomplish its mission with a more reliable and secure energy supply;
- CAO (Energy Manager) will put in place a plan to deploy regional energy managers focused on energy efficiency who can work with multiple components in their respective regions;
- DHS and Components will direct their facilities to perform retro-commissioning to ensure they are operating at the highest levels of efficiency currently possible;
- CFO will ensure that subject level 3 acquisitions capital and operating projects that affect energy use lifecycle cost assessments. This approach recognizes the full service life of buildings and building systems by assessing the long-term effects of renovations or operational changes. These assessments would ensure that federal dollars are spent wisely and energy savings are maximized; and
- DHS and Components will conduct performance assessment and M&V of energy investments as defined in the DHS M&V plan. Document and incorporate into training best practices and lessons learned.

**d. Positions** - At the Department level there are no positions dedicated solely to the reduction of scope 1 and 2 GHG emissions. The Environmental Manager, Energy

Manager and Fleet Manager, in addition to their other tasks, will perform the tasks necessary to reduce scope 1 and 2 GHG emissions. Component level data on positions will be available later this year. The CAO has plans to hire additional personnel to support the environmental and energy programs.

**e. Planning table** - The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 4: Scope 1 & 2 GHG Target Planning Table**

	SCOPE 1&2 GHG TARGET	Unit	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	....	FY 20
Buildings	Energy Intensity Reduction Goals (BTU/SF reduced from FY03 base year)	%	15%	18%	21%	24%	27%	30%	hold	....	hold
	Planned Energy Intensity Reduction (BTU/SF reduced from FY03 base year)	%									
	Renewable Electricity Goals (Percent of electricity from renewable sources)	%	5%	5%	5%	7.5%	hold	hold	hold	hold	hold
	Planned Renewable Electricity Use (Percent of electricity from renewable sources)	%									
Fleet	Petroleum Use Reduction Targets (Percent reduction from FY05 base year)	%	1%	2%	4%	6%	8%	10%	12%	....	16%
	Planned Petroleum Use Reduction (Percent reduction from FY05 base year)	%									
	Alternative Fuel Use in Fleet AFV Target (Percent increase from FY05 base year)	%	61%	77%	95%	114%	136%	159%	hold	....	hold
	Planned Alternative Fuel Use in Fleet AFV (Percent increase from FY05 base year)	%									
	Other, as defined by agency	?									
	Scope 1 & 2 – Reduction Target (reduced from FY08 base year)	%	?	?	?	?	?	?	?	?	?

**f. Department status**

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established basic policy for reducing Scope 1 and 2 GHG emissions through the following programs:

- Renewable energy purchase programs and programs for the development of renewable distributed generation energy projects at DHS facilities;
- Procurement programs to acquire low GHG, hybrid and alternative fuel vehicles;

- Programs to ensure that new construction and major renovation of Departmental buildings complies with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings and when direct leasing or leasing through the General Services Administration, that DHS requests space that meets these principles;
- Programs to ensure that the Department operates the vehicle fleet to reduce its total consumption of petroleum, increase the total fuel consumption of alternative fuels, and acquire hybrid electric vehicles or alternative fuel vehicles when hybrids are not practicable; and
- Programs to ensure the Department buys EPEAT-registered electronic products, enables the EnergyStar® features on Department computers and monitors, establishes and implements policies to extend the useful life of its electronic equipment, and uses environmentally sound practices with respect to disposition of electronic equipment that has reached the end of its useful life.

The Department adopted an Energy Management Program that is very proactive and aggressive. It is guided by this DHS *Master Energy Plan*, which establishes program strategies and tactical actions for achieving substantial energy savings which will also reduce GHG emissions. The *Master Energy Plan* addresses energy sources, supply management, emerging technologies, and energy reliability and security.

In accordance with the CEQ guidance, DHS established a goal to reduce scope 1 and 2 GHG emissions by 25% by the end of fiscal year 2020 against a FY 2008 baseline.

DHS implemented a number of initiatives that target the energy efficiency aspects of its facilities. The resultant effects of such measures include reductions in GHG emissions and cost-savings associated with lower energy usage. Examples of DHS energy intensity reduction initiatives are as follows:

- Replacing old fluorescent light fixtures with new energy efficient fixtures;
- Upgrading old heating, ventilation, and air conditioning (HVAC) controls;
- Installing solar film on windows;
- Replacing single pane windows with energy efficient windows;
- Replacing old heat pumps with new energy efficient models;
- Installing surge suppression/peak preventers on buildings' Energy Management Control System and electrical systems;
- Replacing old exit lights with LED exit lights; and
- Addition/replacement of insulation in building walls, ceilings, and roofs.

Additionally, DHS employs Energy Savings Performance Contracts (ESPCs) as a means for implementing alternative energy and energy efficiency projects across Components.

ESPCs serve as a means for DHS to integrate energy-savings technologies and infrastructure in a cost-effective and efficient manner.

## 2. **GOAL 2: Scope 3 Greenhouse Gas Reduction**

### **Goal Performance Review:**

#### ***a. Goal description***

OMB determined the following categories will be included in the initial scope 3 GHG emission reduction targets:

- Category 1 - Transmission and distribution (T&D) losses from purchased energy to include;
  - Purchased electricity T&D losses;
  - Purchased steam T&D losses; and
  - Purchased chilled water T&D losses.
- Category 2 - Federal employee travel to include;
  - Business air travel;
  - Business ground travel; and
  - Federal employee commuting
- Category 3 - Contracted waste disposal to include:
  - Contracted solid waste disposal; and
  - Contracted wastewater treatment

As required, DHS will establish a reduction target for each scope 3 category and an overall single goal that encompasses all three categories. The Department is currently using the CEQ approved calculation tool to estimate the DHS scope 3 reduction targets. This target is due to OMB on June 2, 2010, the same date as the Sustainability Plan. The reduction goal is not yet available for inclusion in this version of the Sustainability Plan. Components are also developing their own scope 3 emission reduction targets using the same CEQ tool. Employee surveys will be conducted. CHCO will be the lead with support from CIO. Business travel calculations may be retrieved using a GSA product.

#### ***b. Department lead for goal***

The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight.

The Sustainability Council will:

- Identify and prioritize implementation methods;
- Identify and prioritize opportunities to reduce GHG emissions;

- Assess the Department's progress; and
- Engage other functional leaders, as necessary;

The Sustainability Work Group will:

- Review GHG emissions targets and other sustainability goals, and provide recommendations;
- Coordinate with CXO Committees, as necessary, to involve necessary experts, avoid duplication of effort, and communicate issues; and
- Lead discussions to seek consensus decisions on issues and recommendations;

The CXO and their Committees will:

- Coordinate activities with Committee members and evaluate progress;
- Communicate and coordinate with program managers to ensure rapid collection and dissemination of information; and
- Identify and implement projects.

The CAO will:

- Collect data for updating the SSPP; and
- Prepare reports and metrics.

### ***c. Implementation methods***

Below is a list of implementation methods for each category of scope 3 GHG reduction goal:

#### Transmission and distribution losses:

DHS will calculate transmission and distribution losses in accordance with Federal guidance for addressing these emissions. The process for developing these estimates and the accuracy of the results will evolve over time. Transmission and distribution losses are dependent on a variety of local issues, such as the type of fuel used (e.g., coal, nuclear, natural gas) and the efficiency of the generating station. Currently, DHS energy consumption data are available only at the aggregated component level. Accordingly, transmission and distribution losses will be evaluated at this level. Moving forward, as DHS successfully implements advanced metering and data collection infrastructure, it will be possible to estimate these losses and associated emissions at a lower, more accurate level of detail. DHS will reduce transmission and distribution losses by implementing the following short, medium, and long term initiatives.

