

**PAD:**

**Subcommittee:**

**Agency: Department of Transportation**

**Cover Page (Optional)**

# Strategic Sustainability Performance Plan

June 2011

*"The integration of mission, environmental,  
economic and social considerations."*



**U.S. Department of Transportation**



# DEPARTMENT OF TRANSPORTATION

## STRATEGIC SUSTAINABILITY PERFORMANCE PLAN

**June 2011**

For further information regarding this document please contact:

Marguerite Downey  
Manager, Administrative Policy  
Office of Facilities, Information and Asset Management  
Department of Transportation  
1200 New Jersey Ave., SE  
Washington, DC 20590  
Phone: 202-366-0044  
Email: [marguerite.downey@dot.gov](mailto:marguerite.downey@dot.gov)  
Fax: 202-366-3192



U.S. Department  
of Transportation

Office of the Secretary  
of Transportation

## Agency Commitment Letter

June 2011

1200 New Jersey Ave, SE  
Washington, DC 20590

The Department of Transportation's (DOT) mission is to serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets vital national interests and enhances the quality of life of the American people, today and into the future. DOT is committed to integrating mission, environmental, economic and social considerations through sustainability policies and programs. To achieve this goal, the Department will ensure compliance with environmental and energy statutes, regulations, and Executive Orders (EOs).

In coordination with the Chief Financial Officer, Chief Information Officer, Chief Acquisition Officer, Senior Real Property Officer, and General Counsel, DOT has identified several priorities and significant sustainability efforts for the upcoming year:

- Initiate a comprehensive plan to increase the number of buildings that meet the High Performance Sustainable Buildings criteria.
- Develop and maintain a comprehensive inventory of absolute GHG emissions across all three scopes for DOT (base year FY2008).
- Support programs for reductions in GHG emissions and energy use such as enabling power management features on computers, laptops and monitors.
- Increase awareness and usage of renewable energy
- Reduce petroleum consumption and increase alternative fuel use in DOT vehicles.
- Decrease potable water use
- Meet or exceed green purchasing requirements

We will support each of these priorities through the following management tools:

- 1) Identify and develop key performance metrics to track organizational progress.
- 2) Improve functionality of existing systems and/or develop new data management systems.
- 3) Create new policies, procedures and guidance documents with the goals identified in the sustainability plan and build awareness through training materials.
- 4) Integrate sustainability goals with the Department's Higher-tier Environmental Management System.

DOT is committed to becoming a leader in sustainability. Incorporating sustainable practices into the Department's mission helps to promote energy and natural resource conservation, decreases GHG emissions, reduces pollution and contamination releases, enhances the workplace by minimizing hazardous materials and chemicals and strengthens our national interests by encouraging energy independence.

Kathryn B. Thomson  
Counselor to the Secretary &  
Senior Sustainability Officer

## **I. Agency Policy Statement (optional image)**

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

### **Governing Principles**

DOT is committed to sustainability leadership. DOT defines sustainability as the integration of energy, environmental, economic and social considerations into the Department's mission, programs and day-to-day operations. This means that DOT employees at all levels must be responsible and accountable for integrating sustainability stewardship into day-to-day activities to reduce the Department's direct and indirect energy and environmental impact and to protect our natural resources. Incorporating sustainable practices into the Department's mission and operations is also a sound business practice. It promotes energy and natural resource conservation, decreases emissions of greenhouse gases (GHGs) and other pollutants, enhances the workplace by minimizing hazardous materials and chemicals, and advances our national interest in increasing energy efficiency and reducing our dependence on fossil fuels. Building sustainability into our work also ensures that DOT's investments in safe, efficient and affordable transportation systems for all Americans will endure.

Sustainability is not a new concept for DOT. To the contrary, over the past several years, DOT has taken a number of measures to reduce energy consumption and enhance the environment while improving and modernizing transportation systems and spurring economic growth. These efforts include, for example, making historic investments in high speed rail and NextGen satellite technology for air traffic, implementing ambitious new fuel economy standards for cars and trucks, funding more integrated, more efficient intermodal transportation systems, providing transportation alternatives and funding for cleaner public transit bus fleets, and developing America's marine highways.

In addition to DOT-specific programs, DOT is partnering with other Federal agencies to promote sustainability across the country. For instance, DOT, along with the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency, is a founding member of the interagency Partnership for Sustainable Communities. This partnership seeks to improve access to affordable housing, create more transportation options, and lower transportation costs, while protecting the environment in communities nationwide. The Partnership, created in 2009, is already yielding positive results in urban, suburban and rural communities across America. Through the Partnership for Sustainable Communities, DOT is allocating resources to its Livable Communities Program to support initiatives that increase transportation choice and integrate housing and local transportation into land use planning decisions. Livable Communities increase transportation choices, provide affordable connections from homes to employment centers and other key amenities, and enhance economic opportunities and environmental sustainability.

DOT has established the Center for Climate Change and Environmental Forecasting in 1999, now called the Transportation and Climate Change Clearinghouse (TCCC), to play a leadership role in meeting global climate change issues. The TCCC has become the focal point within DOT for information and technical expertise on transportation and climate change, working with its component organizations to coordinate related research, policies, and actions. The TCCC promotes comprehensive multimodal approaches to reduce GHG emissions and

prepares for the effects of climate change on the transportation system, while advancing DOT's core goals of safety, mobility, environmental stewardship, and security.

Beyond greening its programs, DOT is committed to more sustainable operations, and DOT leadership is setting the bar high. For instance, DOT headquarters, which houses more than 10 percent of DOT's workforce, is located in a high performance sustainable building that uses 100 percent renewable energy. These are only a few examples of the aggressive measures DOT is taking to confront energy and environmental challenges. But they are clear and unequivocal signs of DOT's commitment to sustainability.

There are two core documents that govern DOT's sustainability efforts – the Strategic Sustainability Performance Plan (SSPP) and DOT's Strategic Plan for FY2010 – FY2015, entitled "Transportation for a New Generation," which DOT is working to finalize. In general, the SSPP establishes DOT's plan for making its operations more sustainable, while the Strategic Plan governs DOT's mission and identifies key priorities that will transform the existing transportation network into a truly multimodal system that offers the traveling public and businesses safe, convenient, affordable, and environmentally sustainable transportation choices.

DOT's 2011 SSPP lays the foundation to incorporate sustainable practices into the key priorities identified in the Department's Strategic Plan and meet the Executive Order (EO) 13514 requirements and other applicable energy and sustainability requirements. Progress and status toward achieving the Department's energy and sustainability goals will continue to be reported twice yearly in July and January to DOT's SSO and Assistant Secretary for Administration via the OMB Sustainability Scorecard. DOT also has developed its own internal reporting procedures so that senior leadership can track the progress of the Department and each of its operating administrations (OAs). Additionally, each OA within the Department is developing its own SSPP that integrates with the DOT SSPP. Like the departmental-wide SSPP, OA SSPPs will be updated annually. Moreover, each OA will be implementing a higher-tier environmental management system over the next two years that integrates the initiatives within the Department's and its own SSPPs.

As the program-oriented companion to the SSPP, the Strategic Plan centers around five priority goals. These goals are to improve public health and safety, foster livable communities, ensure that transportation assets are maintained in a state of good repair, support the Nation's long-term economic competitiveness, and work to achieve environmental sustainability. Also, like the SSPP, DOT's Strategic Plan sets guidelines that direct the Department to be transparent and accountable to the American public, adopt performance-based measures, focus on achieving strategic outcomes, and maximize the value of public investments.

While DOT is committed to advancing sustainability throughout its operations and program, there are a number of practical challenges that may impact the Department's ability to proceed as quickly as it would like. DOT will manage these as aggressively and efficiently as possible to minimize any adverse impact they may have on the department's ability to meet its obligations. Below the Department identifies some of its most significant challenges.

- **Budget Considerations:** DOT already has implemented a number of the initiatives described in this SSPP, and it has identified a number of new initiatives to ensure further progress. As EO 13514 was only recently adopted (after the commencement of FY 2010 and the budget for FY 2011 had been developed), one challenge for the Department is integrating its sustainability initiatives into the budget planning process. Since Federal budgets are

developed two years in advance, most of these new initiatives are not accounted for in the FY 2010 and FY 2011 budgets. DOT is currently assessing its expended budget for FY 2010 and approved budget for FY 2011. In the short-term, DOT must implement organizational changes to realign existing functions and staff assignments to help compensate until additional resources (both FTE and funding) are obtained through the budget process. Longer term investments for critical infrastructure initiatives such as the NextGen Facilities Program will be necessary for the Department to achieve the goals of the requirements established by EO 13514 and comply with other relevant policies and regulations.

- **Raising Awareness:** The drive toward sustainability will continue to require top-level attention and awareness from the Office of the Secretary (OST) and the leadership of all of the OAs. To be successful, every function and employee throughout the Department must fully understand, participate and take ownership of sustainability goals and obligations. To ensure the highest level of participation, DOT must engage all employees, including managers, through proper training and incentives. Sustainability goals must be incorporated into appropriate job descriptions and employee performance reviews. DOT already has taken steps to address this issue by providing training to senior leadership and integrating periodic sustainability performance reviews for each OA into an existing process in which the OA reports on its progress in a number of priority areas directly to the Deputy Secretary.
- **Data Availability and Quality:** Baseline measurements and progress measurements are cornerstones of achieving sustainability. It is necessary to capture data for establishing baselines and measuring progress related to each goal imposed by EO 13514 and other laws. At this juncture, data availability is limited and the quality of the data is variable. Some necessary initiatives in this direction have been identified and initiated. For example, DOT is currently expanding the fields and functionality of its Real Estate Management System (REMS) and financial information system so that they are capable of capturing energy and water consumption data, “sustainable building” status (already in place), and renewable energy generation at each facility. The data system will integrate the physical features and processes of the building with financial information creating a centralized repository of information. This system is anticipated to include all of the data required to measure and report facility performance under the EO and other applicable laws. DOT needs two to four years to acquire and/or build an operational system capable of performing all of these functions and implement processes to capture the data. In the interim, data must be collected manually, which is often difficult, time intensive, less consistent and lacks validation. Constructing new facilities or upgrading existing facilities to include building automation and energy management systems, along with advanced metering and sub-metering, are essential to furthering this objective.
- **Lead Time Requirements:** DOT has determined that establishing a facility retrofit and upgrade program that integrates the following five major EO goals must be a major new initiative: scope 1 & 2 GHG reductions, energy intensity reduction, water efficiency, high performance sustainable buildings, and on-site renewable energy generation. This program, planned for implementation over a 10-year period, will operate as a trans-Departmental infrastructure team. It will rely on the soon to be developed enhancements in the financial and REMS information systems to help identify the pool of potential candidate facilities for retrofits and upgrades. The objective of this 10-year program will be to develop data information systems (see above) that will facilitate filtering thousands of DOT facilities down to approximately 620 possible candidates for building system upgrades and retrofits. Through this program the 620 or so possible candidate facilities will then be evaluated at project level to identify approximately 95 best candidates based on greatest return on investment. These 95 “best” candidates will achieve

each of the high performance sustainable building guiding principles with the greatest return on investment in one simplified, prioritized program that will be staffed with the expertise to identify projects and carry them out from candidate selection, Energy Savings Performance Contracts (ESPCs)/Utility Energy Saving Contracts (UESCs), the actual renovation and building, and verification of results. Developing and ramping up this program over the next two years followed by eight years for completion of the projects will be a significant challenge. But DOT believes that this program can become a model for the Federal community as it allows for a prioritized, efficient process for achieving sustainable facilities.

- **Limited Opportunities for On-Site Renewable Energy Generation:** DOT has committed to doubling on-site renewable energy generation. Nonetheless, identifying sites suitable for renewable energy installations and the funding to support such installations is a significant challenge. Success will depend heavily on the “Sustainable Buildings” program identified above to help identify the appropriate sites for renewable energy generation and creative financing through ESPC/ UESC mechanisms.
- **Organizational Expansion:** Several OAs within DOT are expected to increase in size as a result of expanded mission requirements. Such growth will place additional pressure on the organization’s ability to achieve the goals identified within this plan. The Department, however, will seek to incorporate sustainability principles into all aspects of its operations when possible (including building sustainability considerations into our program expansion plans), while ensuring that the Department and each OA continues to fulfill its mission.

Related to the challenges described in this section, below is a table that provides a snapshot of the size and scope of DOT’s operations and environmental footprint. This table is meant to help the public understand how DOT compares to other agencies and departments in terms of scale and reach.

**Size and Scope of Operations**

<b>Size and Scope of Operations</b>	<b>Number</b>	<b>Comment</b>
Total # Employees	58011	The total number of employees is current as of January 2011 and includes both permanent and temporary employees.
Total Acres Land Managed	179559	
Total # Facilities Owned	10174	The term facilities is defined as buildings according to DOT. The facility count represents active buildings in DOT's Real Estate Management System.
Total # Facilities Leased (GSA lease)	315	
Total # Facilities Leased (Non-GSA)	1105	
Total Facility Gross Square Feet (GSF)	33399656	The value for Total Facility Gross Square Feet is an aggregation of owned, GSA leased, and non-GSA leased buildings. In some cases net



<b>Size and Scope of Operations</b>	<b>Number</b>	<b>Comment</b>
		square feet were used so number may be a slight underreporting of gross square feet.
Operates in # of Locations throughout U.S.	51	DOT operates facilities in all 50 states and Washington, DC.
Operates in # of Locations outside of U.S.	9	The number of locations outside the U.S. include territories such as Puerto Rico and Guam as well as other countries.
Total # Fleet Vehicles Owned	430	
Total # Fleet Vehicles Leased	5825	
Total # Exempted-Fleet Vehicles (Tactical, Emergency, etc.)	48	
Total Operating Budget FY 2010 (\$MIL)	76385	
Total # Contracts Awarded FY 2010	21157	Number of contracts awarded is comprised of the following: new contract, task orders, delivery orders and modifications.
Total Amount Contracts Awarded FY 2010 (\$MIL)	5634	
Total Amount Spent on Energy Consumption FY 2010 (\$MIL)	130	The energy consumption dollar value includes amount spent on fuel for fleet vehicles.
Total BTU Consumed per GSF	80.9	
Total Gallons of Water Consumed per GSF	41.6	
Total Scope 1 & 2 GHG Emissions (Comprehensive) FY 2008 Baseline MMTCO <sub>2e</sub>	857.9	
Total Scope 1 & 2 GHG Emissions (Subject to Agency Scope 1 & 2 Reduction Target) FY 2008 Baseline MMTCO <sub>2e</sub>	822	
Total Scope 3 GHG Emissions (Comprehensive) FY 2008 Baseline MMTCO <sub>2e</sub>	309.5	
Total Scope 3 GHG Emissions (Subject to Agency Scope 3 Reduction Target) FY 2008 Baseline MMTCO <sub>2e</sub>	311.7	

## **II. Sustainability and the Agency Mission (optional image)**

### **III. Greenhouse Gas Reduction Goals**

DOT has established a 12.3 percent reduction target for Department-wide scope 1 and 2 GHG emissions, and a 10.9 percent reduction target for Department-wide scope 3 GHG emissions in absolute terms by FY 2020, relative to the new FY 2008 baseline (described in Goals 1 and 2). DOT has submitted these targets to and received approval of the targets from CEQ and OMB in accordance with EO 13514, section 2(a) and 2(b), Goals for Agencies. Additionally, as required by EO 13514, Section 2(c), DOT established and reported to CEQ and OMB a comprehensive inventory of absolute GHG emissions, including scope 1, scope 2, and specified scope 3 emissions in January 2011.

DOT is well on its way to meeting its energy intensity reduction targets and its scope 1 & 2 GHG targets. DOT plans to renew its focus on scope 3 reductions this coming year. The Department is prioritizing 1) sustainable building improvements and 2) energy improvements (both energy efficiency and renewable energy utilization)) as the cornerstones of the DOT GHG reduction strategy.

For example, FAA's efforts to implement the NextGen transformation of the National Airspace System (NAS), a wide-ranging evolution from a ground-based system of air traffic control to a satellite based system of air traffic management, includes more efficient operations and facility optimization, which offers ability to substantially reduce FAA's energy and greenhouse gas emissions footprint. This will provide an opportunity for DOT to have more aggressive scope 1 and 2 reduction targets in the future.

In addition, the Secretary and Deputy Secretary have challenged the heads of each OA to prioritize the goal of getting 15 percent of the Department's buildings to meet the guiding principles for High-Performance Sustainable Buildings by 2015. The sustainable building program will be a foundational element of DOT's sustainability strategy and address many of the sustainability challenges including GHGs, energy, and water improvements.

### **III. Greenhouse Gas Reduction Goals (optional image)**

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

DOT made great strides in the last year to lay the foundation to meet energy and sustainability requirements, and those efforts are ongoing.

#### **Highlights of Recent Accomplishments**

- DOT instituted a Sustainability Scorecard into its quarterly "regulatory review" process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT's OAs. Targets for reduced employee commuting, renewable energy, sustainable buildings, water conservation, petroleum reduction, and green procurement are on this scorecard and each Administrator is now regularly accountable for progress and success. DOT is the first Department to have sustainability accountability at this level. This new process is proving to be

extremely powerful, mobilizing all OAs to focus on sustainability targets and is achieving strong early results.

- DOT's Senior Leadership and the Environmental Management System (EMS) Senior Advisory Board are playing a critical role in mobilizing action within all of DOT's OAs and driving the momentum throughout DOT to advance sustainability initiatives.
- DOT completed its first comprehensive greenhouse gas inventory and is on a path to reduce its scope 1 & 2 emissions by 12 percent by 2020.
- RITA's Volpe Center partnered with the White House Council on Environmental Quality (CEQ), OMB, US EPA, and GSA to refine a commuter survey that DOT employed for gathering accurate data for calculating scope 3 emissions. CEQ recommended the Volpe survey to all Federal agencies as the preferred method to inventory commuter emissions.
- DOT deployed approximately 123 new hybrid vehicles in FY2010.
- Deployed a new information system that monitors petroleum consumption and alternative fuel usage in each OA. This has allowed early intervention measures to ensure DOT meets the 12 percent reduction goal. Data from this system is used in the accountability tool for the Deputy Secretary's Sustainability Scorecard review with the OA Administrators.
- Converted the majority of the Headquarters fleet to alternative fuel vehicles and hybrids.
- Developed a decision tool for use at DOT fueling centers to identify the most practical alternative fuel to be made available at the fueling center.
- Underwent an enormous effort with all OAs to comply with the new low greenhouse gas emitting vehicle regulations. Approximately 1000 vehicles were replaced and are now in compliance.
- The Deputy Secretary required each OA to develop an action plan to meet their HPSB targets, and update this plan periodically.
- The Department conducted a comprehensive evaluation to identify approximately 90 facility targets for upgrades to meet energy, water, GHG, HPSB, and renewable energy goals.
- The Department mandated a special, intensive green procurement training for all contracting staff and senior contracting officers throughout DOT.
- DOT led an interagency team to develop the Guidelines for Sustainable Locations for Federal Facilities required by Section 10 of EO 13514. The impact of this work is significant as the Guidelines will be used by all Federal agencies in making transit-oriented siting decisions.
- The issuance of an Administrative Order on printing to enforce better printing practices and enhanced environmental benefits such as duplex printing, toner and paper reduction, as well as energy reduction by migrating to multifunctional devices (MFPs) versus desktop printers.
- Established a Department-wide Green Team.
- Using Energy Star® Portfolio Manager and US EPA eGRID to identify the best locations for renewable energy purchases and/or onsite renewable energy generation.

*Ongoing Implementation Efforts* In order to effectively meet the goals of EO 13514, DOT has developed a high level approach that includes short-term and medium- to long-term activities/initiatives. It builds on existing efforts to improve energy efficiency, reduce the energy intensity of its operations, increase the utilization of alternative fuels, and purchase and build renewable energy capacity.

Short-Term (1-2 years)

- Plan and initiate elements of a new Sustainable Building Infrastructure Team by using the Subject Matter Experts (SMEs) from the DOT OAs that have been successful implementing HPSB.
- Issue an administrative order requiring all OAs to increase their purchase and/or generation of renewable energy over the next three years.
- Promote and raise awareness of the Federal transit benefit program.
- Increase awareness and value of DOT's telework program through a communications strategy that includes e-mails, electronic newsletters, webinars (net meetings), TMS training modules, and briefings.
- Purchase low-speed electric vehicles for campus facility settings.
- Deploy approximately 150 new hybrid vehicles in FY2011.
- Acquire electric vehicles or other alternatively-fueled vehicles when available from GSA.
- Implementing Alternative Fueling Center plan of action and milestones.
- Identify the percentage and numbers of alternative fuel vehicle acquisitions in non-alternative

fuel locations to assist DOT in reducing alternative fuel vehicle (AFV) waivers from 10 percent to 5 percent and utilize efficient, conventional fuel vehicles where no alternative fuel infrastructure exists. • Improve tracking of water consumption values and increase water conservation practices. • Complete program to meet power management requirements for all computers and computer systems.

Medium-Term (3-5 years) • Stand up Sustainable Building Infrastructure Teams in pursuit of GHG, energy, water efficiency, high performance sustainable building, renewable energy and economic performance goals—retrofit up to 20 buildings. • Establish a building re-commissioning program (e.g. initial “retro-commissioning” and ongoing “continuous commissioning”) within the Sustainable Building Infrastructure Teams for buildings that were identified on the retrofit project target list. • Implement awareness program to promote energy conservation and energy efficiency, and distribute information on best practices through awareness and outreach programs across the OAs. • Launch a DOT-wide collaborative and sustainable workspace program pilot (including hotelling); develop metrics, and measure costs and benefits. • Provide management training and tools for telework and hotelling principles. • Begin installing on-site renewable energy generation projects.

Long-Term (6-10 years) • Complete portfolio of new construction or retrofit projects that will achieve the Five Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings which are part of the DOT Sustainable Building Infrastructure Team Program. • Achieve 20-40 facility re-commissioning projects annually. • Develop a dashboard system for communicating energy monitoring results and status of scope 1, 2, and 3 reduction goals using lessons learned from the OAs. • Develop a cadre of subject matter experts that can address scope 3 emissions from transportation systems for external audiences. • Initiate a pilot project for a DOT net-zero energy facility to meet EISA 2007 requirements with the understand that all Federal building projects in design after 2020 are required to achieve this level of energy performance.

In order to accomplish these goals, the Department will continue to strengthen its internal and external communication, leadership and accountability, planning processes, integration between budget and policy, and evaluation methods as discussed below.

#### **a. Internal and External Coordination and Communication**

DOT has implemented a Higher Tier Environmental Management System (EMS) to facilitate both internal and external coordination and communication. The EMS is used to identify, implement and track initiatives and to ensure the organization can monitor progress when meeting the sustainability goals identified in this document. Furthermore, many large DOT facilities have implemented their own EMSs to improve their ability to gather data and report progress on sustainability metrics, including energy consumption, waste production, and water usage. OAs also will implement higher-tier EMSs in the near term.