*Short Term (FY2010-FY2012)*

- DHS and Components will implement energy conservation and efficiency measures that reduce the amount of electricity required from the grid;
- CSO will identify local sources that provide CSO-needed products and can be routinely utilized in a manner consistent with laws and procurement rules. Identify security work and services that are routinely obtained from external providers and determine which could be locally provided or accomplished in-house by CSO staff with the right skill-sets; and
- DHS and Components will meet as much of that demand as possible through on-site generation, such as:
  - Renewable energy sources, including solar, wind and biomass;
  - Alternative energy sources, such as combine heat and power, which may use conventional fuels (i.e., natural gas), but which are extremely efficient; and

*Medium Term (FY2013-FY2017)*

- DHS and Components will identify and evaluate life-cycle cost effective investments in on-site renewable generation. When implemented, these projects will increase DHS renewable compliance (on-site generation counts double toward Federal goals) and reduce grid purchased energy and associated losses and emissions;
- DHS and Components will employ Smart-grid technologies to reduce need to transport energy long distances;
- DHS and Components will develop a plan to improve transmission and distribution loss estimated based on improved available data;
- DHS and Components will evaluate use of combined heat & power technologies (e.g., distributed energy resources (DER) and combined heat and power (CHP) systems) available to help Federal agencies meet increased demand, reduce peak operating costs, and increase system-wide reliability. These technologies can increase the efficiency of the transmission system and have the potential for energy saving through transmission and distribution loss reduction; and
- CSO will establish CSO protocols for locally obtained goods and for providing own work or services or contracting for same locally.

*Long Term (FY2018-FY2021)*

- DHS and Components will identify and execute projects and initiatives to improve transmission and distribution losses; and
- CSO will implement CSO protocols for locally obtained goods, and for providing own work or services or contracting for same locally.

Business Travel:

DHS intends to calculate emissions from airline and rental business travel by using the GSA Travel Management Information System. Going forward, DHS will reduce and manage business travel by adopting technology to eliminate the need for travel and minimizing the impact of essential travel. Business travel will be reduced through enhanced use of technology such as teleconferencing, video conferencing, web-based meetings and web-conferences. DHS will evaluate available tools (e.g., software and hardware) that make these virtual meetings more effective and easier to execute. Examples may include update videoconference equipment or providing webcams to more employees.

DHS will review travel approval processes to ensure that only essential travel is requested and approved. When travel is essential, DHS can implement policies to minimize the GHG impact of that travel.

DHS will reduce and manage business travel by implementing the following short, medium, and long term initiatives.

*Short Term (FY2010-FY2012)*

- Each CXO and Component will review travel approval processes to ensure that only essential travel is requested and approved. When travel is essential, DHS can implement policies to minimize the GHG impact of that travel; and
- DHS and Components will develop policy and guidance that specifies preferences for lower intensity methods of travel, and work with vendors to make these options more affordable (e.g., rail travel instead of airline travel).

*Medium Term (FY2013-FY2017)*

- DHS and Components will develop policy and guidance that specifies:
  - Coordinating multiple trips in a manner that allows multiple topics to be covered in one visit or for visits to multiple sites within one geographic area to be visited within a single trip;
  - When traveling, encourages employees to use mass transit, van services (e.g., airport shuttle) and car pooling to the extent possible;
  - Seek opportunities to work with vendors and encourage use of lower carbon, alternative fuels. For example, as jet fuel alternatives are developed and put into use, specify preference for airlines that use these fuels; and
  - Investigates further use of videoconferencing; lower carbon-emitting methods of travel.

*Long Term (FY2018-FY2021)*

- CAO (Environmental Management) will develop strategies and plans for continued GSA service through Travel Management Information Service when the system begins charging for service.

Contracted solid waste:

DHS and Components will ensure that facilities will work with their solid waste vendors to identify opportunities to reduce the GHG impacts of these operations. In future contracts, DHS will include specifications for mitigating these impacts. DHS also realizes that the best way to reduce emissions from solid waste contractors is to internally minimize the amount of waste generated. This will be achieved through:

*Short Term (FY2010-FY2012)*

- DHS and Components increasing recycling/composting programs, both on-site and by vendors; and
- Ensuring DHS and Components reducing solid waste generation by implementing a sustainable purchasing program.

*Medium Term (FY2013-FY2017)*

- DHS and Components ensure facilities optimizing collection systems and processes to reduce vehicle traffic.

*Long Term (FY2018-FY2021)*

- DHS and Components ensure facilities work with solid waste contractors to install landfill gas capture systems at landfills operated by contractors and seek opportunities to use the captured landfill gas for energy generation.

Employee commuting:

DHS and Components will establish programs to encourage the use of alternative means of commuting to work rather than single car drivers. The program will include incentives for using public mass transit, car pooling, bicycling and teleworking. This will be achieved through:

*Short Term (FY2010-FY2012)*

- CHCO with assistance from CAO will establish processes for conducting employee commuter survey data;
- SSO will direct investigations to further incentivize employee use of teleworking, mass transit, bicycling, and walking, while locating facilities to reduce their transportation impacts; and
- DHS will ensure new construction and major renovation project include locating secure storage for bicycles inside buildings and install proper facilities to support commuting via bicycle, where needed, feasible, and cost-effective.

*Medium Term (FY2013-FY2017)*

- SSO will direct the investigations to develop and implement live where you work programs in conjunction with telework, to encourage DHS employees to live in communities and neighborhoods surrounding DHS work sites. Provide incentives for employees to move into surrounding communities from which it is close enough to walk or take public transit to work.

*Long Term (FY2018-FY2021)*

- DHS and Components will establish policy and guidance to site or locate facilities:
  - In areas where Vehicle Miles Traveled (VMT) correlates inversely to residential density; the greater the density, the fewer miles traveled. Neighborhood structure and mix of uses are also contributing factors. To limit individual automobile commuting, the majority of DHS facilities—except those limited by strategic and security concerns, such as border stations—should be located near transit stops in more urban areas of America’s low VMT cities; current and future DHS facilities are located near transit stops in more urban areas of America’s low VMT cities;
  - Where they are an integrated part of the community, where possible and achieving this objective will not inhibit DHS’ security mission;
  - Within existing communities and neighborhoods of low VMT cities, where possible and achieving this objective will not inhibit DHS’ security mission; and
  - In existing communities that would provide porous and activated facades along sidewalks that welcomes pedestrian traffic, where possible and achieving this objective will not inhibit DHS’ security mission.

Wastewater Treatment:

The CEQ guidance for calculating the wastewater treatment goal uses the total number of Federal employees located in facilities that utilize off-site wastewater treatment. DHS and Component will strive to reduce wastewater discharges through water reduction strategies listed under goal 6 of the Sustainability Plan.

**d. Positions** - At the Department level there are no positions dedicated solely to the reduction of scope 3 GHG emissions. The Environmental Manager and Energy Manager with support from other CXOs, in addition to their other tasks, will perform the tasks necessary to reduce scope 3 GHG emissions. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 5: Scope 3 GHG Target Planning Table**

<b>SCOPE 3 GHG TARGET</b>	<b>Units</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>....</b>	<b>FY 20</b>
Overall Agency Scope 3 Reduction Target (reduced from FY08 base year)	%	?	?	?	?	?		?
Sub-Target for Federal Employee Travel	%	?	?	?	?	?	....	?
Sub-Target for Contracted Waste Disposal	%	?	?	?	?	?	....	?
Sub-Target for Transmission and Distribution Losses from Purchased Energy	%	?	?	?	?	?	....	?
Other, as defined by agency	%	?	?	?	?	?	....	?

**f. Department status**

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy for reducing Scope 3 GHG emissions through the following programs:

- Procurement programs to purchase bio-based, environmentally preferable, and recycled-content products and paper (at least 30 percent post-consumer fiber content) programs; and
- Programs to ensure that the Department reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed, increases the diversion of solid waste as appropriate, and maintains cost-effective waste prevention and recycling programs at its facilities.

The Department operates an active transit subsidy program that encourages employees to commute to work by means other than single driver automobiles. In FY 2009, DHS spent \$2,018,481 on transit subsidies.

**3. GOAL 3: Develop and Maintain Department Comprehensive Greenhouse Gas Inventory**

**Goal Performance Review:**

**a. Define the Department targets for each goal**

DHS will develop and maintain an inventory of GHG emissions across all three scopes in accordance with OMB requirements. DHS will report GHG emissions data to CEQ Chair and OMB Director by January 31, 2011 for their FY 2008 base year and FY 2010 activities, and by January 31 annually thereafter for the preceding fiscal year. OMB has indicated that in the future, additional categories may be added to the inventory requiring DHS to update its inventory.

**b. Department lead for goal**

The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for developing and maintaining a comprehensive GHG inventory.

The Sustainability Council will provide a framework for development and evaluation of management strategies for reduction of GHG emissions and develop a long-term plan to manage the inventory process going forward.

The CAO will coordinate data and information across the Department and prepare the inventory data for submittal to OMB including annual updates.

**c. Implementation methods**

DHS will accurately and consistently quantify and account for GHG emissions from all scope 1, 2, and 3 sources, using OMB accepted GHG accounting and reporting principles. Components will provide the data to DHS for roll-up to a Department inventory. It is anticipated that the inventory conducted in FY 2009 will provide opportunities for updating rather than reinvention. In instances where the OMB accepted accounting and reporting is not feasible, DHS will provide the information using alternative means and fully describe the process to OMB.

**d. Positions** - At the Department level there are no positions dedicated solely to the completing and updating the GHG emission inventory. The Environmental Manager, Energy Manager, Fleet Manager and Real Property, in addition to their other tasks, will perform the tasks to complete and update the inventory. Component level data on positions will be available later this year.

**e. Planning table** – The template did not provide a planning table for this goal.

**f. Department status** – In FY 2009, DHS conducted an initial FY 2008 baseline GHG inventory for Scope 1 and 2 emissions. This inventory was conducted before the issuance of Executive Order 13514 and did not fully capture the requirements in the Executive Order or CEQ guidance.

**4. GOAL 4: High-Performance Sustainable Design/Green Buildings**

**Goal Performance Review:**

**a. Goal description** – The following are the goals for high-performance sustainable design and green buildings:

**Beginning in FY 2020, all new construction shall be designed to achieve zero-net energy by FY 2030;**

- All new construction, major renovation or repair and alteration of federal buildings shall comply with, “Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, December 1, 2008 (Guiding Principles)”;
- DHS must demonstrate annual progress toward 100 percent conformance with incorporating the Guiding Principles into at least 15% of entire building inventory by 2015;
- New construction designs shall be at least 30% more energy efficient than the applicable standard;

- DHS must employ the use of cost-effective, innovative building strategies to minimize energy, water and materials consumption;
- DHS will manage existing building systems to reduce energy, water and materials consumption in a manner that achieves a net reduction in Department deferred maintenance costs;
- DHS will optimize performance of the Department's real property portfolio – examine opportunities to decrease environmental impact through consolidation, reuse and disposal of existing assets prior to adding new assets; and
- DHS will ensure use of best practices and technology in rehabilitation of historic DHS properties.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight. The CAO has the primary responsibility for developing the policy, guidance and tools for policy, guidance, metrics, tracking and reporting.

**c. Implementation methods**

CAO (Real Property) will ensure that policy and procedures exist to incorporate sustainability-related issues into lease agreements and occupancy agreements to enable faster dissemination and implementation of the EO and other sustainability initiatives.

CAO will develop an inventory of land and rooftop areas that can be used for land-intensive, alternative energy sources like solar, biofuels, geothermal, and wind – as the U.S. Coast Guard has already begun to demonstrate in its sustainability efforts. These installations can often be cost competitive and implemented with minimal upfront capital through lease arrangements on land or facilities already owned by DHS.

CAO will look for additional opportunities appropriate to local conditions such as availability of local natural resources, local utility rates, and other local factors. CAO will also periodically reevaluate opportunities as the price for these technologies trend downward.

CAO (Real Property) leads an initiative to consolidate and co-locate real property across the Department. This initiative enables consolidating or co-locating Department and Component offices or functions into one facility rather than separate facilities. Moving forward with this initiative should result in decreasing the overall footprint of the Department's real property, gain efficiencies through shared facility resources and reduce greenhouse gas emissions. The Asset Management Plan contains details of this initiative.

Appendix 3 contains a list of sustainable building practices that help achieve the requirements of these goals. DHS and Components will ensure these practices are incorporated into guidance documents.

The following are tasks necessary to achieve success in achieving this goal:

*Short Term (FY2010-FY2012)*

- CFO will ensure that level 1 and 2 acquisitions capital and operating projects that affect energy or water usage are subject to lifecycle cost assessments;
- CAO (Energy Management) will establish processes for evaluating opportunities to implement renewable and clean energy opportunities using land and facilities available to DHS;
- CAO (Energy Management) will develop a department-wide goal of a specific percentage of energy consumption that must come from renewable energy;
- CAO (Environmental Management) will develop a sustainable practice guidance manual that will include Sustainability requirements and recommendations;
- CAO (Environmental Management) will develop policy and guidance that new construction and major renovation be designed to at least the USGBC LEED® Silver Standard;
- CAO (Environmental Management and Real Property) and Components will develop specific percentage targets to measure compliance with the 15 percent goal;
- CAO (Real Property) and Components will update the planning table for this goal; and
- CAO (Asset Logistics Management) will develop a Design and Construction Guidance Manual that will include sustainability requirements and recommendations.

*Medium Term (FY2013-FY2017)*

- CAO will develop a plan for performance assessment and measurement that includes a plan for benchmarking, long-term monitoring, and verification of savings;
- CAO will establish & implement criteria to prioritize buildings for retrofit, replacement, or consolidation;
- CAO (Energy Management) will establish a process to ensure that retro-commission DHS facilities are operating at the highest levels of efficiency currently possible;
- CAO will develop guidance and policy for employees engaged in facility maintenance, design, construction, and property management to complete recognized LEED® training courses and determine if Senior employees within these career fields should achieve some level of LEED® Accredited Professionals (LEED® AP);
- CAO (Real Property) will work with GSA to develop standardized leasing requirements that incorporate the elements of sustainability, and provide status updates on metrics to DHS; and
- The CAO will develop a system for reporting individual project progress toward addressing the *Guiding Principles* in the following building life cycle stages:

This system will specify how progress to the goal of 15 percent compliant buildings will be tracked and assign roles, responsibilities, and authorities:

- Siting;
- Design;
- Construction;
- Operations & maintenance;
- Renovation; and
- End-of-life.

*Long Term (FY2018-FY2021)*

- DHS and Components will identify sites for the construction of large-scale renewable energy facilities that will help the department accomplish its mission with a more reliable and secure energy supply;
- CFO will establish processes to ensure that level 3 acquisitions capital and operating projects that affect energy or water usage are subject to lifecycle cost assessments;
- CSO will integrate and balance sustainable design issues with Force Protection measure necessary to protect our facilities and infrastructure; and
- SSO will strive to ensure that sustainability will be incorporated into the interagency security standards guidance to ensure appropriate measures to secure federal facilities rather than treating this as a separate program.

**d. Positions** - At the Department level there are no positions dedicated solely to sustainable buildings. The Environmental Manager, Energy Manager, and Real Property, in addition to their other tasks, manage the initiatives and requirements for sustainable buildings. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 6: Sustainable High Performance Buildings Planning Table**

SUSTAINABLE HIGH PERFORMANCE BUILDINGS (Buildings Meeting Guiding Principles)	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Owned Facilities Targets	%	?	?	?	?	?	?
Leased Facilities Targets	%	?	?	?	?	?	?
Total Facility Targets	%	?	?	?	?	?	15%
Other, as defined by agency	?	?	?	?	?	?	?

**f. Department status**

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy that new construction, major renovation and leases comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings and when direct leasing or leasing through the General Services Administration, that DHS requests space that meets these principles. Quarterly scorecards track individual Component progress towards achieving the goals and ensuring that 15 percent of existing buildings be sustainable by 2015.

DHS had developed and initiated a Sustainable Buildings Plan under EO 13423. All of the tasks were completed except building a system to track and report status, update of the Sustainability Directive with EO 13514 and development of Component specific goals. These tasks have been moved from the plan into the Sustainability Plan and the Sustainable Buildings Plan is rescinded.

The CAO Real Property AMP was modified to include sustainable building practices. A building condition assessment tool is in development that includes grading a facility on compliance with sustainable practices (guiding principles).