The EMS serves as a framework to execute department-wide sustainability programs and track performance. The EMS aggregates data from many individual program areas such as energy, fuel consumption, water, waste management, recycling, and environmentally-preferable purchasing. It also functions as a department-wide records

system to monitor, measure, and report compliance. DOT will use the EMS framework to implement, monitor, and continuously improve the goals, programs and projects identified in the SSPP.

*Higher-tier EMS for DOT HQA* central goal of the DOT HQ higher-tier EMS implementation is to create a framework that links together all DOT OAs' EMSs to address DOT sustainability goals, objectives and targets. The DOT higher-tier EMS sets environmental, energy and sustainability objectives, targets and metrics for the entire organization.

## **b. Employee Outreach and Training**

DOT's EMS also is used to facilitate and track employee outreach and training through the elements of internal communications, awareness training, and competency training. Internal Communications establishes mechanisms for sending and receiving environmental-, energy- and sustainability-relevant messages to and from employees. This is a continuous activity as employees need to receive updates on new issues, progress towards attaining objectives and targets, and the achievements of individual groups and functions within DOT.

Awareness Training is conducted periodically to remind existing employees and educate new ones on the DOT Sustainability Policy, the existence of the EMS, 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 EMS roles and responsibilities dealing with specific activities, tasks, programs, and the application of operational controls. DOT will develop and implement the appropriate systems, methods and standards to support the management of a department-wide sustainability program and ensure optimal outreach to DOT employees.

Below are some short-, medium-, and long-term SSPP outreach and training related tasks:

### Short-Term (1-2 years)

- Update DOT environmental, energy, and acquisition policies to include the goals identified in the Strategic Sustainability Performance Plan and EO 13514.
- Develop awareness materials on the goals of the Strategic Sustainability Performance Plan.
- Train Sustainability Mission Management tool (SM2) users.
- Establish presence on DOT Intranet.

### Medium-Term (3-5 years)

- Create sustainability modules in TMS training website.
- Identify no cost on-line training providers (e.g., Greenhouse Gas Institute, etc.).
- Determine appropriate means to track and report training progress on the goals of the Strategic Sustainability Performance Plan.

### Long-Term (6-10 years)

- Review and assess training effectiveness and revise or update existing policies, awareness materials and training modules.

*Coordination and dissemination of the Plan to the field:*• DOT will post copies of the Plan on the Department’s intranet website.• Awareness materials will be developed and distributed to DOT OAs and to field locations.

**c. Leadership & Accountability:**

The leadership and accountability roles throughout the Department are defined below:

- Kathryn Thomson is the designated Senior Sustainability Officer (SSO) for the Department of Transportation. She has overall responsibility for the requirements of EO 13514 and reports directly to the Secretary and Deputy Secretary.• Each OA also has designated a SSO to oversee its compliance with energy and sustainability requirements. To ensure senior leadership, the OAs, with only one exception, have designated their Deputy Administrators to serve as their SSOs.• DOT has established a Higher Tier EMS Senior Advisory Board to guide the implementation of the Higher-tier EMS at HQ. Collaboration among these key leaders will ensure the employee “buy-in” necessary for the successful implementation of the EMS.• The Higher Tier EMS Senior Advisory Board establishes working groups made up of representatives from a range of functional areas, including information technology (IT), finance, legal counsel, procurement, human capital, and communications to implement the Higher-tier EMS and the goals of the Strategic Sustainability Performance Plan.• The Assistant Secretary for Administration oversees policy development and implementation in support of the SSPP. The Assistant Secretary has a designated Department role to lead the implementation of several of the goals of the SSPP.
- The Manager, Administrative Policy is responsible for:
  - o Drafting and updating the SSPP to include content from DOT OAs;
  - o Overseeing the development of and reporting progress on the higher-tier EMS and SSPP to the SSO and the Senior Advisory Board;
  - o Monitoring and reporting on DOT compliance with EO 13514 and other applicable energy and sustainability requirements; and
  - o Updating internal DOT policy and implement innovative practices to address the goals within the SSPP.
- The Real Property Council, which is chaired by the Senior Real Property Officer in OST and comprised of the Senior Real Property Officers in each OA, with FAA serving as the Executive Agent for DOT Property Management is responsible for:
  - o Identifying alternatives to renovation that reduce existing assets’ deferred maintenance costs;
  - o Ensuring all new construction, major renovation, or repair and alteration complies with the Sustainable Building Guiding Principles; and
  - o Implementing policy and guidance to ensure 15 percent of existing facilities and building leases (above 5,000 GSF) meet the Guiding Principles by FY 2015; o Making annual progress towards 100 percent conformance with the Guiding Principles; o Achieving zero-net-energy in buildings entering the planning process after 2020; and
  - o Developing a single-source facility data system.
- The Senior Procurement Official is responsible for:
  - o Issuing procurement policies, contract and lease clauses and grant provisions in consonance with green procurement requirements;
  - o Conducting self assessments to continually improve green procurement process and better describe environmental and other green requirements in statements of work and contracts;
  - o Monitoring DOT contracts for requirements of certificate programs such as FAR 52.223-4, Recovered Material Certification; o Ensuring that FAR 52.204-4, Printed or Copied Double-Sided on Recycled Paper requirement is in all DOT contracts; and
  - o Utilizing statements of work or specifications to eliminate virgin material requirements, promote the reuse of products, require the use of alternative fuels and alternative fueled vehicles, products containing recovered materials (e.g. EPA-designated products), products that

are Energy Star® and FEMP designated or energy-efficient, water conserving WaterSense® labeled products, bio-based products, Environmentally Preferable Products, EPEAT registered products, and non-ozone depleting products.

**d. Agency Policy and Planning Integration:**

DOT and its OAs will issue organizational policy and guidance that establishes and promotes sustainable practices and creates a culture for achieving our sustainability goals. Tasks to be addressed include:

Short-Term• Draft DOT policy establishing SSPP goals as requirements for all OAs. • Require OAs to develop individual SSPPs and integrate goals into higher-tier EMS framework. • Develop bi-annual internal scorecard report for OAs. • Policy requiring all new construction meets the Five Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (aiming for Leadership in Energy and Environmental Design (LEED) Silver rating or higher (or a standard equivalent), to the extent possible or where appropriate. • Finalize and distribute updated Green Procurement and High Performance Sustainable Buildings Implementation Plans to stakeholders. • Perform gap analysis or assessment to ensure that sustainability goals are adequately incorporated into DOT environmental, acquisition, energy, and real property policy, guidance, procedures and update the documents to reflect the EO requirements. • Identify opportunities to incorporate sustainability into day-to-day operations and modify operation to address EO requirements.

Medium-Term• Begin closing identified gaps. • Execute initiatives to incorporate sustainability into day-to-day operations. • Implement major SSPP program initiatives.

Long-Term• All DOT National Environmental Policy Act (NEPA) documents will analyze the Climate Change impacts of the proposed action and its alternatives (in accordance with new guidance from CEQ).

**e. Agency Budget and Policy Integration:**

The Chief Budget Officer will issue guidance on developing and justifying budget initiatives to support EO 13514 and Strategic Sustainability Plan implementation. The guidance will emphasize life-cycle cost analysis (such as the Sustainable Return on Investment (SROI) method) over initial cost in evaluating submissions.

DOT already has implemented some of the initiatives described in this Plan and many new initiatives have been identified. Since Federal budgets are developed two years in advance these new initiatives are not accounted for in the FY 2010 and FY 2011 budget submission. DOT is currently assessing our planned and expended budget for 2010 and 2011. In the short-term, DOT will need to implement organizational changes to realign existing functions and staff assignments to help compensate until additional resources (both FTE and funding) are obtained through the budget process. Budget estimates are not yet included in this plan as the Department is still determining resource requirements for the new sustainability efforts. The FY 2012 budget will be the first year to incorporate the requirements of the new EO 13514. DOT is currently identifying comprehensive resource needs for 2012. DOT will include new sustainability programs in the Department's FY 2012 budget request to OMB. DOT will incorporate these 2012 budget numbers into the SSPP when they are available.

The Department is in the process of issuing several policies to all of its OAs to achieve the goals outlined in EO 13514.

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

Short-Term • The DOT HQ higher-tier EMS is designed to gather data and report progress on sustainability metrics, including energy and fuel consumption, waste production, and water usage. The system will assist DOT in effectively reducing consumption in compliance with the EO. The higher-tier EMS will serve as the framework to execute a department-wide sustainability program and tracking metrics. As an overarching system, the EMS will aggregate and analyze data from many individual program areas such as energy, water, waste management, recycling, and environmentally-preferable purchasing. It also will function as a department-wide records system to monitor measure and report compliance. • The EMS will be used to compile data from individual program areas. Department-wide records will be used to monitor, measure, and report compliance with requirements.

Medium-Term • Dedicate resources to track the status of all facility projects, and ensure that Energy Independence and Security Act (EISA) and other sustainable building requirements are met. • Establish a comprehensive policy for centralized energy and water data collection through an information management system across DOT to understand and track energy performance and to align operations. • Officially institute the Sustainability Mission Management tool (SM2) and internal bi-annual scorecard report (piloted in 2009-2010) to measure progress and monitor the effectiveness and efficiency of initiatives designed to achieve the goals of the SSPP.

Long-Term • The Chief Information Officer (CIO) and the Chief Procurement Officer (CPO) will update and track progress toward the department-wide electronic stewardship plan for continual improvement in energy efficiency and economic performance; • The Real Property Council will set mandatory targets for energy savings from retrofits and work with performance contractors and Energy Service Companies (ESCOs) to establish DOT retrofit performance rates to determine final department-wide percentage reduction.

Table 1 below indicates whether the EO goal is relevant to and has been 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 integrated, and "n/a" indicates that the EO Goals are not applicable. DOT is currently working to integrate the goals of the EO into its other reporting documents and DOT’s EMS. However, this is expected to take time due to the significant level of effort necessary to educate and train stakeholders and identify opportunities to integrate SSPP goals with other organizational reporting goals. Nevertheless, DOT anticipates the integration of SSPP goals and principles into other DOT reports to occur on a regular basis.

**IV. Plan Implementation (optional image)**



**Table 1: Critical Planning Coordination**

<b>Originating Report / Plan</b>	<b>Scope 1 &amp; 2 GHG Reduction</b>	<b>Scope 3 GHG Reduction</b>	<b>Develop and Maintain Agency Comprehensive GHG Inventory</b>	<b>High-Performance Sustainable Design/Green Buildings</b>	<b>Regional and Local Planning</b>	<b>Water Use Efficiency and Management</b>	<b>Pollution Prevention and Waste Elimination</b>	<b>Sustainable Acquisition</b>	<b>Electronic Stewardship and Data Centers</b>	<b>Agency Specific Innovation</b>
GPRAs Strategic Plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Agency Capital Plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A-11 300s	Yes	No	No	Yes	No	N/A	N/A	N/A	Yes	N/A
Annual GHG Inventory and Energy Data Report	Yes	Yes	Yes	Yes	N/A	Yes	Yes	N/A	N/A	N/A
EISA Section 432 Facility Evaluations/Project Reporting/Benchmarking	Yes	Yes	N/A	Yes	N/A	Yes	N/A	N/A	Yes	N/A
Budget	No	No	N/A	No	N/A	No	No	No	No	No
Asset Management Plan / 3 Year Timeline	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Circular A-11 Exhibit 53s	N/A	N/A	N/A	No	N/A	No	No	Yes	N/A	N/A
OMB Scorecards	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
DOE's Annual Federal Fleet Report to Congress and the President	Yes	N/A	Yes	N/A	N/A	N/A	Yes	Yes	N/A	Yes

Originating Report / Plan	Scope 1 & 2 GHG Reduction	Scope 3 GHG Reduction	Develop and Maintain Agency Comprehensive GHG Inventory	High-Performance Sustainable Design/Green Buildings	Regional and Local Planning	Water Use Efficiency and Management	Pollution Prevention and Waste Elimination	Sustainable Acquisition	Electronic Stewardship and Data Centers	Agency Specific Innovation
Data Center Consolidation Plan	Yes	Yes	N/A	Yes	Yes	N/A	Yes	Yes	Yes	No
Environmental Management System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instructions for Implementing Climate Change Adaptation Planning	Yes	Yes	N/A	Yes	Yes	Yes	N/A	Yes	Yes	Yes
Other (reports, policies, plans, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## V. Evaluating Return on Investment

There are several factors that contribute to DOT's decision-making and priority-setting related to sustainability initiatives. These include:

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

When evaluating sustainability initiatives, especially larger projects, DOT will conduct a lifecycle cost analysis and seek to focus funding on projects with a high return on investment (ROI). Using the Sustainable Return on Investment (SROI) method that recognizes the full service life of buildings and building systems; acquisition policies; energy star electronic equipment; and fuel efficient vehicles, SROI includes both the conventional financial costs/benefits and the internal/external environmental and social costs/benefits by assessing the long-term benefits or operational improvements. Full lifecycle cost analysis will help to ensure that Federal dollars are spent wisely and energy savings are maximized.

As a general guideline, DOT will pursue implementation of projects with a 25 year or shorter simple payback. However, as stated above, the SROI 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 25 years, but if it is shorter than the expected asset lifespan; such projects will also be considered.

**b. Social Costs & Benefits:**

DOT will seek to address geographically localized challenges to pursue social benefits. For example, water conservation projects within drought-prone regions could be more highly prioritized than in water abundant regions. These types of considerations will also be incorporated into the Department's adaptation planning efforts.

Currently, DOT 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, DOT will strive to enhance the NEPA review process and ensure these aspects of the NEPA review are robust.

Livable communities—DOT led an interagency effort with HUD, EPA, and GSA, in coordination with the Departments of Homeland Security, and Defense, to develop recommendations addressing sustainable location strategies for siting Federal Facilities. This fulfills the directive of Section 10 in EO 13514 to provide the Council on Environmental Quality Chair with recommendations regarding sustainable location strategies for Federal buildings in agency Sustainability Plans.

**c. Environmental Costs & Benefits:**

DOT will continue to integrate environmental, energy and sustainability considerations into the Department's planning and budgeting processes. As stated above, DOT employs a NEPA review process for all proposed construction projects and major actions to consider potential environmental impacts. DOT will continue to strive to ensure robust NEPA reviews and to minimize negative environmental impacts and costs.

DOT must track environmental cost and benefits for non-environmental projects. Environmental costs could be identified in terms of dollars spent on the environmental portion of projects, disposal costs, fines and penalties for non-compliance, and environmental response to incidents. Currently, only qualitative information about the benefits of environmental programs is being considered; however, DOT is working to develop methods to monetize these benefits through the use of the SROI method. The results of this effort will become available over the next few years.

DOT will continue to strive to identify the cost of sustainability initiatives and measure quantitative benefits in terms of emission reductions, gallons of water saved, reduction in vehicle miles traveled, and other social factors. Not all of the benefits can be translated into dollar figures.

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

Mission-specific costs are usually measured against providing the required level of mission accomplishment. Benefits could be addressed based on lives saved or buildings protected, but this would be challenging to quantify. Benefits are typically qualitatively represented, but not fully quantified. Other factors that may be more fully considered are if the sustainability programs allow for missions to be achieved with enhanced efficiency, reliability and cost-effectiveness.

**e. Operations & Maintenance and Deferred Investments:**

DOT is considering many alternative processes that can help identify and prioritize operations and maintenance issues and also include sustainability as a factor. In addition, SROI is a significant factor in the prioritization.

**f. Climate Change Risk and Vulnerability:**

Climate change has the potential to impact DOT's facilities, operations, and mission, e.g., the increasing intensity and number of extreme weather events threaten the nation's transportation infrastructure. DOT must implement its own cost-effective strategies to address these concerns by planning adaptation strategies. This includes but is not limited to: incorporating adaptation measures to potential changes in the natural environment into mission plans. Such strategies can save taxpayer dollars and safeguard public health and the environment. DOT has taken the first steps in adaptation planning by issuing a Departmental Adaptation Policy Statement which can be found in Appendix 2.

Costs and benefits resulting from climate change impacts must be addressed or quantified in DOT evaluation processes. While it is challenging to predict, quantify, and weigh the costs and benefits resulting from climate change impacts, DOT will develop a proactive approach in evaluating climate change risks in the planning, design, construction, renovation of its facilities and infrastructure. Additionally, DOT will consider the following strategies for addressing and prioritizing considerations involving climate change risks and vulnerabilities: • Develop a climate change adaptation plan for the Department; and • As part of other facility and infrastructure security, and/or condition assessments, include evaluations related to climate change vulnerabilities, where appropriate; • Address sea level rise and other weather/climate changes in new and existing facility and infrastructure design and renovations, where appropriate. Possible strategies include prioritize cooling performance design and operation when modeling energy usage for new construction using expected climate temperature shifts, elevating existing facilities or building with larger setbacks; and • Begin to address the varying impacts of climate change across regions and different types of operational infrastructure.

In addition, DOT is working on a Secretarial policy memo on climate change adaptation, which is part of a larger process to get each of the OAs to begin planning for climate change. As part of this process, DOT has appointed our SSO to be the Adaptation Lead and asked each OA to also appoint a lead on adaptation. This senior level group will periodically meet to guide the Department's adaptation efforts. In addition to the policy memo, DOT will submit responses to CEQ's guiding questions designed to facilitate the Department's thinking about our vulnerability to climate change. The guiding questions will form the basis for two September CEQ milestones, which include a preliminary high level analysis of DOT's vulnerabilities (the final analysis is due in February 2012) and 3 to 5 priority actions to implement in FY 2012.

## **V. Evaluating Return on Investment (optional image)**

### **VI. Transparency**

The SSO, working through DOT's Senior Advisory Board, will establish the transparency methods that DOT will pursue which may include those goals below and others as yet unidentified.

Short-Term• Assistant Secretary for Administration will identify and recommend to the SSO which information in the SSPP should be made publicly available to ensure the Department is as open and as transparent as possible.  
• SSO will review Assistant Secretary for Administration's recommendations and send DOT's response to OMB.  
• Assistant Secretary for Administration will determine how to address pending OMB guidance for transparency.

Medium-Term• Assistant Secretary for Administration will identify how information will be shared both internally and externally.  
• Assistant Secretary for Administration will identify a process for sharing internally and externally along with assigning responsibilities.  
• Develop and implement pilots for internal information sharing such as SharePoint and intranet.  
• Develop and implement pilots for information sharing to the public and DOT's stakeholders.

Long-Term• Internal and external information routinely shared.

*Internal Communications:*The SSPP will be posted on the DOT intranet and SharePoint along with periodic progress reports. Informational and awareness materials will be developed for the DOT intranet site and broadcast messages and other relevant DOT communications mechanisms. Progress reports will become a standing item for the EMS Senior Advisory Board.

*External Communications:*A DOT Sustainability page will be developed for the DOT internet homepage to publicize the Department's efforts. Several DOT OAs will have the opportunity to capitalize on their daily interactions with the public and will be encouraged to develop strategies to benefit DOT's operations by publicizing sustainability efforts, when possible. In addition, any construction projects involving a NEPA review at the level of an Environmental Assessment (EA) or Environmental Impact Statement (EIS) will require DOT to provide opportunities for public input. DOT will continue to perform public notifications and outreach regarding such projects, not only to comply with NEPA requirements, but to promote transparency.

### **VI. Transparency (optional image)**

## **Section 2: Performance Review & Annual Update (Update and Submit Annually)**

### **I. Summary of Accomplishments**

The Department of Transportation (DOT) is committed to meeting the goals of EO 13514. Over the past year DOT has made much progress including:

Goal 1: Scope 1 and 2 GHG• Developing policy and guidance to reduce the energy intensity of buildings and maximize the use of renewable (e.g., solar, wind) and alternative energy (e.g., combined heat & power), especially through on-site generation and partnering with other federal agencies. • Using Energy Star Portfolio Manager to identify the best locations for renewable purchasing and/or onsite renewable generation. • Using the FEMP Alternative Fuel Station Located to determine the appropriate acquisition and distribution of alternative fuel vehicles. • Developed training and awareness to ensure that appropriate agency programs and technical personnel are knowledgeable about the energy and sustainable buildings requirements of EISA 2007 Section 432 and EO 13514. • Communicate DOT's progress in meeting the energy and water reduction and renewable energy goals to senior management. • Educate employees on the importance of using alternative fuels to help meet the requirements and increase DOT's alternative fuel usage overall. • Reduce facility energy consumption through the use of energy conservation measures (ECMs), energy audits, ESPCs and UESCs. • Perform comprehensive energy and water evaluations in 75 percent of the Department's total building inventory (based on annual energy consumption) every four years. • Directed OAs to right-size their fleets using the criteria established by the DOT Fleet Manager. • Ensure the optimal type and size of vehicles are acquired according to the mission it supports. • Continue efforts to reduce petroleum consumption through increased alternative fuel usage beyond the minimum requirement, acquisition of AFVs, and acquisition of hybrid and fuel efficient vehicles. • Sharing Annual Energy Report with other stakeholders to ensure transparency and create awareness. • Deployed a new information system that monitors petroleum consumption and alternative fuel usage in each OA. This has allowed early intervention measures to ensure DOT meets the 12 percent reduction goal. Data is used for the Deputy Secretary's Sustainability Scorecard review with the OA Administrators. • Converted the majority of the Headquarters fleet to alternative fuel vehicles and hybrids. • Developed a decision tool for use at DOT fueling centers to identify the most practical alternative fuel to be made available at the fueling center. • Completed comprehensive department-wide program to ensure compliance with new low GHG emitting vehicle regulations, which resulted in the replacement of approximately 1000 DOT vehicles.

GOAL 2: Scope 3 GHG Reductions and GHG Inventory• DOT instituted a Sustainability Scorecard into its quarterly "regulatory review" process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT's OAs. Targets for reduced employee commuting are on this scorecard and each Administrator is now regularly accountable for progress and success. • Issued an administrative order to all employees asking for participation in a transportation survey developed by the Volpe Center. The survey data was used to establish an initial baseline of employees' commuting characteristics, including mode of transportation used, distance traveled, and frequency of commute. • Completing the Department's first comprehensive GHG inventory and being on track to meet reduction targets. • Issuing an administrative order codifying a comprehensive recycling policy and a companion quick reference guide. • Finalizing and disseminating a printing and copying administrative order that requires all copiers and printers to be set to double-sided as a default and communicates other paper-saving guidelines. • Beginning to leverage the 2010 Telework Enhancement Act to promote increased telework. • Piloting hotelling practices in a few OAs. • Beginning to monitor progress and establish metrics for employee commuting in the Department's EMS and internal scorecard that evaluates EO and other Sustainability requirements and objectives across all 12 OAs and OST, twice annually. • Establishing a DOT-wide green team that includes all the OAs and is focused on creating a culture of sustainability across the Department and serves as a community of interest. • Increasing the capacity to use video conferencing and web-meeting technologies within several

OAs. • Initiating two Department-wide “IdeaHub” Challenges asking employees how they can reduce travel and commuting emissions and be more green at work with great response rates.