## 5. GOAL 5: Regional and Local Planning

### Goal Performance Review:

**a. Goal description** – The following are the goals for regional and local planning:

- Incorporate participation in regional transportation planning (recognition and use of existing community transportation infrastructure) into existing policy and guidance;
- Align Department policies to increase effectiveness of local energy planning;
- Incorporate sustainable building location into policy and planning for new Federal facilities and leases;
- Update policy and guidance to ensure that all Environmental Impact Statements and Environmental Assessments required under the NEPA for proposed new or expanded Federal facilities identify and analyze impacts associated with energy usage and alternative energy sources; and
- Update its policy and guidance to ensure coordination and (where appropriate) consultation with Federal, State, Tribal and local management authorities regarding impacts to local ecosystems, watersheds and environmental management associated with proposed new or expanded Federal facilities.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight. The CAO has primary responsibility for developing the policy, guidance and tools for policy, guidance, metrics, tracking and reporting.

**c. Implementation methods** – The following are the implementation methods and tasks necessary to achieve the regional and local planning goals:

*Short Term (FY2010-FY2012)*

- CHCO working with CAO will examine and implement cost effective programs to incentivize employee use of teleworking, mass transit, bicycling, and walking, while locating facilities to reduce their transportation impacts. Vehicle Miles Travelled (VMT) correlates inversely to residential density; the greater the density, the fewer miles traveled. Neighborhood structure and mix of uses are also contributing factors. To limit individual automobile commuting, the majority of DHS facilities—except those limited by strategic and security concerns, such as border stations—should be located near transit stops in more urban areas of America’s low VMT cities;
- CAO will ensure that EO 13514 siting recommendations issued by OMB are adopted into DHS policy and guidance.
- CAO will ensure that DHS policy and guidance include the following:
  - Locating secure storage for bicycles inside buildings and install proper facilities to support commuting via bicycle, where needed, feasible, and cost-effective;
  - Locating facilities near transit stops;
  - Ensuring facilities are an integrated part of the community, where possible and achieving this objective will not inhibit DHS’ security mission;
  - Locating offices and facilities within existing communities and neighborhoods of low VMT cities, where possible and achieving this objective will not inhibit DHS’ security mission;
  - Designing buildings in existing communities that would provide porous and activated facades along sidewalks that welcomes pedestrian traffic, where possible and achieving this objective will not inhibit DHS’ security mission; and
  - Building location and design uses a matrix similar to the one below to evaluate site choices.

<b>More Sustainable</b>	<b>Less Sustainable</b>
In a low-VMT city	In a high-VMT city
In an existing neighborhood	In a planned neighborhood or subdivision
In a dense urban neighborhood	In a low density, suburban or rural neighborhood
Well served by transit	Badly served by transit
In a historic building	In a more recent building
In a pre-existing building	In a new building
In a building with friendly open edges	In a building with unfriendly closed edges
With Bicycle Storage	Without bicycle storage

*Medium Term (FY2013-FY2017)*

- CHCO will investigate “live where you work” programs in conjunction with telework, to encourage DHS employees to live in communities and neighborhoods surrounding DHS work sites. Provide incentives for employees to move into surrounding communities from which it is close enough to walk or take public transit to work.

*Long Term (FY2018-FY2021)*

- DHS will encourage its Components to consider the acquisition and use of historic buildings in central business districts. Additionally, Components will consider the use

of both developed and undeveloped sites within historic districts if historic property within the central business district is not available.

**d. Positions** - At the Department level there are no positions dedicated solely to regional and local planning. The Environmental Planning and Historic Preservation Manager and Real Property, in addition to their other tasks, manage the initiatives and requirements for regional and local planning. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 8: Regional and Local Planning Table**

REGIONAL AND LOCAL PLANNING	Units	FY 10	FY 11	FY 12	FY 13	....	FY 20
Other, as defined by agency	?						

**f. Department status** –

DHS participated in E.O 13514 Siting Work Group meetings assisted in developing draft siting recommendations for OMB review. This draft document was forwarded to OMB and CEQ for review and issuance. DHS also participates in a Chesapeake Bay Committee and work group to oversee the development and coordination of programs and activities, including data management and reporting for the protection and restoration of the Chesapeake Bay. This Committee manages the development and implementation of strategies and program plans for the watershed and ecosystem of the Bay.

**6. GOAL 6: Improve Water Use Efficiency and Management**

**Goal Performance Review:**

**a. Goal description** – The following are the goals for improving water use efficiency and management:

- Reduce potable water use intensity by at least 26 percent by FY 2020;
- Reduce non-potable water use (industrial, landscaping, agricultural) by at least 20 percent by FY 2020;
- Identify and implement water reuse strategies; and
- Achieve objectives established by EPA in *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of EISA*, December 2009.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation, and oversight. The CAO has primary lead for achieving this goal.

**c. Implementation methods** – The following are the implementation methods and tasks necessary to achieve the regional and local planning goals:

*Short Term (FY2010-FY2012)*

- CAO (Energy Manager) will refine the existing water efficiency program to achieve the goals of EOs 13514 and 13423;
- CAO (Energy Manager) will ensure policy and guidance address the following:
  - Using cost-neutral retrofits involving low-flow and waterless fixtures;
  - Where appropriate, developing a plan to incrementally move away from using potable water in toilets, cooling, and irrigation;
  - Implementing strategies for capture and storage of rainwater for irrigation, toilet flushing, vehicle washing, laundry and other non-potable uses; and
  - Investigating and implementing strategies for onsite water reclamation.

*Medium Term (FY2013-FY2017)*

- DHS will ensure that sites with footprints exceeding 5,000 square feet follow the EPA EISA Section 438 guidance on stormwater runoff management; and
- CAO (Environmental Management and Real Property) will develop a Sustainable Sites guide.

*Long Term (FY2018-FY2021)*

- DHS will use composting toilets and graywater systems - on-site system that converts toilet waste into useful end-products for agriculture.
- DHS will identify and evaluate innovative and sustainable methods to provide potable water following disasters in an effort to improve mission-critical resiliency.
- DHS will move toward decentralized, low-energy wastewater treatment systems, such as “living-machine” treatment systems that rely on gravity and horticultural engineering; and
- CAO will develop policy and guidance for diverting rainwater from entering sewage treatment systems through:
  - Dispersed rainwater catchment systems (producing new supplies of water for irrigation, gray-water systems, etc);
  - Green roofs in urban areas where there are limited opportunities for rainwater filtration; and
  - Urban forestation in DHS projects (to absorb storm water and reduce urban heat island effects characterized by spikes on peak-load due to increased air conditioning).

**d. Positions** - At the Department level there are no positions dedicated solely to improving water use efficiency and management. The Environmental Manager, Energy

Manager, and Real Property, in addition to their other tasks, manage the initiatives and requirements for this goal. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 9 Water Use Efficiency and Management Planning Table**

<b>WATER USE EFFICIENCY &amp; MGMT</b>	<b>Units</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>	<b>....</b>	<b>FY 20</b>
Potable Water Reduction Targets (gal/SF reduced from FY07 base year)	%	6%	8%	10%	12%	14%	16%	....	26%
Planned Potable Water Reduction (gal/SF reduced from FY07 base year)	%								
Industrial, Landscaping, and Agricultural Water Reduction Targets (gal reduced from FY10 base year)	%	-	2%	4%	6%	8%	10%	....	20%
Planned Industrial, Landscaping, and Agricultural Water Reduction (gal reduced from FY10 base year)	%								
Other, as defined by agency	?								

**f. Department status** – Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy to reduce water consumption intensity and purchase water efficient products and services. Component compliance is tracked quarterly through DHS internal scorecards.

**7. GOAL 7: Pollution Prevention and Waste Elimination**

**Goal Performance Review:**

**a. Goal description** – The following are the goals for improving water use efficiency and management:

- Increase source reduction of pollutants and waste;
- Divert at least 50 percent non-hazardous solid waste by FY 2015, excluding construction and demolition (C&D) debris;
- Divert at least 50 percent C&D materials and debris by FY 2015;
- Reduce printing paper use;
- Increase use of uncoated printing and writing paper containing at least 30 percent postconsumer fiber;

- Reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials and products that require hazardous waste disposal, such as lead-stabilized electrical wire and cable;
- Increase diversion of compostable and organic materials from the waste stream;
- Implement integrated pest management and landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials;
- Increase the use of less toxic or hazardous chemicals and processes;
- Implementing a Hazardous Material Pharmacy program to reduce the quantities of hazardous materials purchased, used, and disposed; and
- Report in accordance with Sections (301-313) of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight. CAO and CPO share primary responsibility for achieving these goals.