GOAL 3: High Performance Sustainable Design/Green Buildings & Regional and Local Planning • DOT instituted a Sustainability Scorecard into its quarterly “regulatory review” process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. Sustainable buildings targets are on this scorecard and each Administrator is now regularly accountable for progress and success. • Identified three more buildings that meet the HPSB Guidelines in the past year. • Created a process for identifying and prioritizing the best value target buildings for meeting the HPSB, renewable energy and GHG requirements. • Based on the outcome of the above process, established a portfolio of the targeted buildings for inclusion in the HPSB program • Implementing a number of sustainable building initiatives, which include installing several sustainable features (e.g., green roofs, solar array systems, energy efficient fluorescent and light emitting diode (LED) lighting, new boilers and HVAC systems, geothermal systems, demand management systems, and state of the art metering). • Added the Sustainability data element to the Real Estate Management System (REMS) Database. • Issued policy guidance from the Deputy Secretary that required each OA to develop an action plan to meet their HPSB targets, and update this plan periodically. • FAA’s initiation of the development of Green Real Property Leasing AMS Guidance and clauses, which would include a component to incorporate environmentally sustainable principles in the siting, design, and construction of FAA facilities. • Starting programs within several OAs to incorporate the HPSB Guiding Principles in all new buildings and major renovation projects. • Hosting a number of trainings including a tailored training on using Energy Star Portfolio Manager. As a result, several OAs have begun entering data into this system. • MARAD undertaking a \$4.8 million dollar ESPC project and two other OAs are starting an ESPC process. • Several OAs assessing public transportation in future site locations of administrative offices. • MARAD now working with local and regional planning officials to improve efficiency and reduce truck traffic by instituting marine highway, infrastructure, and port development projects nationwide.

Goal 4: Water Use Efficiency and Management • DOT instituted a Sustainability Scorecard into its quarterly ‘regulatory review’ process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. Water reduction targets are on this scorecard and each Administrator is now regularly accountable for progress and success. • Begin entering water consumption data into Energy Star® Portfolio Manager. • Identify data limitations and methods to improve water consumption data. • Complete comprehensive water evaluations at DOT facilities which constitute 75 percent of total energy consumption as per EISA 2007 Section 432. • Develop a consistent set of metrics to measure water consumption across the organization. • Communicate goals to senior management on water use efficiency. Goal 5: Pollution Prevention and Waste Reduction: • Published DOT Recycling Order for all OAs in DOT HQ. • FAA two centers have continued to work closely in increasing their recycling at their recycling center. • RITA achieved better than 64 percent waste diversion rate at the Volpe Center which won local and state-wide awards for recycling.

Goal 6: Sustainable Acquisition • DOT instituted a Sustainability Scorecard into its quarterly ‘regulatory review’ process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. The 95 percent green procurement target is on this scorecard and each Administrator is now regularly accountable for progress and success. • Continued to implement the GPP policy to ensure EPEAT-registered electronic product procurement preference is almost 100 percent. • Conducted a DOT wide training on Green Procurement with speakers from Department of Veterans Affairs, Department of Agriculture and MARAD with over 200 attendees

(live and webinar). • DOT implemented a Green Procurement Compliance System to ensure the GPP is being implemented. • DOT COTR's are required to complete a Green Procurement training course to obtain FAC-COTR Certification. • FAA has updated their GPP and distributed it to all the Contracting Officers. • All FHWA's purchase card holders and contracting officers take training that includes Going Green guidance. This policy has been in place for several years and now encompasses areas such as construction contracts.

Goal 7: Electronic Stewardship and Data Centers • DOT instituted a Sustainability Scorecard into its quarterly 'regulatory review' process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT's OAs. Power Management targets are on the scorecard for OST and FAA, the managers of DOT's two computer networks system. The FAA Administrator and the OST CIO is now regularly accountable for progress and success. • Ensured new IT related contracts contain an exchange clause referencing FMR 102-39 to avoid disposal costs for the Agency and to ensure recycling. • Continued to implement the GPP to ensure EPEAT-registered electronic product procurement is the preference 100 percent. • Currently DOT has consolidated 1 Tier I-IV and 2 Tier V data centers and continues to strive toward meeting targets defined in the attached DOT FDCCI Plan. • DOT OAs began implementing duplex printing on its multi-function copier/printers and other energy-efficient or environmentally preferable features on its office equipment starting in January 2010, in accordance with DOT Printing Order 1360.5C. • FHWA has purchased software products (e.g., productivity management software) to support telework and reduce business travel with webinar and video conferencing technology. • RITA created and shared Federal Commuter Choice Survey for inventorying commuter greenhouse gases – survey tool was distributed to all Federal agencies as the best method available for accounting for Federal employee trips to and from work.

GOAL 8: Agency Innovation & Government-Wide Support DOT is taking a leadership role in promoting more transportation choices, promoting affordable housing and valuing communities through its interagency collaboration and leadership. By chairing the interagency team and working with the General Services Administration, EPA, Department of Housing and Urban Development and in coordination with the Department of Homeland Security and DOD, DOT developed the Guidelines for Sustainable Locations for Federal Facilities required by the EO. The impact of this work is significant as the Guidelines are to be used by all Federal agencies in determining future site locations.

Additionally, the U.S. DOT Volpe Center has contributed to the greater Federal GHG inventory effort by creating and providing the advanced methodology for scope 3 Federal commuter emissions through designing the "Commuter Choice Survey." The White House Council on Environmental Quality (CEQ) recognized the Volpe survey as the "best available method" for estimating GHG associated with Federal commutes and recommended its use to all Federal agencies for calculating their scope 3 emissions for the GHG inventory. DOT used this Volpe survey tool to survey all employees across the Department to measure their FY10 commuting emissions and achieved a reasonable response rate.

Finally, DOT will participate in regional and local transportation planning by integrating comprehensive stakeholder participation into current operating policy. DOT will continue to provide comprehensive information on Greenhouse Gases, Climate Change, Adaptation and Transportation through its Transportation and Climate Change Clearinghouse (TCCC). Through the TCCC website, DOT provides regional and local transportation planning leaders around the world access to state-of-the-art research and technical guidance surrounding this global issue.



Internally, DOT will work to establish a “green travel” policy which outlines carbon reduction strategies for employees on official travel, including recommendations for fuel-efficient vehicles and "green" lodging services. These strategies will be refined and enhanced in future annual updates of this Plan.

### **Goal 1: Scope 1 & 2 Greenhouse Gas Reduction (Basic Performance Discussion, A - H)**

As part of its commitment to meeting EO 13514, DOT has made much progress in the last year on Goal #1 including:

- Developing policy and guidance to reduce the energy intensity of buildings and maximize the use of renewable (e.g., solar, wind) and alternative energy (e.g., combined heat & power), especially through on-site generation and partnering with other federal agencies.
- Using Energy Star® Portfolio Manager to identify the best locations for renewable purchasing and/or onsite renewable generation.
- Using the FEMP Alternative Fuel Station Located to determine the appropriate acquisition and distribution of alternative fuel vehicles.
- Developed training and awareness to ensure that appropriate agency programs and technical personnel are knowledgeable about the energy and sustainable buildings requirements of EISA 2007 Section 432 and EO 13514.
- Communicate DOTs progress in meeting the energy and water reduction and renewable energy goals to senior management.
- Educate employees on the importance of using alternative fuels to help meet the requirements and increase DOT’s alternative fuel usage overall.
- Reduce facility energy consumption through the use of energy conservation measures (ECMs), energy audits, ESPCs and UESCs.
- Perform comprehensive energy and water evaluations in 75 percent of the Department’s total building inventory (based on annual energy consumption) every four years.
- Directed OAs to right-size their fleets using the criteria established by the DOT Fleet Manager.
- Ensure the optimal type and size of vehicles are acquired according to the mission it supports.
- Continue efforts to reduce petroleum consumption through increased alternative fuel usage beyond the minimum requirement, acquisition of AFVs, and acquisition of hybrid and fuel efficient vehicles.
- Sharing Annual Energy Report with other stakeholders to ensure transparency and create awareness.
- Deployed a new information system that monitors petroleum consumption and alternative fuel usage in each OA. This has allowed early intervention measures to ensure DOT meets the 12 percent reduction goal. Data is used for the Deputy Secretary’s Sustainability Scorecard review with the OA Administrators.
- Converted the majority of the Headquarters fleet to alternative fuel vehicles and hybrids.
- Developed a decision tool for use at DOT fueling centers to identify the most practical alternative fuel to be made available at the fueling center.
- Completed comprehensive department-wide program to ensure compliance with new low greenhouse gas emitting vehicle regulations, which resulted in the replacement of approximately 1000 DOT vehicles.

The Department is committed to reduce emissions beyond its own organizational boundaries and to influence employee and supplier behavior to reduce greenhouse gas emissions and protect the climate. As required by EO 13514, DOT submitted its scope 1 and 2 greenhouse gas percentage reduction target for Fiscal Year (FY) 2020 relative to a FY 2008 baseline. The Department used the Development of Agency Reduction Targets (DART) tool created by the Office of the Federal Environmental Executive (OFEE) to calculate its reduction target. DOT is committed to achieving a 12.3 percent reduction in scope 1 and 2 GHG emissions by FY 2020.

DOT will implement aggressive energy and fuel savings activities to reach the GHG reduction target identified above. GHG reduction will be achieved through a High Performance Sustainable Buildings (HPSB) program (see Goal 4 in this plan) along with additional initiatives specifically targeting alternative fuels and high efficiency

vehicles. The GHG reduction goal requires establishing new initiatives, tools, and policies, along with developing awareness and training. The following is an overview of the goals and short, medium, and long-term initiatives that will achieve the EO goals. The GHG reduction goal will be integrated with other EO goals (e.g., Sustainable Buildings requirements) to achieve greater overall implementation efficiency. These strategies will be further refined in future annual updates of this Plan.

**a. Goal description –**

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Develop and implement innovative policies and practices to reduce overall agency scope 1 and 2 GHG emissions by 12.3 percent by 2020 relative to an FY 2008 baseline.

*BUILDINGS*• Reduce facility energy intensity by 30 percent by 2015 (Baseline: FY 2003).• Purchase Green Power or Renewable Energy Certificates (RECs)--the equivalent of 10 percent of the Department's 2015 electricity consumption which is approximately 110,000 MWH of renewable electricity annually (DOT currently purchases 32,000 MWH of renewable electricity).• Install onsite renewable energy power project(s), where appropriate, with the goal of doubling the Department's current on-site renewable energy production to 820 MWH.• Reduce per capita energy consumption through space management policies. This is being addressed through DOT orders to comply with EO 13327.

*FLEET*• Reduce petroleum use in fleet vehicles by 2 percent annually through FY2020 (Baseline FY2005).• Increase use of alternative fuels in Fleet AFVs.• Optimize use of vehicles and right-size fleet.• Increase use of low GHG-emitting and high fuel economy vehicles.• Replace conventional senior executive fleet with low-GHG emitting, highly-efficient vehicles.• Streamline existing shuttle bus routes by consolidating ridership with other agencies. Identify specific challenges related to consolidation of and/or sharing of transportation services with other agencies.

**b. Department lead for goal –**

The Assistant Secretary for Administration is the designated Agency lead for scope 1 & 2 GHG emissions, and has responsibility for target development implementation, monitoring, evaluation and oversight.

**c. Implementation methods –**

DOT plans to achieve the established scope 1 and 2 reduction targets by increasing building energy efficiency and renewable energy use through Green Power Purchases, on-site generation and/or Renewable Energy Certificates and aggressive use of telework program to reduce commuter emissions. DOT will also revamp its space design and allocation standards to enhance reduction of GHG emissions. DOT plans to reduce fossil fuel use in non-tactical vehicle fleets, by acquiring low GHG emitting vehicles such as hybrids and AFVs; optimizing the number of vehicles in the agency's fleet, using alternative fuel in AFVs and FFVs; developing alternative fuel infrastructure; direct spending on training; and procurement of environmentally preferable motor vehicle products

*BUILDINGS*:• Reduce non-excluded\* facility energy intensity by 30 percent by 2015 (Baseline: FY 2003).• Reduce electricity by 10 percent in non-excluded\* facilities from 2015 to 2020.• Reduce natural gas 10 percent in non-excluded\* facilities from 2015 to 2020.• Purchase 110,000 MWH of renewable electricity annually (DOT

currently purchases 32,000 MWH of renewable electricity).• Install onsite renewable energy power project(s), where appropriate, with the goal of doubling the Department’s current on-site renewable power production to 820 MWH. • Purchase Renewable Energy Certificates (RECs) to the equivalent of 10 percent of the Department’s 2015 electricity consumption from 2015 to 2020. • Perform comprehensive energy and water evaluations in 75 percent of the Department’s total building inventory (based on annual energy consumption) every four years. • Benchmark all metered buildings using the U.S. Environmental Protection Agency’s Energy Star® Portfolio Manager. A metered building is a building with one or more meters (advanced or standard) installed to measure energy consumed within that building. Metered energy includes electricity, natural gas, and steam. Other utilities may be metered as an energy or water management best practice. • Establish space allocation standards that consider the cost savings of telework and provide a standardized means to capture the savings from telework on new space requests.

Note: \*Non-excluded facilities are the facilities covered under EO 13423 and which are required to meet the 2015 target of 30 percent reduction in energy consumption.

*FLEET*: • Reduce petroleum use in fleet vehicles by 2 percent annually through FY2020 (Baseline FY2005). • Reduce gasoline usage by 15 percent from 2015 to 2020. • Reduce diesel fuel usage by 10 percent from 2015 to 2020. • Increase use of alternative fuels in Fleet AFV's by 10 percent annually through FY2020 (baseline FY2005). • Use of 15,000 gasoline gallon equivalents (GGE) from biodiesel from 2015 to 2020. • Use 5,000 GGE of electric power for electric vehicles from 2015 to 2020. • Increase use of alternative fuels in fleet AFVs. • Optimize use of vehicles and right-size fleet. • Increase use of low emission and high fuel economy vehicles. • Develop alternative fuel infrastructure where practicable. • Target and track spending on training; and procurement of environmentally preferable motor vehicle products.

DOT has developed scope 1 and 2 emissions reduction strategies that include short-, medium-, and long-term initiatives to accomplish these goals.

### 1.1. Short-Term Initiatives (1-2 years)

1.1.1. Policy and Guidance • Develop policy and guidance to reduce the energy intensity of buildings and maximize the use of renewable (e.g., solar, wind) and alternative energy (e.g., combined heat & power), especially through on-site generation and partnering with other federal agencies. • Develop policy for fuel efficient and alternative fuel vehicles and issue administrative order requiring use of low emission and high fuel economy vehicles, when practical.

1.1.2. Planning and Design • Use Energy Star® Portfolio Manager and US EPA eGRID to identify the best locations for renewable purchasing and/or onsite renewable generation, where appropriate. • Use Energy Star® Portfolio Manager to conduct baseline energy audits at DOT sites to determine existing and future energy sources and energy consumption, where appropriate. • Use the FEMP Alternative Fuel Station Location website to determine the appropriate acquisition and distribution of alternative fuel vehicles.

1.1.3. Training and Awareness • Develop training and awareness to ensure that appropriate agency programs and technical personnel are knowledgeable about the energy and sustainable buildings requirements of EISA 2007, EO 13514 and the Sustainable Building Implementation Plan (SBIP). • Communicate DOT's progress in meeting

the energy and water reduction and renewable energy goals to senior management. • Require employees to use alternative fuels (where appropriate) to help meet the requirements and increase DOT's alternative fuel usage overall.

1.1.4 Buildings • Reduce facility energy consumption through the use of energy conservation measures (ECMs), energy audits, ESPCs and UESCs. • Pursue reduction of agency space by implementing aggressive telework policy and guidance together with space allocation policy allows the agency to realize real space reduction. • Perform comprehensive energy and water evaluations in 75 percent of the Department's total building inventory (based on annual energy consumption) every four years.

1.1.5. Fleet • Direct OAs to right-size their fleets using the criteria established by the DOT Fleet Manager. • Reassess vehicle needs for mission support to ensure the optimal type and size of vehicles are acquired according to the mission it supports. • Continue efforts to reduce petroleum consumption through increased alternative fuel usage beyond the minimum requirement, acquisition of AFVs, and acquisition of hybrid and fuel efficient vehicles. • Continue to swap out E85 vehicles where alternative fuel infrastructure is non-existent with hybrids and electric cars. • Maximize the use of public transportation, enhance the Department's shuttle program, and requisition of alternative fuel vehicles where alternative fuel stations are located. • Schedule business trips to avoid roadway congestion associated with peak travel times.

1.1.6. Tracking and Reporting • Track energy reduction performance and renewable energy use in Energy Star® Portfolio Manager. • Implement a real time, interactive data system to monitor DOT's sub-organizations' fuel usage of alternative fuel vehicles; include an early intervention process that will notify DOT Fleet Manager of low alternative fuel usage in DOT's organizations. This system will facilitate targeting the best opportunities for improvement and early intervention to ensure the fleet goals continue to stay on track. • Identify the percentage and numbers of alternate fuel acquisitions in non-alternative fuel locations to assist DOT in reducing alternative fuel vehicle waivers from 10 percent to 5 percent and increasing new acquisitions of alternative fuel vehicles from 10 percent to 80 percent.

## 1.2. Medium-Term Initiatives (3-5 years)

1.2.1. Policy and Guidance • Update Department's energy, renewable energy and water policy order. • Develop processes and guidance to eliminate the use of ozone depleting compounds in existing buildings. Instead, where available, utilize alternative, environmentally preferable products, consistent with either the Montreal Protocol or Title VI of the Clean Air Act Amendments of 1990 or equivalent overall air quality benefits that take into account lifecycle impacts. • Utilize statements of work or specifications to eliminate virgin material requirements; promote the reuse of products, require the use of alternative fuels and alternative fueled vehicles; products containing recovered materials (e.g. EPA-designated products), products that are Energy Star® and FEMP designated or energy-efficient, water conserving WaterSense® labeled products, bio-based products, Environmentally Preferable Products, EPEAT registered products, and non-ozone depleting products.

1.2.2. Planning and Design • Establish a continuous commissioning program for DOT facilities to resolve operating problems, improve comfort, optimize energy use and identify candidate buildings for retrofit projects. • Develop policy and guidance to require the use of telework to a sufficient level to reduce the amount of space required to

house the agency and establish space allocation standards that reduce space utilization rates across DOT. • Develop DOT-wide space allocation policy that is designed to realize space savings resulting from department-wide telework policy. • Investigate and implement a DOT-wide onsite process to generate onsite biodiesel (e.g., use cafeteria grease) for vehicles and ships, where appropriate. • Partner with private sector and DOE on alternative fuel station locations and new vehicle technologies.

1.2.3. Training and Awareness • Communicate DOT's progress in meeting the energy reduction and renewable energy goals to senior management. • Facilitate and coordinate training and professional certification programs (e.g., Certified Energy Manager (CEM™) certification for energy managers, Leadership in Energy and Environmental Design (LEED) professional accreditation or a standard equivalent) for employees and contractors, to the extent possible or where appropriate. • Implement awareness program to promote energy conservation and energy efficiency, and distribute information on best practices through awareness and outreach programs across the OAs. • Share Annual Energy Report with other stakeholders to ensure transparency and create awareness.

1.2.4. Buildings • Continue to reduce facility energy consumption through the use of energy conservation measures (ECMs), energy audits, ESPCs and UESCs. • Continue to produce on-site renewable energy and reduce energy purchases from off-site sources. • Continue to benchmark and report building performance in Energy Star® Portfolio manager. • Compare actual performance data from the first year of operation with the energy design target using Energy Star® Portfolio Manager for building and space types covered by Energy Star®. • Perform comprehensive energy and water evaluations in 75 percent of the Department's total building inventory (based on annual energy consumption) every four years. • Install building level electricity meters in new major construction and renovation projects to track and continuously optimize performance. Per EISA Section 434, include equivalent meters for natural gas and steam, where natural gas and steam are used. • Install advanced meters at all high performance sustainable buildings and "covered" EISA 2007 Section 432 buildings, where appropriate. • Implement policy and guidance that requires consideration of space saving by use of telework, hoteling, alternative work schedules whenever acquiring or leasing a new building.

1.2.5. Fleet • Identify the percentage and numbers of alternate fuel acquisitions in non-alternative fuel locations to assist DOT in reducing alternative fuel vehicle waivers from 10 percent to 5 percent and utilize conventional fuel efficient vehicles where no alternative fuel infrastructure exists. • Utilize a fleet monitoring data base to track usage and daily miles of vehicles, and track performance to assist DOT OAs in meeting fleet management goals.

### 1.3. Long-Term Initiatives (6-10 years)

1.3.1. Policy and Guidance • Identify, collect and consolidate best management practices for reducing scope 1 and 2 GHG emissions and develop guidance documents.

1.3.2. Planning and Design • Conduct facilitated workshops with key stakeholders to develop and implement strategies for long-term initiatives to achieve DOT scope 1 and 2 emissions reduction goals for 2015 to 2020. • Develop technology to drive innovation to meet the goals taking into consideration to different geographic areas where DOT operates.

1.3.3. Training and Awareness• Communicate DOTs progress in meeting the energy and water reduction and renewable energy goals to senior management.

1.3.4. Buildings• Expand performance contracts (e.g., ESPCs, UESCs) throughout DOT• Maximize use of advanced meters and data available to meet energy intensity reductions.• Perform comprehensive energy and water evaluations in 75 percent of the Department’s total building inventory (based on annual energy consumption) every four years.

1.3.5. Fleet• Introduce new electric vehicle technology into fleet.

**d. Positions –**

Additional resources are needed at HQ and the OA level to ensure the Department meets all of the energy, water and renewable energy requirements in its buildings and the fuel reduction and alternative fuel use requirements in its vehicle fleet.

**e. Planning table –**

The Department’s planning table for this goal can be found at the end of this section.

**f. Department status –**

The Department is currently on track to meet its scope 1&2 reduction target of 12.3 percent for agency-wide GHG emissions by 2020. In FY 2010, DOT emitted approximately 732,900 metric tons CO<sub>2</sub>-equivalent (MTCO<sub>2</sub>e) of scope 1&2 GHGs from its operations. This represents a 57,636 MTCO<sub>2</sub>e decrease in absolute scope 1&2 emissions from its FY2008 baseline. Contributing to this decrease was the reduction in use of electricity in buildings subject to the EO 13423 goal across the Department.

Energy Consumption: DOT energy consumption as measured by intensity has decreased 23.4 percent since FY2003. DOT energy usage (BTU-per-gross-square-foot (BTU/GSF)) for FY2003 (base year) and FY2010 are summarized below, which also includes the percent change in BTU/GSF between baseline and current year.

DOT Energy Consumption\*:FY2003 (base year): 101,426FY2010: 77,664Difference: -23,762Percent Change from Baseline: -23.4 percent\*As measured by intensity (BTU/GSF) per EO 13423

As per EO 13423, the Department is required to reduce its energy consumption (as measured by intensity) by 30 percent by 2015 from base year 2003. In FY2010, the Department had reduced its total energy consumption (as measured by intensity) by 23.4 percent, meeting the Energy Policy Act of 2005 (EPA 2005) requirement.

Renewable Energy: Also contributing to the reduced energy consumption and scope 1&2 GHG emissions was the use of renewable energy at DOT facilities across the nation. In FY2010 approximately 3.6 percent of electricity consumed by the Department came from renewable resources. Under EPA 2005, the Department is required to ensure that at least 5 percent of its total electricity consumption came from renewable sources. As a result, DOT must step up its efforts to increase the use of renewable energy across the organization through funding, training, promoting, and partnering with other federal agencies.

Vehicle Fleet Fuel Use: In fiscal year 2010, DOT consumed 3,473,429 gallons of petroleum fuel and achieved a reduction of five percent from its 2005 baseline. DOT must continue to decrease the use of petroleum in its fleet in order to achieve the target requirement of 20 percent by 2015. During this same period DOT consumed 34,895 gasoline gallon equivalents (GGE) of alternative fuels, and must continue to increase the use of alternative fuel to meet EO 13423 requirements.

In order to reach petroleum and alternative fuel goals, DOT has implemented the new 'Integrated Logistics Management System' (ILMS). ILMS enables fuel usage monitoring. This allows for identification of problem areas within the fleet and the Department's OAs. Going forward the Department's fleet manager will use this tool to employ early intervention measures in order to get and stay on track with petroleum reduction and alternative fuel requirements. DOT will also launch an alternative fuel awareness campaign and continue right sizing of the fleet and vehicles initiatives. These efforts will enable DOT to meet its 2011 to 2015 petroleum reduction and alternative fuel use goals.

**g. Return on Investment –**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

**h. Highlights –**

DOT is pleased to provide a short summary of scope 1 and 2 achievements for the previous year by OA:

FAAThe Mike Monroney Aeronautical Center (MMAC) in Oklahoma City, OK, purchased sixteen electric maintenance vehicles for FY 2010, converting its gasoline powered maintenance vehicles to full electric.

MMAC installed a new Plate and Frame Heat Exchanger for the Aviation Records building. The Plate and Frame Heat exchanger provides free cooling and enables the chiller compressor to shut down when the outside wet-bulb temperature drops below the required chilled water set-point. The total cost for the project was \$75,000, and it has an annual estimated energy savings of \$7,000 and 563 MMBTU.

MMAC's Office of Facility Management (AMP) distributed Compact Fluorescent Lamps (CFL) to 400 employees during energy awareness month and provided information on Energy Star® products.

MMAC's Energy Manager coordinated energy efficiency technology training for Facility Management Staff to learn new technology and applications to building construction, renovation and maintenance. A total of 21 staff members were trained on utility energy service contracts (UESCs), ground source heat pumps, lighting automation, light emitting diodes (LEDs), solar day lighting, insulation and commissioning.

MARADInstalled high efficiency geothermal heat pumps at the U.S. Merchant Marine Academy. These energy improvements decreased the electrical usage by 1,300 MWH from 2009 to 2010. Additionally, the natural gas use decreased to 64,174 thousand cubic ft in 2010 as compared to 64,468 thousand cubic ft. in 2009.

Reduced the GSA Vehicle Fleet by 23 percent in 2009. Additionally, in 2010, MARAD purchased alternative fuel source vehicles (electric) accounting for four percent of the inventory.

A Super Energy Savings Performance Contract (ESPC) is currently underway at the US Merchant Marine Academy. The Super ESPC has financed a \$4.8 million capital outlay that provides many energy conservation measures including energy efficient lighting upgrade, chiller interconnection and control, water fixture upgrades, and energy management control system upgrades. The annual ESPC savings verification report for 2010 indicates an energy saving of 29,571 MBtu/yr was realized resulting in an energy cost saving of \$857,338 and an operation and maintenance savings of \$518,190.

NHTSAIn support of DOT's Fleet right-sizing initiative to reduce gasoline consumption and the GHG associated with it, NHTSA reduced its agency fleet by 8.33 percent in FY2010. This right-sizing initiative examined vehicles leased from GSA with less than 800 miles per month. NHTSA will continue to monitor this area closely in order to seek opportunities for further reduction.

FHWABeginning with the installation of solar panels in 2003 at the Turner Fairbanks Highway Research Center, FHWA has reduced energy consumption at both of our owned facilities. Below are the numbers from 2009 and 2010 on electricity usage at FHWA owned facilities.

FHWA Electricity Usage(Owned Facilities)FY 2009: 7507.9 MWh FY 2010: 7098.7 MWh% Decline: 5.5%

The FHWA offices nationwide continue to lease or purchase E85 vehicles whenever possible. Over 60 percent of FHWA's vehicles in non-waivered areas are E85 vehicles.

The FHWA's shuttle bus between the Turner Fairbanks Highway Research Center (TFHRC) in McLean, Virginia and the Headquarters building in Washington, D.C., was replaced with an alternative fuel vehicle (AFV) powered by propane. The shuttle travels 154 miles a day, 260 days a year, and 40,040 miles a year. Compared to gasoline, propane yields 87 percent; less smog producing hydrocarbons, up to 90 percent less carbon monoxide, 12 percent less carbon dioxide, and 50 percent fewer toxins and other smog producing emissions.

RITADuring the FY 2010 reporting period, the Volpe Center documented the following GHG and energy progress:• Reduced scope 1 and 2 GHG emissions by 6.5 percent;• Reduced energy intensity in goal-subject facilities by 9.3 percent, relative to a targeted 12 percent reduction for FY 2010;• Used approximately 5 percent renewable energy from electric, thermal, or mechanical sources to power facilities and equipment, relative to a target of 5 percent; and• Reduced fleet (for single vehicle) petroleum use compared with the FY 2005 baseline, relative to a 10 percent reduction target for FY 2010.

SLSDCAs a result of the third-party study of energy and water use at the SLSDC's facilities, the SLSDC has worked on the HVAC controls at the Administration Building to correct issues found with the night-time setbacks.

In addition, the SLSDC continued to purchase more energy efficient vehicles to replace vehicle in the fleet and utilized webcasts and online training to limit business travel whenever possible.



OIGThis year OIG’s Regional Office in Ft. Worth, TX will serve as a test site for low GHG vehicles. OIG has leased five new low GHG-emitting vehicles, making Ft. Worth the first OIG office well on the way to a completely “green fleet”. If low GHG-emitting vehicles prove successful in meeting OIG law enforcement functional requirements, low GHG-emitting vehicles will be phased in nationwide as leased vehicles come up for replacement. OIG’s ultimate goal is an OIG fleet that is composed entirely of low GHG-emitting vehicles. Employees are also encouraged to use E85 fuel whenever possible.

FRAA 1.9 percent total reduction of scope 1 and 2 GHG emissions was demonstrated from 2008 to 2009. This reduction is on par to meet the DOT agency wide scope 1 and 2 GHG emissions reduction target of 12.3 percent by FY 2020 relative to FY 2008 (average annual reduction of 1.025 percent).

FMSCAFMCSA made progress in its efforts to increase fleet vehicle efficiency. FMCSA increased its average fleet miles per gallon by 22.0 percent for city miles per gallon (mpg) and 10.0 percent for highway mpg in 69 of its fleet vehicles in the last year. By using mpg as a measure, FMCSA is on track to meet the goal to reduce petroleum use by 20 percent by 2015.

Below is the planning table for this goal.

**Goal 1: Scope 1 & 2 Greenhouse Gas Reduction (Planning Table)**

.	SCOPE 1&2 GHG TARGET	Unit	FY10	FY11	FY12	FY13	FY14	FY15	...	FY20
Build-ings										
Build-ings										
Build-ings	Energy Intensity Reduction Goals (BTU/SF reduced from FY03 base year)	%	15	18	21	24	27	30		
Build-ings	Planned Energy Intensity Reduction (BTU/SF reduced from FY03 base year)	%	15	18	21	24	27	30	...	
Build-ings	Renewable Electricity Goals (Percent of electricity from renewable sources)	%	5	5	5	7.5				
Build-ings	Planned Renewable Electricity Use (Percent of electricity from renewable sources)	%	5	5	5	7.5			...	

.	<b>SCOPE 1&amp;2 GHG TARGET</b>	<b>Unit</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Fleet	Petroleum Use Reduction Targets (Percent reduction from FY05 base year)	%	10	12	14	16	18	20		30
Fleet	Planned Petroleum Use Reduction (Percent reduction from FY05 base year)	%	10	12	14	16	18	20	...	30
Fleet	Alternative Fuel Use in Fleet AFV Target (Percent increase from FY05 base year)	%	61	77	95	114	136	159		
Fleet	Planned Alternative Fuel Use in Fleet AFV (Percent increase from FY05 base year)	%	61	77	95	114	136	159	...	
Fleet	Senior Executive Fleet Replaced with Low-GHG, High Efficiency Vehicles (Percent replaced from FY08 base year)	%	100	100	100	100	100	100	...	
.	Other as defined by agency								...	
.	Total Scope 1 & 2 GHG Emissions (Comprehensive)	MMTCO2e	777.3199						...	
.	Total Scope 1 & 2 GHG Emissions (Subject to Agency Scope 1 & 2 GHG Reduction Target)	MMTCO2e	732.8788						...	
.	Overall Agency Scope 1 & 2 Reduction (reduced from FY08 base year)	%	10.8						...	

**Goal 1: Scope 1 & 2 Greenhouse Gas Reduction (Goal-Specific Items)**

The goal-specific items were addressed within the basic performance section above.

**Goal 1 (optional image)**

## **Goal 2: Scope 3 Greenhouse Gas Reduction & Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory (Basic Performance Discussion, A - H)**

EO 13514 defines scope 3 greenhouse gas (GHG) emissions as emissions from sources not owned or directly controlled by a Federal agency, but related to agency activities, services, and employee travel and commuting. However, scope 3 emissions are the consequence of agency activities. For this reason, DOT is committed to reduce emissions beyond its own organizational boundaries and to influence the behavior of its employees and suppliers toward actions that reduce GHG emissions and protect the climate.

DOT submitted an overall scope 3 reduction target, in addition to reduction targets for each scope 3 category, to the CEQ Chair and the OMB Director on June 2, 2010. These reduction goals were calculated using the scope 3 target tool developed by the Office of the Federal Environmental Executive (OFEE).

The reduction in business travel and commuting by DOT employees will be the cornerstones of the strategy for reducing the Department's scope 3 GHG emissions. The Department has identified a goal of reducing employee travel emissions by 10 percent by 2020. To achieve this goal, the organization is going to deploy technology to remove the burden of place-based work and fully enable employees to work and collaborate from remote locations. For example, the Department has identified several opportunities to reduce employee business travel and commuting emissions through the use of video and web conferencing technology.

Additionally, the Department plans to pilot test a hotelling approach to space management combined with telework and compressed work week strategies to assess how to better utilize office space.

As part of its commitment to meeting EO 13514, DOT has made much progress in the last year on Goal 2 (scope 3 emissions/ GHG inventory) including:

- DOT instituted a Sustainability Scorecard into its quarterly "regulatory review" process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT's OAs. Targets for reduced employee commuting are on this scorecard and each Administrator is now regularly accountable for progress and success.
- Issued an administrative order to all employees asking for participation in a transportation survey developed by the Volpe Center. The survey data was used to establish an initial baseline of employees' commuting characteristics, including mode of transportation used, distance traveled, and frequency of commute.
- Completing the Department's first comprehensive GHG inventory and being on track to meet reduction targets
- Issuing an administrative order codifying a comprehensive recycling policy and a companion quick reference guide
- Finalizing and disseminating a printing and copying administrative order that requires all copiers and printers to be set to double-sided as a default and communicates other paper-saving guidelines
- Beginning to leverage the 2010 Telework Enhancement Act to promote increased telework
- Piloting hotelling practices in a few OAs
- Beginning to monitor progress and establish metrics for employee commuting in the Department's EMS and internal scorecard that evaluates EO and other Sustainability requirements and objectives across all 12 OAs and OST, twice annually.
- Establishing a DOT-wide green team that includes all the OAs and is focused on creating a culture of sustainability across the Department and serves as a community of interest
- Increasing the capacity to use video teleconferencing and web-meeting technologies within several OAs
- Initiating two Department-wide "IdeaHub" Challenges asking employees how they can reduce travel and commuting emissions and be more green at work with great response rates

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

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Develop and implement innovative policies and practices to reduce overall departmental scope 3 GHG emissions by 10.9 percent by 2020 relative to an FY 2008 baseline.
- Sub-Target – Reduce emissions from Federal business travel and commuting by 10 percent by 2020.
- Improve data accuracy and overall data collection and analysis methods related to scope 3 GHG emissions.
- Divert at least 50 percent of non-hazardous municipal solid waste, excluding construction and demolition (C&D) debris, by the end of fiscal year 2015.
- Divert at least 50 percent of C&D materials and debris by the end of fiscal year 2015.

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

The Assistant Secretary for Administration is the designated Department lead for scope 3 GHG emissions and the GHG inventory, and will have responsibility for target development implementation, monitoring, evaluation and oversight.

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

DOT will achieve the goals listed above by addressing the following scope 3 emissions categories, which were included when establishing the reduction targets (above):

- Federal employee travel - Business air travel - Business ground travel - Federal employee commuting - Conference planning and acquisition
- Contracted waste disposal - Contracted solid waste disposal - Contracted wastewater treatment
- Transmission and distribution (T&D) losses from purchased electricity

Using an integrated higher-tier Environmental Management System, DOT will identify and address additional scope 3 categories in the future as the methodologies, policies, and data sources for such categories are developed, as required by the CEQ Chair and the OMB.

*Federal employee travel* • Implement policies and activities to improve data accuracy and overall data collection and analysis methods related to Federal employee travel.

*Contracted waste disposal* • Divert at least 50 percent of non-hazardous solid waste, excluding C&D debris, by the end of fiscal year 2015 • Divert at least 50 percent of C&D materials and debris by the end of fiscal year 2015

*Transmission and distribution losses from purchased energy* • Reduce T&D system losses by increasing use of renewable energy sources.

DOT has developed scope 3 emissions reduction strategies that include short-, medium-, and long-term initiatives to accomplish these goals.

#### 2.1. Short-Term Initiatives (1-2 years)

2.1.1. Policy and Guidance• A transportation survey will be issued to all DOT employees on a periodic basis to measure GHG emissions from commuting. • Establish a DOT-wide recycling policy. • Create awareness of DOT-wide double-sided copying and printing policy included in DOT Electronic Stewardship Plan.

2.1.2. Planning and Design• Explore, promote and expand additional flexible work place and schedule options, including hotelling, compressed work week scheduling, telework centers, adding a combined telework and compressed work week option for appropriate employees. • Plan to update departmental space standards to actively pursue space reduction resulting from the above initiative and develop metrics to capture the savings generated from these efforts. • Develop a plan to measure employee commuting benefits/subsidies offered by DOT to promote the use of public transportation. • Leverage the Telework Enhancement Act of 2010 to increase the levels of telework participation. • Develop a program to monitor and measure telecommuting benefits and report to senior management periodically. • Monitor progress and establish metrics for employee commuting in the Department's EMS and internal scorecard that evaluates EO and other Sustainability requirements and objectives across all 12 OAs and OST, twice annually.

2.1.3. Training and Awareness• Increase awareness of DOT's telework program through a communications strategy that includes e-mails, electronic newsletters, webinars (net meetings), TMS training modules, and briefings. • Develop training on productivity management for both managers and employees to facilitate manager acceptance and improve productivity for all employees, both in the office and working at home. • Create a DOT-wide greening initiative, that includes energy conservation and waste reduction, to foster culture change that is directed to all employees with an emphasis on key stakeholders and decision-makers.

2.1.4. Federal Employee Travel and Commuting• Encourage employees to increase utilization of conference calls, videoconference technology, webinars, and web conferences, including real-time document sharing and modification capabilities. • Provide tools that encourage employees to request more fuel-efficient rental vehicles. • Encourage managers and employees to telework, use alternative work schedules, utilize public transportation, bike, or walk to work. • Implement policies and activities to require minimizing business travel and use of mass transit when planning conference locations and the use of "green" conference facilities whenever feasible.

2.1.5. Contracted waste disposal• Require all new and renewed waste management and janitorial contracts include recycling of waste streams, and require contractors to measure, track and report waste disposal and recycling rates. • Recycle mixed office paper, which includes nearly all waste paper generated in an office, such as white paper (copier, printer, and notepaper), colored paper, file folders, and envelopes. • Encourage sensible practices for office paper usage, such as (a) reviewing documents on-line, rather than printing them out; (b) providing information electronically instead of through paper; and (c) distributing paper documents through routing rather than through duplication. • Set double-sided copying or printing as the default mode for all copiers and printers DOT-wide. • Quantify amount of office paper reduction by mode to increase accountability. Compare the quantities purchased during a baseline period (i.e., before implementation of the double-sided copying/printing policy) and a post-implementation period to monitor changes in consumption of paper from double sided printing. • Evaluate lifecycle of office products prior to purchasing (See Goal 6). • Use alternative technologies (e.g., websites) to disseminate information to stakeholders instead of using paper, pamphlets, etc.

2.1.6. Transmission and distribution losses from purchased energy• Reduce T&D emissions at DOT by reducing facility energy consumption through the use of energy conservation measures (ECMs), energy audits, commissioning, Energy Savings Performance Contracts (ESPCs) and Utility Savings Energy Contracts (USECs). (See Goal 1)• Produce on-site renewable energy and reduce energy purchases from off-site sources. (See Goal 1)

2.1.7. Facility Tracking and Reporting• Improve data accuracy and overall data collection and analysis methods. • Communicate results/conclusions/analysis of data collection to employees to create awareness and change behavior. • Develop an employee commuting and business travel dashboard to communicate key goals, requirements, etc. • Develop a community of interest to capture best practices (e.g., green alternatives for traveling) and share implementation strategies. • Identify POCs for procurement to make sure people know who to contact to get information on products and services. • Participate in interagency working groups on employee commuting and business travel to help refine these methodologies for data collection and reporting.

## 2.2. Medium-Term Initiatives (3-5 years)

2.2.1. Federal Employee Travel• Utilize on-line booking agent GovTrip to collect data and request for modifications to GovTrip to provide end point data and incorporate fuel efficiency requirements to support tracking progress and calculate emission reductions. • Launch a DOT-wide share space (hotelling) program pilot coupled with space allocation standards and develop metrics, and measure costs and benefits. • Launch a program for alternative modes of transportation (e.g., bike to work program). • Assess and develop new technologies (e.g., higher quality videoconferencing, user friendly IT tools to support videoconferencing from desktops) to reduce trips. Current technologies (e.g., web conferencing) may be limiting. • Develop productivity management tools for employees and managers to promote telework. • Provide secure access to allow employees to login from remote locations to DOT systems/secure lines. • Consider utilizing the Aviation Environment Design Tool (AEDT) developed by FAA to calculate the emissions associated with Federal aircraft business travel.

2.2.2. Contracted waste disposal• Adopt best practices for all other office supplies management, besides paper. • Calculate cost savings from being “paper-smart”; which could be used for investing in other recycled products. Develop methodology to make DOT a paperless office in terms of records management to optimize space usage and establish performance metrics to measure progress. • Capture waste stream by mass/weight and type as opposed to by volume to facilitate comparison DOT-wide wide and to achieve compliance with EOs. (See Goal 5) • For leased buildings (without delegated authority), request waste generation weight by streams. • Review existing and newly issued waste management and janitorial contracts to ensure that recycling provisions are being included. (See Goal 5)

2.2.3. Transmission and distribution losses from purchased energy• Reduce T&D emissions at DOT by reducing facility energy consumption through the use of energy conservation measures (ECMs), energy audits, Energy Savings Performance Contracts (ESPCs) and Utility Savings Energy Contracts (USECs). (See Goal 3)• Where practical and economical, switch to direct fuel usage for energy needs that have lower net GHG emissions. (See Goal 1)• Produce on-site renewable energy, and reduce energy purchases from off-site sources. (See Goal 1)

## 2.3. Long-Term Initiatives (6-10 years)

2.3.1. Planning and Design • Conduct facilitated workshops with key stakeholders to develop and implement strategies for long-term initiatives to achieve DOT scope 3 emission reduction goals.

2.3.2. Policy and Guidance • Identify, collect and consolidate best management practices for reducing scope 3 GHG emissions and develop guidance document. • Develop guidance for employees on “preferred” (greener) modes of transportation and require consideration of all modes of transportation (both rail and air) costs and benefits (including overall cost, value of employee time, emissions, etc.) when submitting travel authorizations. • Develop a community of experts across the OAs that can address scope 3 emissions across DOT.

2.3.3. Training and Awareness • Share Annual Energy Report with stakeholders to create awareness and communicate goals to management on energy consumption and identify opportunities for improvement.

#### **d. Positions -**

DOT needs to acquire either internal or external greenhouse gas subject matter expertise. DOT will also need to build expertise within other offices across the Department such as human resources, facilities management, contracts, and travel management. Without the support and buy-in of these offices, implementing policies and programs related to employee work arrangements, contracted waste, and employee business travel will not be successful. For each of the offices mentioned, it will be challenging to get staff to focus on these issues which are not directly relevant to their daily activities and could be seen as a new burden.

#### **e. Planning Table -**

The Department's planning table for this goal can be found at the end of this section.

#### **f. Department Status -**

DOT has made some progress in its scope 3 goals in FY10. The primary focus was on improved data collection and beginning to increase employee awareness of the GHG emissions related to commuting and business travel.

DOT issued an administrative order to all OAs encouraging all employees participate in a transportation survey developed by the Volpe Center. The survey data was used to establish an initial baseline of employees' commuting characteristics, including mode of transportation used, distance traveled, and frequency of commute.

For business travel, DOT utilized GSA's Travel Management Information System (TMIS) to automatically calculate air travel and rental car emissions based on travel card transaction data for all of DOT's business travel. This method led to some questions about whether the TMIS tool offers a complete picture of DOT's travel emissions. DOT is currently investigating these issues.

To reduce GHG emissions associated with employee commuting, DOT has a telework policy and program in place. DOT has designated telework coordinators who work with the Office of Personnel Management to implement DOT's telework program. They have increased their efforts as a result of the passage of the Telework Enhancement Act of 2010, although full implementation of the new law will take effect in the next couple of years. This program provides policy, guidance, leadership, planning, and consulting services for telecommuting in DOT. DOT offers

online telework training for managers and employees and a mandatory IT security training for all teleworkers. In addition, DOT offers other resources for performance management, including guidance documents, websites and a work plan structure agreement that provides a framework for the discussion that needs to take place between the manager and the employee about expectations.

Several of the DOT Offices plan to investigate and potentially pilot emerging best practices for sharing work stations through alternative work stations and intensifying use of floor space (e.g. hotelling).