**c. Implementation methods** – The following are the implementation methods to achieve Pollution Prevention and Waste Elimination goals:

**Solid Waste Management:**

“Solid waste” for the purpose of this goal refers to municipal solid waste (MSW) (including landscape waste and food waste) and C&D debris. Universal waste items (lead-acid batteries, fluorescent lamps, etc.), “special” non-hazardous wastes (scrubber and wastewater treatment sludge, etc.), or hazardous wastes are not included. Below are implementing methodologies to be studied and, if cost-effective, implemented within DHS to achieve required goals:

- Divert at least 50 percent of non-hazardous solid waste by FY 2015, excluding C&D debris:
  - Conduct waste audits of facilities to gather comprehensive data on local markets and recycling collection companies;
  - Establish effective office waste recycling programs that include not only high-grade paper and corrugated cardboard but other items including beverage containers, compostable cafeteria wastes, newspapers, dry cell batteries, toner cartridges, used furniture, and e-waste (e-waste management is discussed under Goal 9); and
  - Execute long-term contracts with waste collection contractors to ensure best possible revenue from recyclable sales (or alternatively place the majority of market-related risks with the contractor).
- Divert at least 50 percent of C&D materials and debris by FY 2015:

- Require that construction and demolition contractors develop a project waste management plan, and place recycling container(s) on site for duration of the project;
  - Use just-in-time methods to reduce excessive construction-related debris;
  - Ensure that demolition is performed in a manner that allows debris to be readily recycled (e.g., wrecking ball rather than explosives, shear attachments to separate scrap metal from other debris);
  - Where possible, use crushed brick and concrete rubble as fill material on the project site; and
  - Where feasible, permissible, and cost-effective, decontaminate debris on site rather than directly dispose of it at off-site facilities.
- Increase diversion of compostable and organic materials from the waste stream:
    - Use a three-bin collection system at the point of generation, to ensure organics are not mixed with other MSW; and
    - For facilities that generate small amounts of organic waste, evaluate benefits, limitations, and costs of on-site composting; if composting on site, take all necessary steps to control odor.

### Pollution Prevention

Pollution prevention is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream. The Pollution Prevention Act declared a national policy that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner. Pollution prevention strategies generally consist of one of the following actions: equipment or technology modifications; process or procedure modifications; reformulation or redesign of products; substitution of raw materials; and/or improvements in housekeeping, maintenance, training, or inventory controls. Some specific actions that can be studied and, if cost-effective, implemented within DHS are:

- Increase source reduction of pollutants and waste by:
  - Exploring technologies and processes that potentially could (1) reduce quantity of decontamination rinse water, (2) reduce temperature of heated decontamination water to conserve energy, and/or (3) reduce quantity of infectious waste requiring disposal (e.g., autoclave infectious solid waste on site). Any measures selected must comply with applicable safety, health, and environmental protection laws and regulations; and
  - Where feasible, minimizing the use of toxic or hazardous solvents and cleanup chemicals in laboratory operations.
- Reduce printing paper use by:
  - Setting all printers and copiers to produce double-sided copies by default;

- Purchasing digital magazine subscriptions and route them via e-mail; and
- Establishing web sites for employee discussion forums and Department policies; discourage production of hard copy memos.
- Improve integrated pest management and landscape management practices to reduce and eliminate the use of acceptable alternative chemicals and processes by:
  - Using traps and physical barriers to prevent contact between pests and plantings;
  - Leaving mowed grass clippings on lawn areas (provided odor is not objectionable) and use recycled wood chips or compost for mulch;
  - Evaluating potential use of organic and non-toxic soil amendments and/or pesticides; and
  - Where appropriate, using natural vegetation and xeriscaping rather than turf grass and non-native trees or shrubs.
- Increasing use of uncoated printing and writing paper containing at least 30 percent post-consumer fiber; and
- Decreasing the use of chemicals to assist in achieving FY 2020 GHG reduction targets:
  - Specific all new chillers and refrigeration units to be non-CFC and non-HCFC;
  - Convert existing units to non-CFC and non-HCFC where practicable; and
  - Prevent fugitive emissions and manage CFCs purged from older units in accordance with Clean Air Act requirements.

The following are the implementation methods to achieve Pollution Prevention and Waste Elimination goals:

*Short Term (FY2010-FY2012)*

- SSO will direct investigating the feasibility of establishing an incentive program to encourage waste minimization and P2 ideas from employees;
- All CXOs will identify those functions suitable for automation and paper reduction, and determine new more efficient methods of performing;
- All CXOs will increase automation and paperless processes in security administration functions that are currently done manually thus reducing energy/resource requirements and waste;
- CAO (Environmental Management) will establish policy and guidance for conducting pollution prevention and waste audits at priority facilities to include assessment of waste generation and disposal; waste streams; waste stream composition; source reduction opportunities; effectiveness of current recycling programs; and implemented waste diversion technologies;
- CAO (Environmental Management) will ensure that policy and guidance addresses:

- Establishing a pilot programs for collecting and composting organic wastes;
  - Creating a system or process for tracking key program metrics.
  - Implementing hazardous materials pharmacies;
  - Developing pollution prevention and Waste Management Strategic Plan focusing on source reduction, recycling, and (where absolutely necessary) disposal or diversion; and
  - Identifying and evaluating ways to use operations and purchasing, where possible, to contribute to chemical security by promoting a transition to the purchasing and use of safer chemicals.
- CSO will deconstruct/recycle salvageable security systems and equipment rather than disposing of and purchasing new;
  - CSO will develop routine procedures and processes to identify and reclaim systems, equipment, parts, and materials for the purposes of deconstruct/recycle salvageable security systems and equipment rather than disposing of and purchasing new: and
  - CPO will develop contract language that specifies that all vendors reduce the amount of packaging waste, including substitution of reusable shipping containers for disposable packaging.

*Medium Term (FY2013-FY2017)*

- CSO will establish and Implement new processes, measure effectiveness, make improvements and expand as possible;
- CSO will implement processes for routine reclamation and reuse of deconstruct/recycle salvageable security systems and equipment rather than disposing of and purchasing new;
- CAO (Environmental Management) will identify innovative technologies for water, energy, and waste reduction for development of potential pilot projects;
- CAO (Environmental Management) will determine a baseline for the amount of food waste generated at every DHS facility; and
- CAO (Environmental Management) identify materials and products that DHS uses in large quantities and then perform life-cycle assessments of those materials or products that DHS uses in large quantities.

*Long Term (FY2018-FY2021)*

- CAO (Environmental Management) will determine a baseline of CFCs and HCFCs and work towards ensuring that all DHS facilities are CFC- and HCFC-free;
- CSO will establish and Implement new processes, measure effectiveness, make improvements and expand as possible;
- CPO will implement steps to reduce overall air, water, waste, carbon, and other impacts from the supply chain, consistent with LCAs; and

- CPO will engage with vendors and contractors to reduce upstream impacts in the supply chain, e.g., carbon emissions, air pollutants, wastewater, solid wastes, etc.

**d. Positions** - At the Department level there are no positions dedicated solely to pollution prevention and waste elimination. The Environmental Manager and CPO, in addition to their other tasks, manage the initiatives and requirements for pollution prevention and waste elimination. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 10: Pollution Prevention and Waste Elimination Planning Table**

<b>POLLUTION PREVENTION &amp; WASTE ELIMINATION</b>	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Non-Hazardous Solid Waste Diversion Targets (non C&D)	%	?	?	?	?	?	50%
C&D Material & Debris Diversion Targets	%	?	?	?	?	?	50%
Other, as defined by agency	?						

**f. Department status** – Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy to reduce the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed, increases the diversion of solid waste as appropriate, and maintains cost-effective waste prevention and recycling programs at its facilities. The Chemical Management Plan developed for EO 13423 is rescinded and the remaining elements have been integrated into the Sustainability Plan. Quarterly internal scorecards track Component progress towards reporting quantity and cost of hazardous waste disposed. Other significant waste reduction and pollution prevention initiatives include:

- The Secretary directed an Efficiency Review Initiative for Printing and Distribution of Report that requires distribution of reports in electronic format rather than paper and use of double-sided copying was completed in June 2009;
- FLETC implemented facility-wide recycling programs for post-consumer items were implemented at three of our five facilities in FY 2009; and
- USSS: The Secret Service Training Center recently joined in the GSA National Capital Region recycling program. The recycling program was initiated for cans, bottles, glass, and most notably the thick stock paper target used on the weapon ranges. Through the GSA contract the recycle material is picked up and any proceeds that may be received by GSA are then passed down based upon the weight and type recycle material. The diversion of this material has substantially reduced the solid waste allowing the Service to renegotiate its trash hauling contract – an estimated savings of \$28K should be realized. The other notable change is the identification of lead from weapons projectiles that can be recycled rather than handled as solid/hazardous waste. The diversion of this waste stream is expected to

reduce the hazardous material contract by an estimated \$840K over the expected 7-year contract. Additionally, the lead that is recycled will generate revenue for the Service.