DOT formed a bicycle commuter group in 2007 for commuters who bike or walk to DOT HQ. The group meets periodically to discuss topics of interest and to develop methods which encourage and promote wider participation in bicycling and walking as modes of transportation. The group shares information about commutes with cyclists and other interested parties and is working to improve bicycle facilities for people who work at DOT HQ. On May 24, 2010, Assistant Secretary for Administration Linda Washington signed a new transit benefit policy for bikers. The policy is the first of its kind, and grants up to \$20 per month for bicycle maintenance to DOT employees who bike to work. The goal is to encourage employees to choose transportation methods that improve air quality and personal health. DOT HQ has also provided additional bike racks to support this policy,

DOT's future plans are outlined above with the near, medium, and long term initiatives. For example, the Department is already actively working on the recycling policy and promoting the new double-sided printing policy. DOT has also started a DOT-wide Green Team that will help to raise awareness and promote culture change.

#### **g. Return on Investment -**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

#### **h. Highlights -**

##### Commuter Survey – Measuring Scope 3 GHG Emissions

The U.S. DOT Volpe Center has contributed to the greater Federal GHG inventory effort by creating and providing the advanced methodology for scope 3 Federal commuter emissions through designing the “Commuter Choice Survey.” The White House Council on Environmental Quality (CEQ) recognized the Volpe survey as the “best available method” for estimating GHG associated with Federal commutes and recommended its use to all Federal agencies for calculating their scope 3 emissions for the GHG inventory. DOT used this Volpe survey tool to survey all employees across the Department to measure their FY10 commuting emissions and achieved a reasonable response rate.

##### Teleworking and Commuting

A number of DOT's OAs have reported an increase in the number of their employees that are participating in teleworking. For example, FHWA reported that 43 percent of their employees telework at least once a pay period and the number continues to increase. This resulted in 66,400 fewer commuting trips.



Another OA, NHTSA, has been promoting telework and achieved an almost 10 percent increase in telework hours from FY09 to FY10. This was coupled with an 8 percent increase in employees who applied for commuter benefits and switched to public transportation as their commuting method.

Deploying Video and Webconferencing Capabilities

DOT plans to continue to increase awareness and capability of collaborating through video and webconferencing tools. Some parts of the Department have made great strides in this area. For example, the Office of the Inspector General has installed video conferencing capability at their headquarters and all 17 regional offices, greatly reducing business travel. Other OAs such as FHWA, RITA, and FAA also offer video teleconferencing capabilities. Although DOT is making progress, there is still much to be done to deploy this capability throughout the Department.

Challenges: Growth in number of employees and accurate data

Although DOT is taking steps to not only quantify but also reduce scope 3 emissions, the Department faced some uphill battles in achieving reductions. The first factor was an increase in number of DOT employees since 2008. The measure is an absolute measure, but a growth in employees has a direct impact on all elements of scope 3 emissions - commuting, travel, waste, and transmission losses.

The second challenge was related to accurate data. Although DOT collected data through various systems such as the TMIS tool and electricity bills, DOT will continue to strengthen the confidence in its data collection. As indicated above, DOT is an active participant in interagency groups to refine these data collection methodologies.

Below is the planning table for this goal.

**Goal 2: Scope 3 Greenhouse Gas Reduction & Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory (Planning Table)**

<b>SCOPE 3 GHG TARGET</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Total Scope 3 GHG Emissions (Comprehensive)	MMTCO2e	325.9						...	
Total Scope 3 GHG Emissions (Subject to Agency Scope 3 GHG Reduction Target)	MMTCO2e	324.3						...	
Overall Agency Scope 3 Reduction (reduced from FY08 base year)	%	+4.76						...	
Overall Agency Scope 3 Reduction Target (reduced from FY08 base year)	%	1	1	1	1	1	2	...	11

## **Goal 2: Scope 3 Greenhouse Gas Reduction & Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory (Goal-Specific Items)**

Most of the goal-specific items were addressed within the basic performance section above, however the GHG inventory development process is described below.

### **GHG Inventory Development**

With the cooperation of each of its OAs, DOT established a new baseline estimate of greenhouse gas emissions for FY 2008 and completed its comprehensive FY2010 inventory as per EO 13514. The Department used the template developed by DOE FEMP, the Greenhouse Gas and Sustainability Data Report, to assist in developing its baseline and inventory.

DOT identified, collected, and managed all data required to inventory emissions in a top-down fashion. The Department used existing data streams and reporting tools when possible, and developed new reporting tools as needed. In particular, the data call process utilized existing data collection processes for annual energy reporting including data from the Real Estate Management System (REMS), fleet management data from the Federal Automotive Statistical Tool (FAST), solid waste information captured in the Green Purchasing and Waste Management report and employee business travel captured in the GSA TravelTRX system. The Office of the Secretary (OST) maintained the DOT-wide GHG data reporting spreadsheet provided by DOE FEMP. OST provided each OA POC with a data call template requesting only data that is managed at or within the OA level.

DOT created an Inventory Management Plan (IMP) for the management of greenhouse gas (GHG) accounting within for the Department. DOT did perform 2nd party audits; however DOT did not pursue external verification this past year. ISO 14064 requires external verification, but the Guidance does not require agency inventories to be ISO 14064 compliant. OA POCs were responsible for internally reviewing their GHG inventory data for gaps or errors before submitting data to OST Administrative Policy GHG Lead (GHG Lead). The GHG Lead conducted two independent data reviews: a pre-submission review, and a post-submission review.

*Pre-submission review* Before submitting the DOT inventory for management review, the GHG Lead independently reviewed OA data for gaps or errors. The GHG Lead compared OA submissions to historic baselines, and as necessary, OST requested OA POCs to correct and resubmit data, as needed.

*Post-submission review* After submitting the DOT inventory for management review, the GHG Lead performed an in-depth analysis of OA data submissions. This analysis consisted of: contacting utilities to verify submitted utility bills, requesting documentation of fugitive emission releases and interviewing facility managers on data systems.

The SSO, Kathryn B. Thomson (Counselor to the Secretary), is responsible for the final review and approval of the GHG inventory, as outlined in Section 3. This review is required by January 15 of each year, in advance of the January FEMP submission deadline.

Challenges One of the most significant challenges was calculating the s3 Business Air Travel Emissions. DOT found that the GSA TravelTRX system only included about two-thirds of flights taken, because it only captured

flights booked through a Travel Management Center or GovTrip. The business air travel emissions appeared to rise dramatically between FY2008 and FY2010, however when DOT investigated, a large portion of this apparent increase was because more employees were using these systems and not because they were travelling more. DOT is looking to add a third methodology which is a hybrid of the two existing methodologies to the Technical Support Document that allows agencies to both use TravelTRX and add flights that are not captured by that system through a formula.

## **Goal 2 (optional image)**

### **Goal 3: High-Performance Sustainable Design/Green Buildings & Regional and Local Planning (Basic Performance Discussion, A - H)**

The Department is committed to achieving the high performance/sustainable buildings (HPSB) design goals of EOs 13423 and 13514. DOT will make all efforts to support these goals during the design, construction, maintenance and operation of all new and existing facilities and major renovation projects.

DOT will systematically review, update and modify its real property portfolio based on the HPSB goals identified below. DOT will strengthen its HPSB program responsible for the identification, implementation and monitoring of projects and activities undertaken to meet the HPSB goals. DOT will create awareness of the HPSB principles among employees and train key stakeholders. DOT will develop a single-source HPSB data system integrating utility consumption, project and physical asset information building on existing systems. The HPSB goals will be integrated with other EO goals, e.g., renewable energy, to achieve greater system performance and efficient implementation.

DOT is also dedicated to enhancing regional and local planning. As appropriate, DOT will participate in regional transportation planning; align departmental policies to increase effectiveness of local energy planning, incorporate sustainable building location into policy and planning. In addition, DOT will update department policy and guidance to ensure that Environmental Impact Statements (EISs) and Environmental Assessments (EAs) for Federal facilities, required under the National Environmental Policy Act (NEPA) identify and analyze impacts associated with energy usage, climate change, and alternative energy sources. Moreover, DOT will ensure coordination and consultation with Federal, State, Tribal and local management authorities during regional and local planning activities.

DOT will participate in regional and local transportation planning by integrating this key concept into current operating policy. DOT will continue to build a center of excellence on Greenhouse Gases, Climate Change, Adaptation and Transportation through its Transportation and Climate Change Clearinghouse (TCCC). Through the TCCC website, DOT provides regional and local transportation planning leaders around the world access to state-of-the-art research and technical guidance surrounding this global issue. Internally, DOT will establish a "green travel" policy which outlines carbon reduction strategies for employees on official travel, including recommendations for fuel-efficient vehicles and "green" lodging services. These strategies will be refined and enhanced in future annual updates of this Plan.

As part of its commitment to meeting EO13514, DOT has made much progress in the last year on Goal 3 including:

- DOT instituted a Sustainability Scorecard into its quarterly ‘regulatory review’ process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. Sustainable buildings targets are on this scorecard and each Administrator is now regularly accountable for progress and success.
- Identified three more buildings that meet the HPSB Guidelines in the past year
- Created a process for identifying and prioritizing the best value target buildings for meeting the HPSB, renewable energy and greenhouse gas requirements.
- Based on the outcome of the above process, established a portfolio of the targeted buildings for inclusion in the HPSB program
- Implementing a number of sustainable building initiatives, which include installing several sustainable features (e.g., green roofs, solar array systems, energy efficient fluorescent and light emitting diode (LED) lighting, new boilers and HVAC systems, geothermal systems, demand management systems, and state of the art metering).
- Added the Sustainability data element to the Real Estate Management System (REMS) Database
- Issued policy guidance from the Deputy Secretary that required each OA to develop an action plan to meet their HPSB targets, and update this plan periodically.
- FAA’s initiation of the development of Green Real Property Leasing AMS Guidance and clauses, which would include a component to incorporate environmentally sustainable principles in the siting, design, and construction of FAA facilities.
- Starting programs within several OAs to incorporate the HPSB Guiding Principles in all new buildings and major renovation projects.
- Hosting a number of trainings including a tailored training on using Energy Star Portfolio Manager. As a result, several OAs have begun entering data into this system.
- MARAD undertaking a \$4.8 million dollar ESPC project and two other OAs are starting an ESPC process.
- Several OAs assessing public transportation in future site locations of administrative offices.
- MARAD now working with local and regional planning officials to improve efficiency and reduce truck traffic by instituting marine highway, infrastructure, and port development projects nationwide.

**a. Goal description -**

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Design, beginning in FY 2020, all new Federal buildings to achieve zero-net energy by FY 2030.
- Ensure all new construction, major renovation or repair and alteration of Federal buildings comply with, “Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (Guiding Principles).”
- Meet the HPSB Guiding Principles by FY 2015 in at least 15 percent of the Department’s existing buildings and building leases [5,000 GSF threshold for occupied existing buildings and building leases].
- Demonstrate annual progress toward 100 percent conformance with Guiding Principles for entire building inventory.
- Demonstrate use of cost-effective, innovative building strategies to minimize energy, water and materials consumption.
- Manage existing building systems to reduce energy, water and materials consumption in a manner that achieves a net reduction in Department deferred maintenance costs.
- 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.
- Incorporate consultation with local and metropolitan planning organizations regarding the impact, or potential impact, of Federal actions on local transportation infrastructure and local development plans into existing policy and guidance.
- Align Department policies to increase effectiveness of local planning efforts regarding transportation, energy resources and the environment.
- Incorporate sustainable building siting guidelines into policy and planning for new Federal facilities and leases.
- Update Department policy and guidance to ensure that all EISs and EAs required under NEPA for proposed new or expanded Federal facilities identify and analyze impacts associated with energy usage and alternative energy sources.
- Update Department 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 head of the Real Property Council, as the designated Department lead for Goal 3, will direct the activities of the Real Property Council, facilities managers, and environmental managers for target development, implementation, monitoring, evaluation and oversight. The FAA serves at the Executive Agency for managing Real Property data.

**c. Implementation methods -**

DOT will implement the goals listed above by addressing policy and guidance, planning and design, construction, operation and maintenance, tracking and reporting for new buildings, major renovations, and buildings identified as best value opportunities for upgrading to meet the HPSB guiding principles and other goals of EOs 13423 and 13514 by utilizing the following overarching strategy.

Overarching Strategy

*Policy and Guidance*• DOT policy for achieving the high performance/sustainable buildings design is defined in the High Performance and Sustainable Buildings Implementation Plan (SBIP). The SBIP describes how DOT will support the goals, the design, the construction, and the maintenance and operation practices of all new facilities and major renovation projects, and the maintenance and operation practices of existing facilities. It outlines the criteria for new construction and what elements will determine which existing buildings will be targeted to meet the 15 percent goal. This plan will be periodically reviewed and updated as necessary. • Form a HPSB community of subject matter experts across DOT OAs to develop guidance to implement the EO, SBIP, and comply with related statutory requirements.

*Planning and Design*• Develop a collaborative HPSB planning and design process that integrates a cross functional team in all stages of the project. This includes leveraging capabilities within DOT OAs such as FAA's ESPC expertise. • Establish a process for identifying and prioritizing the best value target buildings for meeting the HPSB, renewable energy and GHG requirements. • Based on the outcome of the above process, establish a portfolio of the targeted buildings for intervention and inclusion in the HPSB program and update the Sustainable Buildings Plan of Action and Milestones (POAM) document to include this process and portfolio for achieving HPSB status for all targeted buildings in the HPSB portfolio by 2020, including the programs and resources that will be required to reach all objectives. • Establish facility performance goals for siting, energy, water, materials, and indoor environmental quality along with other comprehensive design and EOs goals that will result in meeting the HPSB goals throughout the lifecycle of the building. • Optimize performance of the department's real property portfolio – dispose and consolidate excess and underutilized property, co-locate field offices, consolidate across metropolitan and regional locations. • Align department space actions (new leases, new construction, and consolidation) with Department scope 1&2 and scope 3 GHG reduction targets.

*Construction of New Buildings, Major Renovations, and New Leases*• Develop a new comprehensive HPSB Departmental Policy that addresses existing buildings and new construction. • Incorporate the HPSB Guiding

Principles in all new buildings and major renovation projects and leased facilities where DOT has designated authority. • Incorporate sustainable principles into all acquisitions contracts for construction and leases. Require a LEED Silver rating or higher (or a standard equivalent) for new DOT-owned buildings and non-GSA leases and Energy Star certification for buildings over 10,000 SF or equivalent third party certification, to the extent possible.

*Operations and Maintenance (O&M)* • The O&M program shall: o Measure and benchmark building O&M performance for sustainability. o Set O&M annual sustainable performance goals for portfolio assets. o Conduct audits for targeted buildings and actively monitor space and adjust requirements (i.e., modifying the HVAC, lighting, electrical, telecommunications, safety, housekeeping, and building automation control systems) to changing operational needs. o Repair, upgrade, and recommission building systems to ensure that they are working to meet current needs and are on track to meet HPSB goals. o Extend the useful service life of materials and equipment. o Prevent disruptive failures in the building. o Where feasible and cost-effective, participate in the LEED® Existing Building Operations and Maintenance (EBO&M) Program, either by obtaining this certification or where certification is not advantageous satisfying the majority of the principles outlined in EBO&M.

*Facility Tracking and Reporting* • Maintain and update sustainable building inventory data in the Federal Real Property Profile (FRPP) database. The FRPP will include data element #25 on sustainability to be reported with the FRPP annual data report. • Utilize the Energy Star Portfolio Manager Tool, or equivalent to track and report on the status of the inventory that meets the HPSB goals.

*Regional & Local Planning* • Developing policy and guidance that incorporates participation in regional transportation planning. • Updating Department policy and guidance to ensure that all EISs and EAs required under NEPA for proposed new or expanded Federal facilities identify and analyze impacts associated with energy usage and alternative energy sources. • Updating Department policy and guidance to ensure coordination and (where appropriate) consultation with Federal, State, Tribal and local management authorities during the NEPA process. • Continue to participate in implementation of regional Federal partnerships that support sustainability and livable communities. o Under the Chesapeake Bay Watershed Protection and Restoration Strategy, support regional planning efforts to develop integrated transportation, land use, housing and water infrastructure plans for smart growth and environmental stewardship, continue to ensure that DOT implements stormwater requirements for new and redeveloped facilities and promotes reduced stormwater impacts in Federally-assisted transportation projects. o Under the Great Lakes Restoration Initiative, implement assistance for projects that restore wetlands and other habitats in connection with highway projects and carry out research on technologies to combat invasive species. o Through DOT programs, support sustainable, safe, secure and productive access to and use of the ocean, including marine transportation, and enhance the sustainability of ocean and coastal economies and promote sustainable practices on land.

DOT has developed a more detailed approach that includes short-, medium-, and long-term initiatives to accomplish these HPSB goals.

### 3.1. Short-Term Initiatives (1-2 years)

3.1.1. Policy and Guidance• Identify gaps in policies, guidance documents, criteria, contracts, leases, training and other areas of the real property, facilities management, and sustainable building programs. • Establish a whole building performance target that takes into account the intended use, occupancy, operations, plug loads, other energy demands, and design to earn the Energy Star® targets for new construction and major renovation and non-GSA leases. • Require a LEED Silver rating or higher (or a standard equivalent) for DOT -owned buildings and non-GSA leases, to the extent possible.

3.1.2. Planning and Design• Build a new program with new and existing FTEs and external subject matter experts to identify, prioritize and execute a building upgrade program to meet the EOs and HPSB goals, including a highly trained and experienced Departmental infrastructure team that includes facility managers, energy managers and procurement specialists. • Investigate (or expand) performance contracts (e.g., energy savings performance contracts (ESPCs), utility energy services contracts (UESCs)) as a means to integrate energy-savings technologies and infrastructure in a cost-effective and efficient manner.

3.1.3. Training and Awareness• Continue to develop training and awareness initiatives to ensure that appropriate department programs and technical personnel are knowledgeable on the energy and sustainable buildings requirements of EISA, EO 13514 and the SBIP. • Continue to utilize IdeaHub, a system to solicit ideas from employees on regular basis.

3.1.4. Construction of New buildings, Major Renovations and New Leases• Incorporate the Guiding Principles HPSB in all new buildings and major renovation projects and pursue LEED Silver buildings, where possible • Develop a green lease template for non-GSA buildings. • Develop HPSB specifications and model contract templates for inclusion in construction and non-GSA leasing projects for all DOT buildings. • Develop GSA Occupancy Agreement requirements that specify that space GSA acquires for DOT and any of its modes must be LEED Silver or above and support the Guiding Principles. • DOT will augment its existing building upgrade plan, with a comprehensive new facilities strategy. The new facilities strategy will result in modern, high performance, sustainable buildings that will feature significant sustainability improvements, and will be critical to meeting DOT's sustainability targets.

3.1.5. Operations and Maintenance• Develop a survey of facilities to identify current status/condition of buildings. • Conduct energy assessments of top 15 percent of buildings most qualified to meet the Guiding Principles and prioritize implementation. • Operate and maintain, and conduct all minor repairs and alterations for existing building systems to reduce energy, water and materials consumption in a manner that achieves a net reduction in department deferred maintenance costs.

3.1.6. Facility Tracking and Reporting• Conduct periodic assessments of the sustainable buildings program and progress. • Begin to enter data into Energy Star Portfolio Manager

3.1.7. Regional & Local Planning• Provide support to State and Regional agencies by providing guidance and technical support, review and input of State transportation climate action plans, and sponsorship of peer exchanges to assist agencies in developing effective planning practices under existing regulations. • Provide leadership support to promote climate adaptation strategy and the incorporation of climate change considerations in planning and investment decisions. • Conduct a series of facilitated workshops to develop and implement strategies and outline

long-term initiatives to achieve these goals. • Initiate actions to implement national adaptation strategy. • Assess public transportation options at future site locations of administrative offices. • Incentivize managers and employees to pursue alternative work arrangements and commuting methods besides single occupancy vehicles by strategically locating facilities to reduce negative transportation impacts. (Link with Goal 2) • Train Real Property managers, engineers, contracting officers and other appropriate staff on the principles of regional and local planning associated with the goals of EOs 13423 and 13514.

### 3.2. Medium-Term Initiatives (3-5 years)

3.2.1. Policy and Guidance • Develop or update building sustainability policies and guidance contracts, leases, training and other areas of the sustainable building program. • Develop Green Real Property Leasing AMS Guidance and clauses, which would include a component to incorporate environmentally sustainable principles in the siting, design, and construction of FAA facilities. • Incorporate criteria for sustainable design and development, energy efficiency, and verification of building performance into build-to-suit lease solicitations where DOT has delegated authority. • Develop processes to eliminate the use of ozone depleting compounds in existing buildings where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title VI of the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account lifecycle impacts. • Certify that the ozone depleting equipment has been replaced properly and maintain the new equipment. • Develop hotelling, teleworking and other space management approaches to better utilize or reduce existing building space and achieve reduced costs of DOT facility operations and expand delivery of remote work tools. (See Goal 2) 3.2.2. Planning and Design • Meet at least 30 percent of the hot water demand through the installation of solar hot water heaters, when lifecycle cost effective. (See Goal 1) • Develop model green non-GSA lease template on HPSB and assess results in a geographic area with few vendors to generate market demand and create a change in the market place for more sustainable buildings available for lease by the government. • Require a LEED Silver rating or higher (or a standard equivalent) for DOT owned buildings and non-GSA leases, to the extent practicable. • Incorporate sustainable practices into Department policy and planning for new construction, non-GSA leases, and lease renewal strategies.

3.2.3. Training and Awareness • Develop and institute a change management process including awareness training to ensure HPSB goals are being implemented and measured. • Include criteria encouraging lease clauses and provisions that support the Guiding Principles according to the High Performance and Sustainable Buildings Guidance. • Share Annual Energy Report with other stakeholders to ensure transparency and awareness on results. • Continue communicating goals to senior management and facility managers on energy consumption and identify opportunities for improvement. • Provide management training and tools for telework and hotelling principles. • Develop an education and awareness program for performance contracts (e.g., ESPCs, UESCs).

3.2.4. Construction of New Buildings, Major Renovations and New Leases • Institute whole building performance targets that take into account the intended use, occupancy, operations, plug loads, other energy demands, and design to earn the Energy Star® targets for new construction and major renovation, where applicable. • Include documentation of energy savings and or cost avoidance information when designing new buildings. • Analyze existing underutilized properties before initiating new construction • Demonstrate use of cost-effective, innovative building and sustainable landscape strategies to minimize energy, water and materials consumption. • Utilize energy-efficient technologies and systems for all HPSBs, where technically and economically feasible. These



include building envelope, HVAC and lighting systems, and other non-mission critical equipment and systems. Bundle energy efficiency projects (i.e., those with short payback/return on investment and those with longer payback periods), in order to produce a weighted average payback that is an acceptable ROI, where possible. • Consider the implementation of ESPCs and UESCs to leverage private sector financing for the construction of energy conservation or renewable energy technologies where technically and economically feasible. Carefully examine all technical, legal, financial and other ramifications before proceeding with an ESPC. By default, utilize DoD or GSA “Super ESPCs” contract vehicles and contractors, except where clearly disadvantageous to DOT. • Install submetering of energy and water at all major DOT facilities (criteria to be determined at a later date) or wherever expected to yield data that will result in significant cost savings and/or energy and water usage savings through implementation of targeted upgrade projects. • Conduct periodic feasibility studies of innovative and emerging green buildings technologies suitable for DOT facilities.

3.2.5. Operations and Maintenance • Develop processes and technologies for tracking and monitoring energy consumption and other utilities at facilities. • Perform energy audits to reduce energy consumption and water and renewable energy. • Install building level electricity meters in new major construction and renovation projects to track and continuously optimize performance. Per EISA Section 434, include equivalent meters for natural gas and steam, when natural gas and steam are used. • Install real time energy metering at all high priority facilities. • Expand performance contracts (e.g., ESPCs, UESCs) throughout DOT, as appropriate.

3.2.6. Facility Tracking and Reporting • Compare actual performance data from the first year of operation with the energy design target, preferably by using Energy Star® Portfolio Manager for building and space types covered by Energy Star®.

3.2.7. Regional and Local Planning • Develop and implement “live where you work” programs, to encourage use of telework centers and employees to live in communities and neighborhoods near DOT facilities. • Examine the potential for offering incentives for employees to move into surrounding communities enabling walk and transit commutes. • Provide secure indoor storage for bicycles, and proper facilities to support commuting via bicycle, where needed, feasible, and cost-effective across field sites and HQ. • Enhance Transportation and Climate Change Clearinghouse (TCCC) website and update content. • Increase effectiveness of regional measures that enhance integrity of local ecosystems and watersheds. • Assist communities with new potential DOT facilities to achieve LEED for Neighborhood Development (ND) certification. • Continue agency participation in critical local and regional efforts and initiatives (e.g., EO on Chesapeake Bay Protection and Restoration, EO on Stewardship of the Ocean, Our Coasts, and the Great Lakes, etc.).

### 3.3. Long-Term Initiatives (6-10 years)

3.3.1. Policy and Guidance • Develop a template that can be used in SOW for renovations or new construction that incorporates all HPSB Guiding Principles. The template should include energy and water requirements. • Identify potential opportunities to integrate high performance sustainable building goals into DOT’s inventory of technical buildings. (How would this be incorporated? It is global positioning satellite systems? Mainly structures not buildings).

3.3.2. Planning and Design• Develop technology to drive innovation to meet HPSB goals addressing the regional considerations linked to different geographic areas where DOT operates. • Develop a HPSB building phased implementation plan based on size, age, etc. • Design net-zero energy buildings for all new construction • Dispose and consolidate excess and underutilized property, co-locate field offices, consolidate footprint across metropolitan and regional locations.

3.3.3. Training and Awareness• Develop infrastructure teams of subject matter experts that can address HPSB issues across DOT. • Continue to implement change management process, including awareness to ensure HPSB goals are met. • Communicate goals to management on energy consumption regularly and identify opportunities for improvement.

3.3.4. Construction of New Buildings, Major Renovations, and New Leases• Construct net-zero energy buildings. Implement five (HPSB) guiding principles into the design requirements for construction. • Utilize energy-efficient technologies and systems for all HPSBs, where technically and economically feasible. These include building envelope, HVAC and lighting systems, and other non-mission critical equipment and systems. Bundle energy efficiency projects (i.e., those with short payback/return on investment and those with longer payback periods), in order to produce a weighted average payback that is an acceptable ROI, where possible. • Consider the implementation of ESPCs and UESCs to leverage private sector financing for the construction of energy conservation or renewable energy technologies where technically and economically feasible. Carefully examine all technical, legal, financial and other ramifications before proceeding with an ESPC. By default, utilize DoD or GSA “Super ESPCs” contract vehicles and contractors, except where clearly disadvantageous to DOT. • Develop on-site renewable energy generation projects (e.g., photovoltaics installations). (See Goal 1) • Conserve, rehabilitate, and reuse historic Federal properties, using current best practices and technology. • Install submetering of energy and water at all major DOT facilities (criteria to be determined at a later date) or wherever expected to yield data that will result in significant cost savings and/or energy and water usage savings through implementation of targeted upgrade projects. Conduct periodic feasibility studies of innovative and emerging green buildings technologies suitable for DOT facilities.

3.3.5. Operations and Maintenance• Develop technology and processes to centrally monitor and control HPSB facilities. • Expand O&M performance contracts (e.g., ESPCs, UESCs) throughout DOT.

3.3.6. Facility Tracking and Reporting• Develop a dashboard system for communicating energy monitoring results and status of HPSB goals. (See Goal 1) • Maximize use of meters and data available to meet HPSB requirements.

3.3.7. Regional and Local Planning• Locate future DOT facilities near transit stops in more urban areas of America’s low Vehicle Miles Traveled (VMT) cities where possible and achieving this objective will not inhibit DOT’s mission. • Ensure that DOT facilities are an integrated part of the community, where possible without adversely impacting DOT’s mission. • Integrate methods and practices necessary to achieve the goals of this plan into Departmental master planning documents (i.e., HPSB goals; pollution prevention and waste reduction goals; water use reduction goals; sustainable acquisition goals; electronic stewardship and data center consolidation, etc.).

#### **d. Positions -**

The Department is trying to train and build a comprehensive strategy to increase this capacity. Some elements of this strategy include:• Hire/contract LEED accredited experts for technical support.• Develop “Performance Contracting” contract specialists• Hire/contract positions for HPSB program implementation• Identify line item for HPSB in budget.• Utilize expertise and resources from within the OAs• Recruit staff with the knowledge, skills and capabilities to work with local and regional groups and to address employee-related transportation issues.• Continue to maintain the TCCC as a cross-Department initiative.

#### **e. Planning Table -**

The Department's planning table for this goal can be found at the end of this section.

#### **f. Department Status -**

To meet the HPSB goals identified above, DOT developed the High Performance and Sustainable Buildings Implementation Plan (SBIP). This document describes how DOT will support the goals of EOs 13423, 13514 and the Energy Independence and Security Act (EISA) through 1) the design, construction, and maintenance and operation practices of all new facilities and major renovation projects and 2) the maintenance and operation practices of existing facilities, and 3) using ESPCs to meet the requirements of HPSB goals. See Goal 3 Introduction for specific accomplishments.

A prime example of DOT’s commitment to HPSB is the FAA NextGen Facilities Program which aims to design and build modern, high-performance, sustainable, green Air Traffic Control facilities across the Nation. The FAA’s commitment to building new LEED® Silver HPSBs Air Traffic Control facilities will result in dramatic energy, carbon, and other environmental savings/benefits, and also assist in facilitating fuel, carbon, air pollution, and noise reduction from more efficient and effective operation of the NAS.

DOT started and maintains the Transportation and Climate Change Clearinghouse (TCCC) to be the focal point of technical expertise on transportation and climate change. Through strategic research, policy analysis, partnerships, and outreach, the Center creates comprehensive and multi-modal approaches to reduce transportation-related greenhouse gases and to mitigate the effects of global climate change on the transportation network. The Center researches transportation strategies and technologies to reduce greenhouse gases, identifies facilities that may be at risk from possible effects of climate change and climate anomalies, and develops an array of tools to assess the transportation system's ability to adapt to variances in global climate. DOT continues to be an active participant in a number of interagency working groups, including chairing the group that developed the Guidelines for Sustainable Locations for Federal Facilities and engaging with the Group evaluating the HPSB Criteria called the Interagency Sustainability Working Group (ISWG).

Other activities related to Goal 3 that are in progress include: 3.1.1. Policy and Guidance• Identifying all buildings that meet the HPSB Guiding Principles in the newly created Sustainable Buildings field in the REMS (Real Property) Database.• Identifying best practices and develop building sustainability implementation guidance document.• FAA initiated the development of Green Real Property Leasing AMS Guidance and clauses, which would include a component to incorporate environmentally sustainable principles in the siting, design, and construction of FAA facilities.

3.1.2. Planning and Design• Conducting baseline energy audits at DOT sites to determine existing and future energy sources and energy consumption. • Include Renewable Energy and space needs assessments considerations in DOT Sustainable Building Program. • Verifying the baseline of facilities that are >5000 sq ft and identifying exemptions for technical facilities and/or data centers to support the business case. • Conducting comprehensive assessment on the top 15 percent or more of the buildings having the highest potential for meeting the Guiding Principles.

3.1.3. Training and Awareness• Developing training and awareness initiatives to ensure that appropriate Department programs and technical personnel are knowledgeable on the energy and sustainable buildings requirements of EISA, EO 13514 and the SBIP. • Communicating goals to senior management and facility managers.

3.1.5. Operations and Maintenance• Several of the OAs are actively pursuing LEED for new buildings and working toward meeting the HPSB Guiding Principles in their existing buildings. • DOT’s Maritime Administration has undertaken a \$4.8 million dollar ESPC project and two other OAs are in the process of starting ESPCs. • DOT HQ is currently installing technologies for tracking and monitoring energy consumption and other utilities on a continuous basis.

3.1.6. Facility Tracking and Reporting• Request OMB exemption for specific building types that are not appropriate for HPSB, e.g., unstaffed equipment shelters, from the DOT inventory when calculating progress toward the 15 percent goal by 2015. • At the end of FY10, four buildings met the HPSB guidelines and several others were making progress by meeting one or more elements.

3.1.7. Regional and Local Planning• Begin to incorporate adaptation planning and vulnerability assessment into DOT’s operations and policies • Some of the OAs have begun updating their policy and guidance to ensure that all EISs and EAs, required under NEPA for proposed new or expanded Federal aid eligible facilities, identify and analyze impacts associated with energy usage and alternative energy sources. • The Federal Highway Administration will begin reviewing State transportation climate action plans, and sponsorship of peer exchanges to assist agencies in developing effective planning practices under existing regulations. • Many DOT OAs are now assessing public transportation in future site locations of administrative offices. • FAA has initiated the development of Green Real Property Leasing AMS Guidance and clauses, which would contain guidance pertaining to the recognition of existing transportation infrastructure when siting new Federal facilities and consideration for the availability of renewable energy sources. • In support of the goals, the Maritime Administration is working with local and regional planning officials to improve efficiency and reduce truck traffic by instituting marine highway, infrastructure, and port development projects nationwide.

#### **g. Return on Investment -**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

#### **h. Highlights -**

HPSBs and the Federal Aviation Administration

FAA’s Western Service Area towers designed over the past decade demonstrate sustainable measures in energy and water efficiency, indoor air quality, and material selection. The Western Service Area has integrated the LEED system with tower requirements in their Standard Design. Within each project, members of the Tower Design Program, including a LEED accredited professional, balance sustainable design with financial requirements and Department mission. As a result, the Seattle Air Traffic Control Tower was the first DOT building to meet the HPSB guidelines. Their experience was fundamental to elevating tower design for Oakland and Palm Springs International Airports to target LEED Gold and Silver status, respectively. Highlights of the projects include a geothermal heat pump, PV solar cells to supply 50% of the electrical power, 30% less water demand, use of low VOC building materials, and daylight views for 93% of building occupants.

Energy Saving Performance Contracts

A Super Energy Savings Performance Contract (ESPC) is currently underway at the Maritime Administration’s Merchant Marine Academy. The Super ESPC has financed a \$4.8 million capital outlay that provides many energy conservation measures including energy efficient lighting upgrade, chiller interconnection and control, water fixture upgrades, and energy management control system upgrades. The annual ESPC savings verification report for 2010 indicates an energy saving of 29,571 MBtu/yr was realized resulting in an energy cost saving of \$857,338 and an operation and maintenance savings of \$518,190.

Recommendations for Sustainable Locations for Federal Facilities

DOT is taking a leadership role in promoting more transportation choices, promoting affordable housing and valuing communities through its interagency collaboration and leadership. By chairing the interagency team and working with the General Services Administration, EPA, Department of Housing and Urban Development and in coordination with the Department of Homeland Security and DOD, DOT developed the Guidelines for Sustainable Locations for Federal Facilities required by the Executive Order. The impact of this work is significant as the Guidelines are to be used by all Federal agencies in determining site locations.

Below is the planning table for this goal.

**Goal 3: High-Performance Sustainable Design/Green Buildings & Regional and Local Planning (Planning Table)**

<b>GOAL 3 Targets</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Owned Buildings	%	1	2	2	2	3	10	...	
FRPP-Reported Leased Buildings	%	1	1	1	1	1	5	...	
Total Buildings	%	2	3	3	3	4	15	...	
Other (Buildings), as defined by agency		?	?	?	?	?	?	...	
Other (Reg/Local Planning), as defined by agency		n/a	n/a	n/a	n/a	n/a	n/a	...	

### **Goal 3: High-Performance Sustainable Design/Green Buildings & Regional and Local Planning (Goal-Specific Items)**

The goal-specific items were addressed within the basic performance section above.

### **Goal 3 (optional image)**

### **GOAL 4: Water Use Efficiency and Management (Basic Performance Discussion, A - H)**

As part of its commitment to meeting EO 13514, DOT has made much progress in the last year on Goal 4 including:

- DOT instituted a Sustainability Scorecard into its quarterly ‘regulatory review’ process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. Water reduction targets are on this scorecard and each Administrator is now regularly accountable for progress and success.
- Begin entering water consumption data into Energy Star® Portfolio Manager.
- Identify data limitations and methods to improve water consumption data.
- Complete comprehensive water evaluations at DOT facilities which constitute 75 percent of total energy consumption as per EISA 2007 Section 432.
- Develop a consistent set of metrics to measure water consumption across the organization.
- Communicate goals to senior management on water use efficiency.

The Department is committed to reducing potable water use intensity, industrial, landscaping, and agricultural water use, identifying and implementing water reuse strategies and achieving objectives established by EPA in Stormwater Guidance for Federal Facilities. The requirements for water use efficiency will be achieved through the HPSB program (Goal 3) along with additional initiatives specifically targeting best value water efficiency opportunities. Water efficiency goals require establishing new initiatives, tools, and policies, along with developing awareness and training. The following is an overview of the goals and short, medium, and long-term initiatives that will achieve the EO goals. The HPSB goals will be integrated with other EO goals (e.g., Sustainable Buildings requirements) to achieve greater overall efficiency of EO implementation. These strategies will be further refined in future annual updates of this Plan.

#### **a. Goal description –**

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Reduce potable water use intensity by at least 26 percent by FY 2020.
- Reduce industrial, landscaping, and agricultural water use by at least 20 percent by FY 2020.
- Identify and implement water reuse strategies, landscaping water conservation strategies, such as micro-irrigation and drought tolerant plants, in coordination with high performance sustainable buildings initiatives.
- Achieve objectives established by EPA in Stormwater Guidance for Federal Facilities.
- Incorporate appropriate reduction strategies for non-potable water use into DOT policy and planning.
- Achieve 100 percent containment for 95th percentile storm or restoration to pre-development hydrology for new construction or major renovations on buildings greater than 5,000 sqft.

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

The head of the Real Property Council, as the designated Department lead for Goal 4, will direct the activities of the Real Property Council, facilities managers, and environmental managers for target development, implementation, monitoring, evaluation and oversight. The FAA serves at the Executive Department for managing Real Property data.

### **c. Implementation methods –**

DOT will implement the goals listed above by using the following approaches: deploy new building designs and upgrade existing buildings to improve water efficiency and drive water conservation initiatives, water efficient landscaping and irrigation design and policies, and water reuse and recycling initiatives. DOT will implement design and construction strategies to reduce storm water runoff and polluted site water runoff.

DOT has developed a strategic approach that includes short-, medium-, and long-term initiatives to accomplish these goals.

#### 4.1. Short-Term Initiatives (1-2 years)

4.1.1. Policy and Guidance • Develop a policy and strategy for management and efficient use of water. • Form a community of subject matter experts across DOT OAs to develop policies and guidance.

4.1.2. Planning and Design • Enter water consumption data into Energy Star® Portfolio Manager and establish baseline as per EO 13423. • Identify data limitations and methods to improve water consumption data. • Complete comprehensive water evaluations at DOT facilities which constitute 75 percent of total energy consumption as per EISA 2007 Section 432. • Identify a baseline through water audits at DOT sites to determine opportunities for water conservation. • Conduct best in class study of DOT and Federal Agencies for water use. • Employ strategies that reduce potable water use by 20 percent.

4.1.3. Training and Awareness • Develop communication strategy focused on water use and conservation. • Develop a training program for water conservation policy, techniques, design, and best available water-efficient technologies to ensure that appropriate Department program and technical personnel are knowledgeable on the water use efficiency and management goals in EO 13514. • Communicate goals to senior management on water use efficiency and recommend opportunities for improvement. • Develop a process to solicit water conservation ideas from employees on a regular basis.

#### 4.2. Medium-Term Initiatives (3-5 years)

4.2.1. Policy and Guidance • Initiate the development of a water use information system by adding new fields and requirement to provide consumption information from invoices in the Delphi financial database. Develop new business rules and enter new information, where applicable. • Develop strategies for the different operational areas to attain DOT-wide goals. • Develop a consistent set of metrics to measure water consumption across the organization.

4.2.2. Planning and Design • Compare actual performance data from the first year of operation with the water design target using Energy Star® Portfolio Manager. • Include alternative ways (e.g., alternative technologies) to make use of rain water, treated wastewater, and air conditioner condensate. • Conduct benchmarking of best-in-class

practices utilized by other federal agencies and the private sector. • Pursue strategies to reduce water consumption in DOT facility cooling towers. • Employ design and construction strategies that reduce storm water runoff and discharges of polluted water offsite. • Establish baselines for buildings, after meeting the EPA Act 1992, Uniform Plumbing Codes 2006, and the International Plumbing Codes 2006 fixture performance requirements. • Begin establishing dedicated metering for supply versus sewerage to the extent practicable.

4.2.3. Training and Awareness • Develop training modules in TMS for engineers in the field and other DOT employees on water conservation policy, technologies and best practices.

4.2.4. Operations & Maintenance • Install meters at the highest water consumption facilities to capture actual water consumption which allows for the management of water use during occupancy. Include separation of water supply and sewerage so that facilities can save money for water that is reused on site (e.g. gray water) and also not be charged for water that evaporates (i.e. lost from cooling tower or landscaping). • Institute water efficient landscape and irrigation policy and strategies, such as beneficial landscaping, xeriscaping, water reuse, recycling, and harvested rainwater use to reduce outdoor potable water consumption.

#### 4.3. Long-Term Initiatives (6-10 years)

4.3.1. Policy and Guidance • Develop a template that can be used in SOWs for renovations or new construction that incorporates all HPSB Guiding Principles. The template would include all water conservation requirements.

4.3.2. Planning and Design • Conduct a series of facilitated workshops to develop and implement strategies and outline long-term initiatives to achieve these goals.

4.3.3. Training and Awareness • Develop a center of excellence (part of Goal 3, Sustainable Buildings strategy) for subject matter experts that can address water issues, along with other facility sustainability objectives, across DOT. • Continue to implement change management process including awareness to ensure HPSB goals are met. • Communicate goals to senior management on water consumption and recommend opportunities for improvement. • Institute process to solicit ideas for innovative methods and ideas for water conservation from employees.

4.3.4. Operations and Maintenance • Choose irrigation contractors who are certified through a WaterSense labeled program. • Specify EPA's WaterSense-labeled products or other water conserving products in contracts, where available. • Conduct a business case analysis for reuse of gray water. • Identify products and practices that make low flow and no water plumbing fixtures effective and acceptable to employees.

#### **d. Positions –**

Additional resources are needed at HQ and the OA level to ensure the Department meets all of the water requirements in its buildings.

#### **e. Planning table -**

The Department's planning table for this goal can be found at the end of this section.



#### **f. Department status –**

In FY 2010, DOT consumed 508 million gallons of potable water in its buildings resulting in a water intensity of 41.6 gallons per gross square foot. This represents an increase of 1.2 percent from the Department's FY 2007 baseline under EO 13423. Currently, the Department must increase efforts to meet the potable water reduction goal of 26 percent by 2020. The Department has stepped up its efforts to reduce the use of potable water across the organization through funding, training, promoting, and partnering with other federal agencies.

#### **g. Return on Investment –**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

#### **h. Highlights –**

DOT is pleased to provide a short summary of potable water reduction achievements for the previous year by OA:

FAA Compared to its FY 2007 baseline, FAA experienced a 1 percent potable water intensity increase in FY 2010. However, FAA implemented notable water efficiency improvement projects in FY 2010. The William J. Hughes Technical Center (ACT) in Atlantic City, NJ installed 11 waterless urinals resulting in an estimated savings of 440,000 gals/year. In addition, the Mike Monroney Aeronautical Center (AMC) in Oklahoma City, OK, improved its water irrigation controls and replaced showerheads and valves to comply with low flow standards generating a projected savings of 2,535,000 gals/year. EO 13514 requires agencies to track and record industrial, landscaping, and agricultural water consumption. FAA must plan to incorporate processes that will enable capturing and reporting this data.

MARAD By implementing water management strategies including water-efficient and low-flow fixtures and efficient cooling towers; reducing OA industrial, landscaping, and agricultural water consumption by two percent annually or twenty percent by the end of fiscal year 2020. MARAD goals are on track to improving water use and management.

NHTSA The San Angelo Test Facility (SATF), a facility that NHTSA operates on Goodfellow Air Force Base (GAFB) in San Angelo, Texas. This facility tests tires for compliance with NHTSA regulations. Pursuant to the regulations, the tests are performed on a pavement surface that is wetted with precise volumes of water. The water is not recovered following test completion and either evaporates or runs off the surface. In Calendar Year 2010, the SATF used a total of 324,500 gallons of water, both for testing purposes and, more minimally, for office use. This represented an increase from the 257,400 gallons the facility used in Calendar Year 2009. The increase in water consumption is attributed to increase use of the SATF test track by outside testers, which may not be the responsibility of NHTSA to reduce total consumption. The outside testers pay a fee for use of the test track and the cost of water is included in this fee. The water used on the test track is non-potable, required per the tire testing procedures, and therefore not targeted for reduction. The test track use and inside use (potable) of water is not separately metered; however, the SATF Director estimates that approximately 90 percent is on the test track and

10 percent is inside. The installation of meters to separately measure outside and inside water consumption will be necessary in order to establish a baseline for the consumption of potable water, if this is to be targeted for reduction. FHWAThe FHWA reduced its consumption of water at owned facilities since 2005 by over 20 percent. Below are the numbers from 2009 and 2010 on water consumption at FHWA owned facilities. The numbers are in millions of gallons.

FHWA Total Water UsageFY09: 7.7galFY10: 6.9gal10.4 percent decrease from FY09

RITACompared to its FY 2007 baseline, Volpe Center experienced a 14.7 percent potable water intensity decrease in FY 2010. The Volpe Center initiated a retrofit of all indoor plumbing fixtures that will be complete in FY 2011. Once the retrofit is finished, it will result in an estimated additional 13 percent of water (~900,000 gallons) saved annually. EO 13514 requires agencies to track and record industrial, landscaping, and agricultural water consumption. RITA plans to incorporate processes that will allow for capturing and reporting this data and that will likely require additional water sub-metering at the Volpe Center.