## 8. GOAL 8: Sustainable Acquisition

### Goal Performance Review:

**a. Goal description** – DHS adopted the goal from EO 13514 that 95 percent of new contract actions including task and delivery orders, for products and services with the exception of acquisition of weapon systems, are energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, biobased, environmentally preferable, non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives, where such products and services meet agency performance requirements. This goal focuses on implementing cost effective acquisition and reducing resource consumption, without compromising the Department’s paramount mission to secure the nation and deter and respond to threats against the country. It is DHS’ policy to achieve 100 percent compliance with mandatory federal sustainable procurement requirements in all applicable acquisition transactions. Other DHS goals include:

- Supporting sustainability by engaging in the planning of high-performance, sustainable buildings to ensure that contractors are, where feasible and cost-effective, using “green” building materials and subcontractors follow sustainability practices (refer to Goal 4: High-Performance Sustainable Design/Green Buildings and Goal 7: Pollution Prevention and Waste Elimination);
- Developing and implementing a system of tracking and reporting “green” procurements with support from CIO and CAO;
- Developing pollution prevention and recycling policies for inclusion in DHS contracts and leases (refer to Goal 7: Pollution Prevention and Waste Elimination);
- Implementing standard contract language to reduce GHG emissions, consistent with the DHS’ Department-wide GHG reduction target developed pursuant to Section 2 of EO 13514;
- Developing and implementing mandatory acquisition workforce sustainability training and qualifications with CHCO;
- Leveraging purchasing power to incentivize the innovation of goods and services that align with the EO goals; and
- Establishing DHS-wide contract for the replacement of ink jet and toner cartridges that includes mandatory recycling of (and credit for) spent ink jet and toner cartridges.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for sustainable acquisition target

development, implementation, and oversight. CPO has primary responsibility for achieving the sustainable acquisition goal.

***c. Implementation methods –***

CPO with assistance from CAO will develop ways to use its purchasing power to procure goods and services that address key sustainability issues such as GHG emissions, water efficiency, pollution prevention, and high-performance sustainable buildings to encourage manufacturers and corporations to invest in research and innovation, and to increase the production and availability of environmentally preferable goods and services. This can lead to competitive pricing and increase reliance on abundant, renewable, and environmentally-preferable resources.

The CPO Homeland Security Acquisition Manual and Affirmative Procurement Plan provide guidance and procedures for ensuring DHS achieves the goal. All Department program offices, Components, operation offices, sites, facilities, and applicable contractors will follow the Affirmative Procurement Plan. DHS components have been instructed to take the necessary steps to carry out the requirements of the Affirmative Procurement Plan for all products and services provided by its vendors.

The following are tasks necessary to achieve the goal for sustainable acquisition:

*Short Term (FY2010-FY2012)*

- CPO, with assistance from CAO, will review annually the Acquisition Forecast website ([fido.gov](http://fido.gov)) and its semi-annual update, and other appropriate data, to identify target procurements for early intervention in acquisition planning;
- CPO will review the DHS Affirmative Procurement Plan to ensure it fully addresses EO 13514 requirements paying particular attention to GHG emission requirements and ensuring it leverages DHS purchasing power to incentivize innovation of goods and services that align with EO 13514 goals;
- CPO will develop a plan for performing in-house reviews of contracts for compliance with EO 13514 and creating corrective action plans for discrepancies;
- CPO with support from CAO, CFO and CHCO will work together develop sustainable acquisition training for government purchase card holders;
- CPO with assistance from CAO will develop suggested sustainable purchasing language for contracts, statements of work and contract evaluations;
- CPO will establish requirements for Contracting Officers, Contracting Officer Technical Representatives, Program Managers, Project Managers, micro-purchase card holders and other members of the acquisition workforce to complete sustainability training;
- CAO (Environmental Management) will develop policy and guidance for implementing Hazardous Material Pharmacy programs to reduce the quantities of hazardous materials purchased, used, and disposed; and

- CSO will strive to obtain security goods and services locally or internally thus reducing energy requirements for their delivery and use.

*Medium Term (FY2013-FY2017)*

- CPO will establish a DHS-wide contract for replacement of ink jet and toner cartridges. This contract would include mandatory use of remanufactured ink jet and toner cartridges, easy recycling of spent ink jet and toner cartridges (i.e., mailing envelopes), and credit for recycled ink jet and toner cartridges.

*Long Term (FY2018-FY2021)*

- CPO with assistance from CAO will develop policies, guidance and procedures to encourage carbon footprint minimization through the supply chain by including contract provisions with suppliers of all materials, goods, and services to identify and use more energy-efficient products.

**d. Positions** - At the Department level there are no positions dedicated solely to sustainable acquisition. The Environmental Manager, Energy Manager, and CPO, in addition to their other tasks, manage the initiatives and requirements for sustainable acquisitions. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 11: Sustainable Acquisition Planning Table**

SUSTAINABLE ACQUISITION	Units	FY 10	FY 11	FY 12	....	FY 20
New Contract Actions Meeting Sustainable Acquisition Requirements	%	?	95%	hold	hold	Hold
Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	%	?	?	?	?	?
Water Efficient Products	%	?	?	?	?	?
Biobased Products	%	?	?	?	?	?
Recycled Content Products	%	?	?	?	?	?
Environmentally Preferable Products/Services (excluding EPEAT)	%	?	?	?	?	?
SNAP/non-ozone depleting substances	%	?	?	?	?	?
Other, as defined by agency	?					

**f. Department status**

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* instituted policy to establishing procurement programs to purchase bio-based, environmentally preferable, energy-efficient, water-efficient, alternative fueled vehicle, non-ozone depleting substances, and recycled-content products and paper (at least 30 percent post-consumer fiber content) programs.

The Department's Affirmative Procurement Plan was modified in 2009 to address all green purchasing requirements. The DHS Affirmative Procurement Plan (APP), in accordance with FAR 23.400 was updated as of October 1, 2009 at Appendix Q to the DHS Homeland Security Acquisition Manual. The DHS policy states that DHS must strive towards achieving 100% compliance with mandatory Federal green procurement requirements in all applicable acquisitions.

## 9. GOAL 9: Electronic Stewardship and Data Centers

### Goal Performance Review:

**a. Goal description** – Ensure that 95 percent of new contract actions including task and delivery orders, for electronic products and services with the exception of acquisition of weapon systems, are energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated) or Electronic Product Environmental Assessment Tool (EPEAT) certified) where such products and services meet agency performance requirements. Other goals include:

- Establishing and implementing policy and guidance to ensure use of power management, duplex printing, and other energy efficient or environmentally preferred options and features on all eligible DHS electronic products;
- Ensuring procurement preference for EPEAT-registered electronic products;
- Updating DHS policy to reflect environmentally sound practices for disposition of all Department excess or surplus electronic products;
- Updating DHS policy to ensure implementation of best management practices for energy efficient management of servers and Federal data centers; and
- Creating a plan to meet technology energy consumption reduction goals in its data centers.

**b. Department lead for goal** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight. The CIO has primary responsibility for achieving the electronic stewardship goal.