Below is the planning table for this goal.

**GOAL 4: Water Use Efficiency and Management (Planning Table)**

<b>Water Use Efficiency &amp; MGMT</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</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)	%	6	8	10	12	14	16	...	26
Industrial, Landscaping, and Agricultural Water Reduction Targets (gal reduced from FY10 base year)	%	0	2	4	6	8	10	...	20
Planned Industrial, Landscaping, and Agricultural Water Reduction (gal reduced from FY10 base year)	%	0	2	4	6	8	10	...	20
Other, as defined by agency								...	

**GOAL 4: Water Use Efficiency and Management (Goal-Specific Items)**

The goal-specific items were addressed within the basic performance section above.

Goal 4 (optional image)

## **GOAL 5: Pollution Prevention and Waste Reduction (Basic Performance Discussion, A - H)**

The DOT is committed to complying with the requirements of EOs 13423 and 13514 and the Pollution Prevention Act of 1990 (PPA), which describes Congress' preferred hierarchy for reduction and management of wastes. The Department has pursued pollution prevention and waste minimization activities through Green Procurement, Electronic Stewardship and High Performance Sustainable Buildings programs.

The DOT developed a Green Procurement Plan (GPP) (see Appendix 3) to enhance and sustain the Department mission through cost effective acquisition that achieves compliance, reduces resource consumption and solid and hazardous waste generation. One of the objectives of this Plan is to emphasize pollution prevention as part of the purchasing process and it applies to all acquisitions and contracting mechanisms, including service contracts, leases, purchases made with government purchase and fleet cards and purchases below the micro-purchase threshold.

As part of its commitment to meeting EO 13514, the Department has made much progress in the last year on Goal 5 including:

- Published DOT Recycling Order for all OAs in the DOT HQ.FAA two centers have continued to work closely in increasing their recycling at their recycling center.
- RITA achieved better than 64 percent waste diversion rate at the Volpe Center which won local and state-wide awards for recycling.
- FAA has two centers have continued to work closely in increasing their recycling at their recycling center.

### **a. Goal description –**

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Increase source reduction of pollutants and waste.
- Divert at least 50 percent non-hazardous municipal solid waste (MSW) by FY 2015.
- Discuss agency strategies to reduce MSW sent to landfills and how implementation will assist the agency in achieving FY 2020 GHG reduction targets (see Goals 1 and 2 above).
- Divert at least 50 percent of 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 discuss how implementation will assist the agency in achieving FY 2020 GHG reduction targets [See Goals 1 and 2 above].
- 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 agency use of acceptable alternative chemicals and processes
- 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 Senior Sustainability Officer (SSO), as the designated Department lead, will direct the activities through the Higher Tier Environmental Management System (EMS) for target development, implementation and oversight.

**c. Implementation methods** –The Department will implement the goals listed above by addressing two main categories: solid waste management and pollution prevention. Several of the pollution prevention and waste reduction goals are directly linked to Sustainable Acquisition activities, which are discussed under Goal No. 6

Solid Waste Management: “Solid waste” consists of MSW, including landscape waste and food waste, discarded electronic items (e-waste), and construction debris. Universal waste items (e.g., lead-acid batteries, fluorescent lamps), special non-hazardous wastes (e.g., scrubber and wastewater treatment sludges), or hazardous wastes are not included in this definition. • Divert at least 50 percent of non-hazardous solid waste from landfills by the end of fiscal year 2015 by requesting MSD sheets from vendors certifying recycled percentage of solid waste. • Minimize the generation of waste and pollutants through source reduction. • Increase the diversion of compostable and organic material from the waste stream. • Begin tracking the data on reduction C&D materials and debris through data calls to the OAs. • Decrease agency use of chemicals to assist the agency in achieving greenhouse gas reduction targets. • Reduce printing paper use and acquire uncoated printing and writing paper containing at least 30 percent post-consumer fiber.

Pollution Prevention (P2) and Waste Reduction 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, acquiring more recycled content material and establishing recycling centers to reduce waste in landfills.

- Decrease agency use of chemicals to assist the agency in achieving greenhouse gas reduction targets. • Reduce printing paper use and acquiring uncoated printing and writing paper containing at least 30 percent post-consumer fiber.

The Department has developed a strategic approach that includes short-, medium-, and long-term initiatives to accomplish these goals.

### 5.1. Short-Term Initiatives (1-2 years)

5.1.1. Policy and Guidance • Review and update procurement and real property policies, regulations, contract clauses and grant provisions in consonance with green procurement requirements. • Publish DOT Recycling Order for all OAs in DOT HQ. • FAA two centers have continued to work closely in increasing their recycling at their recycling center. • Execute long-term contracts with waste collection contractors to ensure best possible revenue from sale of recyclable materials. • Research an initiative to require that construction and demolition contractors develop a project waste management plan, and place recycling container(s) on site for duration of the project. • Increase the number of 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 7, Electronic Stewardship).

5.1.2. Planning and Design • Conduct a series of facilitated workshops to develop long-term initiatives to achieve these goals. • Develop a DOT-wide P2 and Waste Management Strategic Plan focusing on source reduction,

recycling, and (where absolutely necessary) disposal or diversion. • Establish a pilot program for collecting and composting wastes at DOT owned and leased facilities.

5.1.3. Training and Awareness • Implement an awareness program to promote the GPP, and distribute information on best practices through awareness and outreach programs to promote acquisition of environmentally preferable products, services and new technologies. • Establish web sites for Department policies and information on waste management and pollution prevention. • Develop module in TMS and conduct training for procurement personnel at least annually. • Facilitate and coordinate educational and promotional programs for employees and contractors, as appropriate. • Establish an incentive program for employees and managers to encourage waste minimization and P2 ideas from employees. • Discourage production of hard copy memos and reports to reduce waste; promote paperless office practices.

5.1.4. Facility Tracking and Reporting • Identify green procurement data for compilation and distribution to key stakeholders. • Report the status of the implementation of the GPP within the Department to senior management and externally to other applicable Federal agencies and offices. • Conduct self assessments by OAs to continually improve green procurement process and better describe environmental and other green requirements in statements of work and contracts. • Conduct P2 and waste audits at priority facilities identified by DOT, including assessment of waste generation and disposal; waste streams; waste stream composition; source reduction opportunities; effectiveness of current recycling programs; and implemented waste diversion technologies. • Quantify amount of office paper reduction by OA to increase accountability. Compare the quantities purchased during a baseline period, i.e., before implementation of the department policies such as double-sided copying/printing policy, workforce demographics and printer locations with a post-implementation period to monitor changes in consumption of paper.

5.1.5. Solid Waste Management • 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). • Use crushed brick and concrete rubble from demolition as fill material on the project site, where possible. • Where permissible, and cost-effective, decontaminate debris on site rather than directly dispose of it at off-site facilities. • Where feasible, use a three-bin collection system at the point of generation, to ensure organics are not mixed with other MSW. • For facilities that generate small amounts of waste, evaluate benefits, limitations, and costs of on-site composting; if composting on site, take all necessary steps to control odor or rodents. • Minimize use of toxic or hazardous solvents and cleanup chemicals in laboratory operations, where feasible. • Procure recyclable and reusable items over disposable versions (e.g. recyclable binder covers; rechargeable batteries).

5.1.6. Pollution Prevention and Waste Reduction • Make DOT a paper-smart agency; evaluate business processes to identify those that may be made paperless, through electronic means (e.g., scanning, and appropriate tools to read scanned documents, faxing, and electronic versions of all standard forms). • Calculate cost savings from going paperless; and reinvest savings into P2 programs. • Recycle mixed office paper, which includes nearly all waste paper generated in an office, such as white paper (copier, printer, and notepaper), colored paper, file folders, and envelopes. • Substitute electronic systems for paper based ones to eliminate unnecessary paper (e.g. shipping request forms, etc.) • Encourage sensible practices for office paper usage, such as (a) reviewing documents on-line, rather than printing; (b) providing information electronically instead of through paper; and (c) distributing paper documents

through routing rather than through duplication. • Set double-sided copying or printing as the default mode for all copiers and printers DOT-wide. • Reduce recordable media waste, such as CD-ROMs, by providing secure flash drives and remote access to agency data storage. • Purchase digital magazine subscriptions and route them via e-mail. • Use traps and physical barriers to prevent contact between pests and plantings. • Leave mowed grass clippings on lawn areas (provided odor is not objectionable) and use recycled wood chips or compost for mulch. • Compost all yard waste on site if possible. • Evaluate potential use of organic and non-toxic soil amendments and/or pesticides. • Use natural vegetation and xeriscaping rather than turf grass and non-native trees or shrubs, where appropriate. • Use standard available products without Ozone Depleting Substances to refill existing chillers and refrigeration units. • Convert existing refrigeration units to non-CFC and non-HCFC where practicable. • Prevent fugitive emissions and manage CFCs purged from older units in accordance with Clean Air Act requirements. • Require that all vendors reduce the amount of packaging waste, including substitution of reusable shipping containers for disposable packaging. • Ensure that P2 and waste minimization programs are consistent with DOT-wide and lower-tier EMS's. • Explore synergies between this Goal and the HPSB, Sustainable Acquisitions and Electronics Stewardship Goals, to maximize P2 and source reduction efforts.

## 5.2. Medium-Term Initiatives (3-5 years)

5.2.1. Planning and Design • Implement a Hazardous Material Management policy for the Department and its OAs to reduce the quantities of hazardous materials purchased, used, and disposed. • Promote the procurement and use of products with low levels of volatile organic compounds (VOCs) or non-toxic chemicals. • Seek out innovative technologies for water, energy, and waste reduction. • Develop a Department-wide financial strategy for contracting end of life recycling of e-waste.

5.2.2. Training and Awareness • Conduct targeted analysis of use of green procurement practices and update training module in TMS. • Establish a green procurement training module in TMS for the purchasing community. • Consider starting campus clean up days/week at all DOT facilities to increase waste reduction awareness.

5.2.3. Facility Tracking and Reporting • Audit facilities and field operations on a periodic basis to assure compliance with green procurement policies and practices. • Gather data and conduct retroactive audits to determine which existing programs should be continued, and then fine-tune remaining programs to maximize waste reduction and cost-effectiveness.

5.2.4. Solid Waste Management • Implement organics composting contracts where technically feasible and cost-effective. • Determine a baseline for the amount of food waste generated at every DOT facility.

5.2.5. Pollution Prevention and Waste Reduction • Perform life-cycle assessments (LCAs) of materials or products that DOT uses in large quantities. • Explore opportunities to eliminate use of paper towels in restrooms.

## 5.3. Long-Term Initiatives (6-10 years)

5.3.1. Planning and Design • Establish a DOT-wide contract for replacement of ink jet and toner cartridges that includes mandatory use of remanufactured ink jet and toner cartridges, easy recycling of spent ink jet and toner cartridges, and credit for recycled ink jet and toner cartridges. • 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. • Provide guidance, facilitate acquisition planning and establish Federal supply sources, such as the General Services Administration (GSA), Government Printing Office (GPO), Javits-Wagner-O'Day (JWOD) Program, the Defense General Supply Center (DGSC), and UNICOR for EPA-designated items and other recycled content products.

5.3.2. Solid Waste Management • Ensure that all DOT facilities are CFC- and HCFC-free. • Evaluate alternatives to expand P2 and source reduction such that the EO 13514 targets are significantly exceeded and that DOT is positioned to comply with any future, more stringent statutes, regulations, and/or EOs. • Continue to engage with vendors and contractors to reduce upstream impacts in the supply chain, e.g., carbon emissions, air pollutants, wastewater, solid wastes, etc. • Implement cost-effective, innovative P2 technologies. • Identify and evaluate 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.

5.3.3. Pollution Prevention • Implement steps to reduce overall air, water, waste, carbon, and other impacts from the supply chain, consistent with LCAs. • Continue to engage with vendors and contractors to reduce upstream impacts in the supply chain, e.g., carbon emissions, air pollutants, wastewater, solid wastes, etc.

5.3.4 Training and Awareness • Establish web sites for Department policies and information on waste management and pollution prevention.

#### **d. Positions –**

DOT is planning to hire subject matter experts in the areas of pollution prevention, waste management, and green procurement.

#### **e. Planning table –**

The Department's planning table for this goal can be found at the end of this section.

#### **f. Department status –**

DOT developed a Green Procurement Plan (GPP) to enhance and sustain the DOT mission through cost effective acquisition that achieves compliance and reduces resource consumption and solid and hazardous waste generation. DOT's procurement of green products and services contributes to sound management of the Department's financial resources, natural resources, and energy. In its day-to-day operations, DOT is committed to be environmentally and energy conscious in its selection and use of products and services. The GPP demonstrates DOT's commitment to environmental stewardship by becoming a model consumer of green products and services.

DOT has implemented a Sustainable Acquisition Compliance System to ensure the GPP is being implemented. The Sustainable Acquisition Compliance System was initiated to 1) determine if the goals of the GPP are being implemented and progress made; and 2) provide a mechanism to provide continual improvement in contracting and using environmentally friendly materials and services.

Best practices for sustainable acquisition will be formally shared among the OA of the Department. For example, the Maritime Administration has a model Green Procurement Program. Key points of this initiative include acquisition of low sulfur marine fuel, alternative fuels, alternative-fueled vehicles, bio-based products, Energy Star® and energy efficient products, environmentally preferable products, non-ozone depleting substances for air conditioning, recovered material, renewable energy, and water efficient products. Limiting acquisitions and procurement to contractors (such as shipyards) that meet specified environmental standards is being evaluated.

**g. Return on Investment -**

At this time, DOT does not have any projects that fall into this category. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

**h. Highlights -**

DOTThe DOT issued a new recycling policy for the DOT OAs.

FAAThe FAA’s two centers have continued to work closely in increasing their recycling at their recycling center.

RITARITA has achieved better than 64 percent waste diversion rate at the Volpe Center which won local and state-wide awards for recycling.

FHWAFHWA has implemented in multiple locations the following recycling and waste prevention: 1) participated in an electronic recycling drive (i.e., cell phones, computers, computer screens, television sets) resulting in 150 lbs of old electronics equipment being recycled, and 2) volunteered to be a “test floor” for the GSA’s building recycling initiative.

Below is the planning table for this goal.

**GOAL 5: Pollution Prevention and Waste Reduction (Planning Table)**

<b>Pollution Prevention &amp; Waste Reduction</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Non-Hazardous Solid Waste Diversion Targets (Non-C & D)	%	?	5	10	15	20	50	...	
C & D Material & Debris Diversion Targets	%	?	5	10	15	20	50	...	
If agency uses on-site or off-site waste-to-energy, estimated total weight of materials managed through waste-to-energy	Tons or Pounds	0	0	?	?	?	?	...	
Number of sites or facilities with on-site composting programs	#	2	2	?	?	?	?	...	



<b>Pollution Prevention &amp; Waste Reduction</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Number of sites or facilities recycling through off-site composting programs	#	0	0	?	?	?	?	...	
If agency has on-site or off-site composting programs, estimated total weight of materials diverted to composting	Pounds	441	441	?	?	?	?	...	
% of agency-operated offices/sites with a recycling program	%	95	95	?	?	?	?	...	
If agency offices located in multi-tenant buildings, % of those buildings with a recycling program	%	0	0	?	?	?	?	...	
% of agency-operated residential housing with recycling programs	%	0	0	?	?	?	?	...	
Other, as defined by agency	n/a	n/a						...	

**GOAL 5: Pollution Prevention and Waste Reduction (Goal-Specific Items)**

The goal-specific items were addressed within the basic performance section above.

**Goal 5 (optional image)**

**GOAL 6: Sustainable Acquisitions (Basic Performance Discussion, A - H)**

The Department has established policies, procedures, guidance and programs that will achieve the sustainable acquisition requirements of EOs 13423 and 13514. The DOT’s Transportation Acquisition Regulation (TAR) establishes uniform acquisition policies that implement and supplement the Federal Acquisition Regulations (FAR) and Acquisition Management System (AMS) for sustainable acquisitions.

The EOs 13423 and 13514 establishes goals and a number of sustainable practices related to the acquisition of environmentally preferable products, including designated recycled-content products, designated biobased-content products, non-ozone depleting substances, non or less toxic materials, and green environmentally preferable and energy efficient) electronics.

To reduce solid and hazardous waste disposition, DOT has developed a GPP to enhance and sustain the DOT mission through cost effective acquisition that achieves compliance and reduces resource consumption and solid and hazardous waste generation. DOT’s procurement of green products and services contributes to sound management of the Department’s financial resources, natural resources, and energy. In its day-to-day operations,

DOT is committed to be environmentally and energy conscious in its selection and use of products and services. The GPP demonstrates DOT's commitment to environmental stewardship by becoming a model consumer of green products and services. As well, the DOT has implemented a Green Procurement Compliance System to ensure the GPP is being implemented. The Green Procurement Compliance System was initiated to 1) determine if the goals established by the Senior Sustainability Officer in the GPP are being implemented and progress made and 2) provide a mechanism to provide continual improvement in contracting and using environmentally friendly materials and services

As part of its commitment to meeting EO 13514, DOT has made much progress in the last year on Goal 6 including: • DOT instituted a Sustainability Scorecard into its quarterly 'regulatory review' process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT's OAs. The 95% green procurement target is on this scorecard and each Administrator is now regularly accountable for progress and success. • Continued to implement the GPP policy to ensure EPEAT-registered electronic product procurement preference is almost 100%. • Conducted a DOT wide training on Green Procurement for all contracting officers, engineers, program officers and senior management with speakers from Department of Veterans Affairs, Department of Agriculture and MARAAD with over 200 attendees (live and webinar). • DOT implemented a Green Procurement Compliance System to ensure the GPP is being implemented. • DOT COTR's are required to complete a Green Procurement training course to obtain FAC-COTR Certification. • FAA has updated their GPP and distributed it to all the Contracting Officers. • All FHWA's purchase card holders and contracting officers take training that includes Going Green guidance. This policy has been in place for several years and now encompasses areas such as construction contracts.

**a. Goal Description –**

The Department adopts the following EO 13514 related goals: • Ensure 95% of new contract actions, are in compliance with acquisition plans, statement of works and relevant contract clauses. Update Departmental affirmative procurement plans (also known as GPP or Environmentally Preferable Purchasing Plans), policies and programs to ensure that Federally-mandated designated products and services are included in all relevant acquisitions.

**b. Department lead for Goal –**

The DOT Senior Procurement Executive (SPE) is charged with implementing EOs 13514 and 13423 and will have responsibility for target development implementation, monitoring, evaluation and oversight.

**c. Implementation method –**

The DOT SPE in collaboration with the Office of Administrative Policy will develop and update policies that will facilitate sustainable acquisitions for the DOT.

DOT will implement the goals by ensuring that 95 percent of new contract actions, including task and delivery orders under new contracts and existing contracts, require the supply or use of products and services that are energy efficient, water efficient, biobased, environmentally preferable, non-ozone depleting, contain recycled content, or

are non-toxic or less toxic alternatives, and by updating agency affirmative procurement plans, policies and programs to include all Federally-mandated designated products and services in all relevant acquisitions.

DOT will assess needs and institutionalize industry best practices; use reporting systems as a management tool to track contract clauses as well as segregate by Product Service Code contract actions that appear to be sustainable, work cross modal to share ideas and provide training. As well DOT will also benchmark other agencies for their best practices.

#### 6.1. Short-Term Initiatives (1-2 years)

6.1.1. Policy and Guidance• Facilitate environmental programs in the areas of acquisitions, facilities management, standards, waste prevention, recycling, and logistics activities as they relate to GPP. • Review new contract actions to verify that green products and services are being acquired when appropriate. • Issue procurement policies, regulations, and grant provisions in consonance with green procurement requirements. • Incorporate use of green products in real property leasing policy and guidance. • Utilize statements of work or specifications to eliminate virgin material requirements, promote the reuse of products, require the use of alternative fuels and alternative fueled vehicles, products containing recovered materials (e.g., EPA-designated products), products that are Energy Star® and FEMP designated or energy-efficient, water conserving WaterSense® labeled products, bio-based products, Environmentally Preferable Products, EPEAT registered products, and non-ozone depleting products. • Continue to implement the GPP policy to ensure EPEAT-registered electronic product procurement preference.

6.1.2. Training and Awareness• Conduct training on green procurement for procurement personnel (e.g., live, web-based, via training slides). • Distribute information on best practices through awareness and outreach programs to facilitate markets for environmentally preferable products, services and new technologies. • Create a module in TMS and eLMS and conduct green purchasing training for procurement personnel (e.g., live, web-based, via training slides) • Facilitate and coordinate educational and promotional programs for employees (the purchasing community) and contractors, as appropriate. • Implement an awareness program to promote the GPP. • Conduct market research to determine the availability of environmentally preferable good and services. • Promote the DOT GPP through articles in newsletters, workshops to educate employees, and using logos/recycling statements on official stationary and publications directed to reach field operations, procurement officials, supply and requirements personnel and individuals who purchase material or products with a government credit card.

6.1.3. Facility Tracking and Reporting• Identify green procurement data for compilation and distribution to key stakeholders. • Report the status of the GPP within the Department to Senior Management and externally to other applicable Federal agencies and offices. • Require quarterly data calls to the OAs to continually improve green procurement process and better describe environmental and other green requirements in statements of work and contracts. • Develop key metrics and create a system for tracking performance. • Monitor DOT contracts for compliance with FAR Subpart 23.7- Contracting for Environmentally Preferable Products and Services, and for requirements of certificate programs such as FAR 52.223-4, Recovered Material Certification. • Ensure that FAR 52.204-4, Printed or Copied Double Sided on Recycled Paper and 52.223-6, Drug Free Workplace is in all DOT contracts.

## 6.2. Medium-Term Initiatives (3-5 years)

6.2.1. Planning and Design• Provide guidance and facilitate acquisition planning and establish Federal supply sources, such as the General Services Administration (GSA), Government Printing Office (GPO), Javits-Wagner-O'Day (JWOD) Program, the Defense General Supply Center (DGSC), and UNICOR for EPA-designated items and other recycled content products.

6.2.2. Training and Awareness• Conduct targeted analysis of use of green procurement practices and update training module in TMS and eLMS. • Develop intranet website for sustainable acquisition frequently asked questions. • Provide training opportunities to learn about life-cycle assessments (LCAs) of materials or products that DOT uses in large quantities.

6.2.3. Facility Tracking and Reporting• Audit facilities and field operations on a periodic basis to assure compliance with green procurement policies and practices. • Develop metrics to measure progress such as total dollars of procured green products vs. conventional.

## 6.3. Long-Term Initiatives (6-10 years)

6.3.1. Planning and Design• Conduct a series of facilitated workshops to develop long-term initiatives to achieve these goals. • Promotes a DOT-wide contract for replacement of ink jet and toner cartridges that includes mandatory use of remanufactured ink jet and toner cartridges, easy recycling of spent ink jet and toner cartridges, and credit for recycled ink jet and toner cartridges. • 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 –**

DOT Chief of the Contracting Officers (COCOs) is committed to incorporating sustainable acquisition as part of the Contracting Officers (COs) duties. COs are responsible for acquisition planning and to ensure the inclusion of applicable contract clauses in all new awards.