**c. Implementation methods** – The following are methods and tasks to achieve the electronic stewardship goals:

### Short Term (FY2010-FY2012)

- CPO will develop suggested contract language for leasing and turn-in of electronic equipment and procurement of EPEAT products;
- CIO will implement best management practices in energy-efficient management of servers and Federal data centers;
- CIO and CPO may issue policy encouraging Program Offices to consider as part of the requirements development process, product disposition in IT purchase and lease

- contracts. This will assist in ensuring that contracts awarded will encourage manufacturers to generate responsible stewardship programs that allow for the return of excess un-used materials, used items, containers, and packaging.
- CIO and CAO will create a reporting system for tracking and reporting electronic property disposal actions;
  - CIO with assistance from CAO will implement technologies to track and report reductions in carbon emissions related to transit, travel, training, and conferencing strategies;
  - CIO will ensure all computing platforms are capable of monitoring and managing server resources to accommodate variations in utilization. Example: A business application may have five web servers; but after 6:00 PM at night, there is little or no data is being requested, but all five servers are consuming extreme amount of electricity and generating heat. If the computing platform power management and monitoring; then four of the five web servers could go to “sleep mode” and wake up additional web servers only when needed;
  - CIO will establish and implement a DHS-wide integrated reporting systems for EPEAT purchasing results;
  - CIO will establish policy, guidance and procedures for:
    - Implementing and enforcing power management, duplex printing, and other energy-efficient or environmentally preferable features on all electronic products;
    - Putting workstations and monitors into sleep mode at the end of the business day as a cost saving measure;
    - Ensuring all workstations and monitors are Energy Star certified and only purchase Energy Star certified workstations and monitors;
    - Employing virtualization as an energy saving practice;
    - Setting set printers and copiers to automatic double-sided printing and copying;
    - Replacing stand alone servers with blade servers;
    - Environmentally sound management and disposal of non-useable electronics; and
    - Ensure procurement preference for EPEAT-registered electronic products.
  - CIO will evaluate equipment replacement cycles and establish policies to maximize product life:
    - Use EPA’s guidance to improve the operation and maintenance of electronic products; and
    - Implement procedures to ensure timely reuse and donation of equipment.
  - CAO will update the draft Sustainable Practices Guidance Manual to reflect EO 13514 and issue it for formal issue;
  - CIO and CAO will develop and implement a system for tracking progress in 3 life cycle phases:

- Purchasing;
  - Operations and maintenance; and
  - End of life.
- CIO and CAO will develop system for tracking Department progress towards Target Electronics Stewardship Goals:
    - Purchasing EPEAT-registered products;
    - Enabling ENERGY STAR® Features; and
    - Recycling of non-reusable computers using environmentally sound management practices.

*Medium Term (FY2013-FY2017)*

- CIO with assistance from CAO will baseline data centers for power, space and cooling in order to provide a reference point for future comparisons to track the following data on a monthly basis and provide a trending capability;
- CIO will develop a model Data Center Infrastructure Efficiency and PUE or Power Usage Effectiveness that can be used for qualitative and quantitative analysis of power consumption, cooling, floor space and energy costs;
- CIO with assistance from CAO will explore opportunities to implement renewable energy generation systems for powering mission critical equipment; and
- CIO will develop a plan to identify improvements in cooling data center CPO will track and report purchases.

*Long Term (FY2018-FY2021)*

- CIO will consider incorporating other technologies like putting the lights on timers, using artificial Intelligence in our computing platforms so that they shut down portions of the systems during low periods of utilization, and other technologies will help us reduce our energy costs, reduce our carbon footprint and extend the lifecycles of our infrastructure components.

**d. Positions** – At the Department level there are no positions dedicated solely to electronic stewardship. The Environmental Manager, Energy Manager, CIO and CPO, in addition to their other tasks, manage the initiatives and requirements for electronic stewardship. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 12: Electronic Stewardship and Data Centers Planning Table**

<b>ELECTRONIC STEWARDSHIP &amp; DATA CENTERS</b>	Units	FY 10	FY 11	FY 12	FY 13
% of device types covered by current Energy Star specifications that must be energy-star qualified	%	?	90%	95%	hold
% of electronic assets covered by sound disposition practices	%	?	?	?	?
% of cloud activity hosted in a data center	%	?	30%	60%	hold
% of agency data centers independently metered or advanced metered and monitored on a weekly basis	%	?	90%	100%	hold
Reduction in the number of agency data centers	%	?	20%	40%	hold
% of agency, eligible electronic products with power management and other energy-environmentally preferable features (duplexing) actively implemented and in use	%	?	95%	100%	hold
% of agency data centers operating with an average CPU utilization of 60-70%	%	?	50%	75%	hold
% of agency data centers operating at a PUE range of 1.3 – 1.6	%	?	25%	50%	hold
% of covered electronic product acquisitions that are EPEAT- registered	%	?	95%	95%	hold
% of agency data center activity implemented via virtualization	%	?	30%	40%	hold
Other, as defined by agency	?	?	?	?	?

**f. Department status –**

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy for purchasing EPEAT-registered electronic products, enabling EnergyStar® features on agency computers and monitors, extending the useful life of electronic equipment and using environmentally sound practices with respect to disposition of electronic equipment that has reached the end of its useful life. The DHS Electronics Stewardship Plan developed under EO 13423 is rescinded the remaining elements have been incorporated in the Sustainability Plan.

Under one of DHS' strategic sourcing initiatives, two Department-wide contracts were established for procuring information technology products and services under the Enterprise Acquisition Gateway for Leading Edge Solutions (EAGLE) and First Source programs. Both programs were modified in FY 2009 to incorporate the latest Federal Acquisition Regulation requirements for EPEAT purchases. Additionally the modification included requirements for the vendors to provide purchase results. First quarter reporting in FY 2010 indicated that 92 percent of electronic product purchases were EPEAT certified.

**10. GOAL 10: Institutionalize Sustainability into all Facets of the DHS Mission**

**Goal Performance Review:**

**a. Goal description** – DHS will develop innovative policies, guidance, projects, and procedures to institutionalize sustainability into all facets of its mission. To date, sustainability has been the responsibility of the environment and safety communities. Over the years, other DHS functions have largely relied on the environment and safety functions to address those areas of concern. For DHS to be successful, every employee

needs to understand, participate in and contribute to the attainment of sustainability goals. This culture shift will require years to be fully imbedded into DHS.

**b. Department lead for Sustainability goals** – The SSO, as the designated Department lead, will direct the activities of the Sustainability Council for target development, implementation and oversight.

**c. Implementation Approach and Opportunities** – The following are the implementation approaches tasks for achieving the DHS goal:

- DHS needs to implement organizational changes to realign existing functions to integrate sustainable practices into all Departmental processes and procedures;
- DHS must provide the staff and systems needed to manage Executive Order 13514 compliance, establish accountability measures and report regularly on sustainability benchmarks;
- DHS personnel must be empowered to solve tough sustainability challenges, and allow their solutions to have an appropriate impact on the resolution of those challenges;
- Law enforcement Components, Customs and Border Protection, Immigration and Customs Enforcement, the Transportation Security Administration, the Coast Guard, and the Secret Service can lead the country in adapting sustainable practices, from using sustainable fueled vehicles (as Secretary Napolitano's Efficiency Review calls for) to utilizing renewable energy sources;
- Aligning with state, local, and tribal law enforcement entities provides DHS the opportunity to facilitate the exchange of sustainability practices, and provide a forum for demonstrating credible solutions to enable their adoption: and
- Several Components may have the opportunity to capitalize on their daily interaction with the public and develop strategies to benefit the department's own operations by publicizing, when possible and cost-effective, sustainability efforts to those who they serve.

The following are specific tasks associated with achieving the goal:

*Short Term (FY2010-FY2012)*

- SSO will coordinate the security standards of the Interagency Security Committee with the SSPP to reinforce and advance the sustainability interests of the EO and DHS;
- CXOs will communication the SSO's challenge that all DHS employees work towards DHS sustainability goals;
- CXOs will communicate the SSO's desire to empower employees to solve tough sustainability challenges and identify solutions that have a positive impact on the resolution of those challenges;

## DHS Strategic Sustainability Performance Plan

- CAO and CHCO will work to identify and implement general sustainability training courses for DHS personnel;
- CHCO will define the framework for personnel sustainability certifications and qualifications and assess personnel sustainability certifications and qualifications;
- Work to make buildings that do not need to be gated or closed off for security reasons, open and integrated with the surrounding community; and
- Adopt the Sustainable Sites Initiative guidelines for rainwater, storm water management, and ecosystem services at St. Elizabeth's.

### *Medium Term (FY2013-FY2017)*

- The SSO will establish a Department-wide awards program for sustainability and provide incentives for winners;
- CHCO with assistance from CAO will develop sustainability training courses for DHS and component employees that are accessible via the DHScovery (on-line) training system; and
- CHCO will include introductory sustainability training in new employee orientation.

### *Long Term (FY2018-FY2021)*

- CHCO will work with CPO to develop and implement mandatory acquisition workforce sustainability training and qualifications;
- CHCO will identify, with CFO, sources which will provide a certificate to document the successful completion of sustainability training/refresher training for micro-purchase card holders; and
- DHS, when possible, work with regional, city, and local transportation officials to extend metro transit service to locations close to the main entrance of facilities, ideally by rail, to ensure a feeling of convenience and safety for commuting workers.

**d. Positions** – At the Department level there are no positions dedicated solely to this goal. The Environmental Manager, Energy Manager, and CXOs, in addition to their other tasks, manage the initiatives and requirements for this goal. Component level data on positions will be available later this year.

**e. Planning table** – The planning table below has not been completed. Component data will be submitted later this year and will be used to estimate reductions during the out years.

**Table 13: Department Innovation Planning Table**

DEPARTMENT INNOVATION	Units	FY 10	FY 11	FY 13	....	FY 20
Other, as defined by agency	?					

**f. Department status –**

DHS recognized that in order to be successful, sustainability must be integrated into the Department’s culture. Current policy requires employees, at all organizational levels, to be responsible and accountable for integrating environmental stewardship into their day-to-day activities in order to reduce the environmental impact of their activities and to protect our natural resources. The fundamental policy is to protect our natural resources, prevent pollution, reduce waste and strive to exceed the environmental performance goals, objectives and targets established by the EO. To assist in this endeavor, the Secretary established a Sustainability Efficiency Task Force that evaluated the Department’s program and made recommendations to improve performance.

Directive 025-01 *Sustainable Practices for Environmental, Energy and Transportation Management* established policy that DHS will develop and implement sustainable practices programs to ensure that all operations and necessary actions are carried out in an environmentally, economically, and fiscally sound manner and will meet the DHS goals, targets and objectives.

**Section 3: Department Self Evaluation**

I. Please answer 'yes' or 'no' to the following questions. If the answer is 'no', provide an explanation below.

Does your plan provide/consider overarching strategies and approaches for achieving long-term sustainability goals?	Yes
Does your plan identify milestones and resources needed for implementation?	Yes
Does your plan align with your agency's 2011 budget submission?	Yes
Is your plan consistent with your agency's FY 2011 budget and appropriately aligned to reflect your agency's planned FY 2012 budget submission?	Yes
Does your plan integrate existing EO and statutory requirements into a single framework and align with other existing mission and management related goals to make the best use of available resources?	Yes
Does your plan provide methods for obtaining data needed to measure progress, evaluate results, and improve performance?	Yes

Narrative requested:

The following are DHS's planned actions for the July 2010 to December 2010 period:

- Complete Component level sustainability plans;
- Update and complete the tables in the Sustainability Plan;
- Inventory DHS GHG emissions in accordance with OMB and CEQ requirements;
- Update the Sustainability Plan;
- Issue a Department-wide sustainability policy letter signed by the Secretary;
- Conduct an employee commuting survey; and
- Complete 50% of short term tasks listed in the Sustainability Plan

The following are DHS's planned actions for the January 2011 to June 2011 period:

- Submit the DHS annual green purchasing, energy, fleet and environmental management system report;
- Update the Sustainability Plan; and
- Complete 75% of short-term tasks listed in the Sustainability Plan.

**Appendix 1: Acronyms and Abbreviations**

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AMP	Asset Management Plan
AFV	Alternative Fuel Vehicle
ARRA	American Recovery and Reinvestment Act of 2009
BTU or Btu	British Thermal Unit
C&D	Construction and Demolition
CAO	Chief Administrative Officer
CEQ	Council on Environmental Quality
CFL	Computer for Learning
CFO	Chief Financial Officer
CHCO	Chief Human Capital Officer
CIO	Chief Information Officer
CPO	Chief Procurement Officer
CPU	Central Processing Unit
CSO	Chief Security Officer
DHS	Department of Homeland Security
DST	Decision Support Tool
EISA	Energy Independence and Security Act
EMS	Environmental Management System
EO	Executive Order
EPA	Environmental Protection Agency
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right-to-Know Act
EPEAT	Electronic Product Environmental Assessment Tool
EPP	Environmentally Preferable Purchasing
ESPC	Energy Services Performance Contract
EUL	Enhanced Use Lease
FLETC	Federal Law Enforcement Training Center
FEMA	Federal Emergency Management Administration
FEMP	Federal Energy Management Program
FTE	Full Time Employee
FY	Fiscal Year
gal	gallon
GHG	Greenhouse Gas
GPRA	Government Performance and Results Act
GSA	General Services Administration
GSF	Gross Square Feet
HVAC	Heating, Ventilation and Air Conditioning
IT	Information Technology
LED	Light Emitting Diodes
M&V	Measurement and Verification
MILCON	Military Construction
mtCO <sub>2</sub> e	Metric tons of Carbon Dioxide Equivalent
NEPA	National Environmental Policy Act
O&M	Operations and Maintenance
OMB	Office of Management and Budget

## DHS Strategic Sustainability Performance Plan

OSPP	Operational Sustainability Performance Plan
PPA	Power Purchase Agreement
PUE	Power Usage Efficiency
R2	Responsible Recyclers
RIA	Regulatory Impact Analysis
ROI	Return on Investment
SEL	Spectrally Enhanced Lighting
SF	Square Feet or Square Footage
SNAP	Significant New Alternatives Policy
SRPO	Senior Real Property Officer
SSO	Senior Sustainability Officer
SWG	Sustainability Work Group
TRI	Toxics Release Inventory
UESC	Utility Energy Services Contract
USC	United States Code
USCG	US Coast Guard
USM	Under Secretary for Management
USSS	US Secret Service

## **Appendix 2: High Performance Sustainability Building Requirements**

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Below are strategies and requirements for sustainable buildings for evaluation to ensure they are incorporated into DHS guidance documents:

- Highly reflective or vegetative (green) roofs on new or renovated buildings - Green roofs can improve the energy performance of federal buildings, help manage storm water, reduce airborne emissions, and mitigate the effects of urban heat islands. Green roofs reduce heat gain by shading surfaces of a roof, reduce runoff by absorbing and filtering rain, and reduce GHG emissions in the surrounding air;
- Use ENERGY STAR® and other energy-efficient products as well as sustainable building design for all new constructions, renovations and modifications;
- Install energy efficient window film (solar film) on windows;
- Replace old fluorescent light fixtures with new energy efficient fixtures;
- Incorporate renewable and low emission technologies, such as photovoltaics, fuel cells, ground-source, heat pumps, solar walls, and solar hot water heating systems;
- Apply the use of Best Management Practices of water efficient landscaping, low-volume, commodes, urinals, faucets, and showerheads, and water reuse and recycling at vehicle wash stations in projects and initiatives to improve water efficiency;
- Increase the number of meters at strategic locations on electrical and water distribution systems so that energy manager can better understand facility's utility usage;
- SEL - Energy savings are achieved by using lamps that have less light output, but higher correlated color temperature (CCT) coupled with lower ballast factor, extra efficient electronic ballasts. SEL is a market-ready, cost effective solution for quick energy savings;
- Ice storage retrofit for rooftop air conditioning - Ice storage chillers can operate at night (cooler, more efficient condensing temperatures) to meet a daytime cooling demand. This flexibility permits a smaller chiller to satisfy a larger peak cooling load. Further, the system can shift the cooling demand to off-peak hours when electricity from the utility is generated more efficiently and at lower cost;
- Sustainable Office Furniture - Purchase furniture from manufacturers and retailers committed to minimizing carbon emissions, waste stream pollutants, un-recyclable content and use of materials, such as recycled wood fibers, wheat straw, sunflower hulls, recycled paper, bamboo, recycled content aluminum, recycled content powder coated steel, bio-based plastic, cork, etc;
- Locate secure storage for bicycles inside buildings and install proper facilities to support commuting via bicycle, where needed, feasible, and cost-effective; and
- Dramatically reduce the amount of planned on-site parking, and free up a vast site area for more productive uses.