The DOT acquisition community must take a hard look at how it plans to implement this plan due to scarce resources. Currently, implementation plans are accomplished by a single FTE in DOT headquarters that has many competing and collateral priorities.

### **e. Planning Table –**

The Department's planning table can be found at the end of this section.

### **f. Department Status -**

DOT policies, procedures and green procurement language are contained within the FAR, AMS, TAR, TAM, and DOT Acquisition Policy Letter. There are several government websites and other sources that contain listings of

EPPs, EPEAT and other sustainable products. Procurement uses these regulations and lists for all appropriate purchases and contracts.

The following are actions planned in FY 2011:

- The DOT will update master listings of environmentally preferable products to enable efficient access, and to better incorporate appropriate provisions, for services, commodities and technology.
- The DOT will update its GPP by fourth quarter of FY-11
- The DOT is currently developing a Green Guide for use by the Operating Administration.
- On an ongoing basis, the DOT will update the master listing of environmentally preferred products for access on the internal M60 website.
- The DOT will identify and make available computer based training that will be posted to the M60 website as well as TMS.
- The DOT has developed a Self Assessment Checklist and expect completion in the third quarter of FY-11

**g. Return on Investment –**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

The DOT will conduct periodic reviews of FedBizOps to ensure that sustainable requirements are included in Request for Proposals, Solicitations and Contract Awards. The DOT will follow-up on all corrective action plans to ensure agency implementation.

**h. Highlights –**

DOT's policies, procedures and green procurement language are contained within the FAR, AMS, TAR, TAM Policy Letters and the DOT Strategic Plan. Additionally, there are several government websites and other sources that contain listings of EPEAT and other sustainable products. DOT procurement and contractor purchasing personnel use these regulations.

Department-wideThe DOT OAs have incorporated green requirements during the acquisition planning process for all contract actions.

The DOT OAs are monitoring all contracts for compliance with FAR Subpart 23.7- Contracting for Environmentally Preferable Products and Services, and for requirements of certificate programs such as FAR 52.223-4, Recovered Material Certification. Ensuring that FAR 52.204-4, Printed or Copied Double Sided on Recycled Paper and 52.223-6, Drug Free Workplace is in all DOT contracts. The DOT has developed a procurement checklist that will be distributed to each OA in the next few weeks.

The DOT conducts internal Compliance Reviews to ensure acquisition plan requirements incorporate the applicable sustainability goals herein and the goals identified in the DOT Green Purchasing Plan.

Currently DOT is one of the few agencies where COTR's are required to complete a Green Procurement training course to obtain FAC-COTR Certification.

OSTThe OST conducted a DOT wide training on Green Procurement for all contracting staff, engineers, program officewith speakers from Department of Veterans Affairs, Department of Agriculture and had over 200 attendees.

FHWAAll FHWA’s purchase card holders and contracting officers take training that includes Going Green guidance. This policy has been in place for several years and now encompasses areas such as construction contracts.

Challenges - A challenge for the Department is that it lacks an internal data tracking system for sustainability requirements. As well, the current Federal Procurement Data Reporting System (FPDS- NG) does not have data fields that support the requirements of the EOs. As a result, reporting is a labor intensive manual exercise that would require multiple resources.

Below is the planning table for this goal.

**GOAL 6: Sustainable Acquisitions (Planning Table)**

<b>Sustainable Acquisition</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
New Contract Actions Meeting Sustainable Acquisition Requirements	%	95%	95%	95%	95%			...	Hold
Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	%	n/a	TBD	?	?	?	?	...	
Water Efficient Products	%	n/a	TBD	?	?	?	?	...	
Biobased Products	%							...	
Recycled Content Products	%	n/a	TBD	?	?	?	?	...	
Environmentally Preferable Products/Services (excluding EPEAT - EPEAT is included in Goal 7)	%	n/a	TBD	?	?	?	?	...	
SNAP/non-ozone depleting substances	%	n/a	TBD	?	?	?	?	...	
Other, as defined by agency		n/a	TBD?	?	?	?	?	...	

**GOAL 6: Sustainable Acquisition Contract Review**

<b>SUSTAINABLE ACQUISITION CONTRACT REVIEW</b>	<b>1st QTR FY 11</b>	<b>2nd QTR FY 11</b>	<b>3rd QTR FY 11 (planned)</b>	<b>4th QTR FY 11 (planned)</b>
Total # Agency Contracts	493	1204	TBD	TBD
Total # Contracts Eligible for Review	32	305	TBD	TBD

<b>SUSTAINABLE ACQUISITION CONTRACT REVIEW</b>	<b>1st QTR FY 11</b>	<b>2nd QTR FY 11</b>	<b>3rd QTR FY 11 (planned)</b>	<b>4th QTR FY 11 (planned)</b>
Total Contracts Eligible Contract Reviewed (i.e., 5% or more eligible based on previous OMB guidance)	32	58	TBD	TBD
# of Compliant Contracts	27	58	TBD	TBD
Total % of Compliant Contracts	85	100%	TBD	TBD

**GOAL 6: Sustainable Acquisitions Contract Review**

The DOT in an effort to provide a consistent method for collecting and providing DOT data, the Office of Administrative Policy in collaboration with the Office of the Senior Procurement Executive developed a template for submitting the results of the compliance review. The report was used to provide data on DOT efforts towards meeting EOs 13423 and 13514 goal of requiring 95% of all new contracts be considered green purchases. Each of the OA's was required to review five percent of all new contracts for the performance period between January 1, 2011 through March 31, 2011. The OAs selected the following types of contracts for review, i.e., products, construction and services. In total the OA's reviewed 329 contracts from a total contract of 1204. DOT reviewed 61 (approximately 5%) of the total eligible contract. Contracts reviewed included sustainable acquisition aspects, i.e., acquisition plan, statement of work, and contract clauses. All contracts reviewed were in compliance with the green procurement requirements. All the contracts in compliance included the appropriate clauses, i.e., energy efficient products, recycled content, biobased products, environmentally preferred etc. This review revealed 100% compliance with the sustainable acquisition goal. As well, OAs were required to submit corrective action plans.

**GOAL 6: Sustainable Acquisitions (Goal-Specific Items)**

**The goal-specific items were addressed within the basic performance section above.**

**Goal 6 (optional image)**

**GOAL 7: Electronic Stewardship and Data Centers (Basic Performance Discussion, A - H)**

The Department is committed to the principles and practices of electronic stewardship and efficient data center management. Electronic stewardship addresses the life-cycle management of electronics from procurement to disposal for the purpose of reducing the environmental and energy impacts of electronic product acquisition, operation, maintenance and disposition. This goal also seeks to reduce the environmental and energy impacts of data centers. The EOs 13423 and 13514 set goals, objectives and sustainable practices applicable to electronics stewardship and data center management.

As part of its commitment to meeting EO 13514, DOT has made much progress in the last year on Goal 7 including:

- DOT instituted a Sustainability Scorecard into its quarterly ‘regulatory review’ process—individual meetings held between the Deputy Secretary and the Administrator of each of DOT’s OAs. Power management targets are on the scorecard for OST and FAA, the managers of DOT’s two computer networks system. The FAA Administrator and the OST CIO is now regularly accountable for progress and success.
- Ensured new IT related contracts contain an exchange clause referencing FMR 102-39 to avoid disposal costs for the Agency and to ensure recycling;
- Continued to implement the GPP to ensure EPEAT-registered electronic product procurement is the preference 100%.
- Currently DOT has consolidated 1 Tier I-IV and 2 Tier V data centers and continues to strive toward meeting targets defined in the attached DOT FDCCI Plan.
- DOT OAs began implementing duplex printing on its multi-function copier/printers and other energy-efficient or environmentally preferable features on its office equipment starting in January 2010, in accordance with DOT Printing Order 1360.5C.
- FHWA has purchased software products (e.g., productivity management software) to support telework and reduce business travel with webinar and video conferencing technology.
- RITA created and shared Federal Commuter Choice Survey for inventorying commuter greenhouse gases – survey tool was distributed to all Federal agencies as the best method available for accounting for Federal employee trips to and from work.

**a. Goal description –**

To fulfill the requirements of EOs 13423 and 13514, DOT will plan and take action working across the OAs to:

- Comply with OMB Federal Data Center Consolidation Initiative (FDCCI) data collection and planning activities deadlines to develop and submit updates to DOT Data Center Consolidation Plan;
- Implement defined Department milestones as defined in the FDCCI DOT Data Center Consolidation Plan;
- Use OMB defined performance metrics to monitor the Department’s progress in meeting reduction goals in its data centers;
- Ensure 95% of new contract actions include task and delivery orders for products and services are energy efficient (ENERGY STAR or FEMP-designated) and environmentally preferable (EPEAT certified);
- Establish and implement policies to enable power management, duplex printing, and other energy efficient or environmentally preferable features on all eligible DOT electronic products;
- Establish and implement policies to extend the useful life of DOT electronic equipment to four years for desktops and laptops;
- Ensure environmentally sound practices with respect to the DOT’s disposition of all DOT excess or surplus of electronic products; and
- Implement best practices in energy efficient management of servers and data centers.

**b. Department lead for goal –**

The Director of Information Technology and the Manager, Personal Property, as the designated Department leads, will direct the activities for policy, target development, implementation and oversight. The DOT Chief Technology Officer will act as Program Manager for FDCCI.

**c. Implementation methods –**

DOT will implement the goals listed above by addressing the four life-cycle phases for electronics assets: Acquisition, Operations & Maintenance (O&M), Facility Tracking and Reporting and End-of-Life (disposition).

*Acquisition*• DOT will implement the OMB “Cloud First” planning for all relevant acquisitions, if a Cloud alternative is not chosen as an IT solution DOT will show that an alternatives analysis was completed and a Cloud Computing



option was explored; • Ensure procurement of Energy Star® and FEMP designated equipment; • Ensure new IT related contracts contain an exchange clause referencing FMR 102-39 to avoid disposal costs for the Agency and to ensure recycling; • Ensure new IT related contracts contain preferential or provisioned clauses for: double-sided or duplex printing capabilities, environmentally preferable products, and energy-efficient products (Note: These clauses should also be contained within solicitation provisions); • Evaluate existing IT vendor contracts to see if they can be modified to include data elements and/or metrics for reporting to improve data quality (Note: New IT contracts should also include reporting capabilities, as applicable); and • Require that all new printers and/or copiers, both network and personal, provide duplex printing capability in accordance with DOT Printing Order 1360.5C.

*Operations & Maintenance* • Implement best management practices in energy-efficient management of servers and DOT data centers (e.g., consolidation, server virtualization, cloud computing); • Maintain average lifespan of desktops, laptops, and servers to 4 years or better; • Enable power management on all eligible desktops and laptops; • Establish Department directive or guidance for power management; • Develop or update IT operations and maintenance (O&M) policies, procedures and guidance, to ensure compliance and continued sustainability of power management, duplex printing, and other environmentally preferable features within the DOT; • Enable duplex printing features on all imaging equipment as the standard “default” setting. DOT Printing Order 1360.5C establishes standards for duplexing as well as other environmentally preferred imaging practices; and • Provide adequate training, awareness, and communication to DOT employees on the importance of ES and the efforts the DOT is taking to reduce our environmental footprint and enhance sustainability.

*Facility Tracking and Reporting* • Establish performance metrics for electronic stewardship activities and data centers. • Implement DOT-wide integrated reporting and tracking systems.

*End of Life Management* • Implement environmentally sound management practices for recycling (eCycling) and final disposal of electronic wastes to help keep electronic components out of the landfill and recover materials for use in the manufacture of new products, including the following: Donate or recycle used electronics to qualified organizations; Dispose of usable or refurbished equipment through the General Services Administration and recycle unusable, unsold equipment using sustainable environmental practices; Implement program to partner with electronics recyclers that adhere to strict environmentally sustainable practices; and Recycle end of life electronics and attempt to increase DOT reuse/recycle percentage. • Improve data collection and metrics on the reutilization and disposition of DOT electronic equipment in the areas of: Exchange/Sale (e.g., Federal Management Regulation (FMR) 102-39, Asset Recovery Program), reuse internally, declared excess and reported to GSA, donation through Computers for Learning (CFL), transfer to eligible Federal entities (e.g., Direct Transfers), declared surplus, public sales (e.g., GSA Auction), and abandonment/ destruction and/or eCycling (e.g., Unicor); • Establish and implement policies mandating the use of Asset Recovery Services or R2 certified recycling agents for Agency electronic equipment at its end of life; • Ensure new IT related contracts contain an exchange clause referencing FMR 102-39 to avoid disposal costs for the Agency and to ensure recycling. DOT has developed Electronic Stewardship and Data Centers milestones that include short-, medium-, and long-term initiatives to accomplish these goals.

### 7.1. Short-Term Initiatives (1-2 years)

7.1.1. Policy and Guidance • Continue to implement the GPP to ensure EPEAT-registered electronic product procurement preference. • Conduct a gap analysis of existing policies and programs that address electronic stewardship. • Form a community of subject matter experts across DOT OAs to develop policies and guidance. • Monitor Electronic Stewardship progress by establishing metrics via the Department's EMS communications and monitoring system and internal scorecard that evaluates EO and other Sustainability requirements and objectives across all 12 OAs and OST, twice annually.

7.1.2. Planning and Design • Study consolidation and virtualization of select data centers and continue to participate in the Federal Data Center Consolidation Initiative (FDCCI). • Update DOT list of all data center construction, expansion and/or consolidation activities currently planned or under way across all Departmental modes through submission of DOT FDCCI Asset Inventory and Final Consolidation Plan deliverables. • Update DOT-wide data center consolidation plan to reflect all Agency FY11 FDCCI activities and planning. • Update DOT data center baseline by conducting hardware and software (e.g., major systems and support) inventory validation to include energy usage and cost information. • Develop guidance on the most effective methods of benchmarking current energy consumption/utilization. • Conduct benchmarking study to identify current and best management.

7.1.3. Training and Awareness • Develop aggressive awareness campaign to promote telework (see Goal 2, Scope 3 Greenhouse Gas Emissions Reduction) and to ensure employees (management employees specifically) are aware of the full range of support and resources available to them. • Develop training for telework technologies. • Create awareness of DOT-wide double-sided copying and printing policy. • Develop and implement DOT FDCCI Communications Plan

7.1.4. Acquisition • Review internal Department procurement supply, program, logistics procedures, plans and directives and revise them as necessary to achieve the goals of EO 13514. • Review and revise specifications, product descriptions, and standards during the acquisition planning stage to enhance DOT's procurement of EPEAT-registered products, Silver rated or higher (or equivalent). Develop IT Blanket Purchase Agreements (BPAs) that include EPEAT requirements; revise existing contracts and BPAs to include EPEAT compliance provisions. • Require that all new printers and/or copiers, both network and personal, provide duplex printing capability. • Ensure procurement of Energy Star® and FEMP designated equipment. • Procure EPEAT Silver-rated electronic products or higher if available. • Purchase 95 percent or better of the DOT electronic computing equipment from EPEAT registered manufacturers that are Energy Star® 5.0 compliant. • Continue four-year refresh policy, buying new EPEAT monitors, computers, and laptops, Silver rated or higher (or equivalent), when possible and applicable.

7.1.5. Operations and Maintenance • Enable Energy Star® power management features on desktops, laptops and monitors. • Extend the useful life of electronics to a minimum of 4 years to the maximum degree possible based on mission needs.

7.1.6. End of Life Management • Develop policy to use environmentally sound disposal practices for excess or surplus electronic products. • Recycle end of life electronics and attempt to increase DOT reuse/recycle percentage. 7.1.7. Facility Tracking and Reporting • Establish milestones for reaching electronic stewardship goals based on input from acquisition, property, and IT staff.

## 7.2. Medium-Term Initiatives (3-5 years)

7.2.1. Policy and Guidance• Define method to calculate the incremental costs for buying energy efficient equipment and associated cost savings.

7.2.2. Planning and Design• Conduct an analysis of the potential costs (considering life cycle costs) and benefits of investing in technology tools to support teleworkers. • Conduct an analysis of the potential costs and environmental benefits of virtualization through the use of cloud computing.

7.2.3. Training and Awareness• Develop power management training and broadcast to all DOT employees and contractors about policy and power management commitment. • Determine power management training requirements and develop any necessary training. • Develop training modules in electronic training system relating to the energy-efficient operation of computers and monitors that will be customized to meet the needs of target audiences, with general modules for all DOT employees

7.2.4. Acquisition• Assess and purchase software products to support telework or reduce business travel.

7.2.5. Operations & Maintenance• Revise O&M policies to reflect the requirement of the EO 13514 and incorporate language to enable telework. • Continue to update DOT FDCCI Plan to reflect milestones achieved and planned future milestones in accordance with OMB guidance aligned to the OMB FDCCI. • Implement virtualization of the environment where appropriate through cloud computing aligned with the OMB FDCCI and Federal Cloud Computing Initiatives.

7.2.6. End of Life Management• Use vendors' exchange/take back programs.

7.2.7. Facility Tracking and Reporting• Strengthen the existing reporting system for tracking, reporting and communicating electronic property disposal actions.

## 7.3. Long-Term Initiatives (6-10 years)

7.3.1. Planning and Design• DOT will conduct a series of facilitated workshops to develop and implement strategies and outline long-term initiatives to achieve these goals.

7.3.2. Operations and Maintenance• Consolidate selected data centers across DOT in order to achieve cost savings, energy consumption reductions, optimal space utilization and improvements in IT asset utilization. These data centers are identified in the DOT Data Center Consolidation Plan developed in compliance with guidance provided by the OMB FDCCI.

### **d. Positions -**

The majority of data center consolidation is completed by full-time staff, but other O&M activities and lack of resources restrict DOT from the ability to assign dedicated employees to this project. Major staffing concern for the FDCCI are repurposing of federal FTEs from decommissioned sites and labor union issues. The majority of non data center consolidation projects and initiatives are completed as collateral duties for federal FTEs; therefore,

the implementation of these projects and initiatives are at the mercy of availability of those assigned. **e. Planning Table –**

All data center reduction and optimization goals and targets can be viewed throughout the DOT FDCCI Plan. Section 2 of the plan states the following targets to be achieved by the close of FY 2015.

11% reduction in Tier 1-4 data centers 13% reduction in server rooms/closets 15% reduction in racks 20% reduction in servers 10% savings in energy consumption 10% savings in building operational costs 25% virtualization target 8:1 VM's per host for Windows Servers; 3:1 VM's per host for Non-Windows Servers 60% physical server utilization target for all servers DOT is 80% power management enabled for eligible PCs and on track for 100% by 12/31/11.

**f. Department Status -**

The DOT will continue to comply with the OMB FDCCI. An Agency FDCCI Plan was approved 12/2010 and DOT representation participated in a 2-day GSA/OMB facilitated Peer Review of Agency Plans.

Updates to the DOT Asset Inventory and FDCCI Plan were submitted in 2/2011 and 3/2011 to include FAA NAS data center data and planning.

The DOT will submit an updated Asset Inventory by the end of Q3 2011 and an updated DOT FDCCI by the close of Q4 2011. DOT achieved the goal of ensuring 95% of its information technology (IT) purchases were EPEAT certified and has begun an effort to enable power management settings on eligible desktops and laptops.

The DOT created a Printing Order (1360.5C) to enforce better printing practices and enhanced environmental benefits such as duplex printing, toner and paper reduction, as well as energy reduction by migrating to multifunctional devices (MFPs) versus desktop printers.

**g. Return on Investment –**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

As stated in the DOT FDCCI Plan, DOT estimates a \$23,661,023 return on investment over 5 years for the FDCCI with the first return on investment showing up in FY13 (~1M) and the majority of the return realized in FY15.

The DOT FDCCI Plan includes section 5.1 which addresses Cost Benefit Analysis and defines the Return on Investment throughout the lifecycle of the initiative.

**h. Highlights –**

Department-wide Currently the DOT has consolidated one Tier I-IV and two Tier V data centers and continues to strive toward meeting targets defined in the attached DOT FDCCI Plan.

The DOT OAs have begun implementing duplex printing on its multi-function copier/printers and other energy-efficient or environmentally preferable features on its office equipment starting in January 2010, in accordance with Department policies.

FHWAThe FHWA has purchased software products (e.g., productivity management software) to support telework and reduce business travel with webinar and video conferencing technology.

RITARITA created and shared Federal Commuter Choice Survey for inventorying commuter greenhouse gases – survey tool was distributed to all Federal agencies as the best method available for accounting for Federal employee trips to and from work.

### Challenges

Enabling power management on all eligible desktop and laptop computers has proven to be extremely challenging in the Window XP environment. DOT did not have funds available to purchase a vendor solution and had to pursue this goal by leveraging internal capabilities. Several technological issues still remain and work arounds/mitigation strategies are being developed. Due to the issues inherent in enabling power management settings at the enterprise level in a predominantly Windows XP environment, DOT is working very hard to demonstrate as much compliance as possible by the 6/30/2011 OMB deadline.

Below is the planning table for this goal.

### GOAL 7: Electronic Stewardship and Data Centers (Planning Table)

<b>ELECTRONIC STEWARDHIP &amp; DATA CENTERS</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>
% of electronic product acquisition covered by current Energy Star specifications that must be energy-star qualified	%	n/a	100	100			
% of covered electronic product acquisitions that are EPEAT- registered	%	n/a	95	95			
% of covered electronic product acquisitions that are FEMP- designated	%	n/a	95	95			
% of agency, eligible PC, Laptops, and Monitors with power management actively implemented and in use	%	n/a	100	100			
% of agency, eligible electronic printing products with duplexing features in use	%	n/a	95	100			
% of electronic assets covered by sound disposition practices	%	n/a	100	100			

<b>ELECTRONIC STEWARDHIP &amp; DATA CENTERS</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>
% of agency data centers independently metered, advanced metered, or sub-metered to determine monthly (or more frequently) Power Utilization Effectiveness (PUE)	%	n/a	see note	see note			
Reduction in the number of agency data centers	%	n/a	see note	see note			
% of agency data centers operating with an average CPU utilization greater than 65%	#	n/a	see note	see note			
Maximum annual weighted average Power Utilization Effectiveness (PUE) for agency.	#	n/a	1.8	1.7	1.6	1.5	1.4

**GOAL 7: Electronic Stewardship and Data Centers (Goal-Specific Items)**

In the above planning table all information concerning physical data centers, CPU, and PUE is addressed in the DOT Data Center Consolidation Plan in compliance with the OMB FDCCI.

**Goal 7 (optional image)**

**GOAL 8: (New) Agency Innovation & Government-Wide Support (Basic Performance Discussion, A - H)**

The Department has a long history of innovation in policies, programs, practices and technology associated with transportation. DOT has shown the same leadership in developing and implementing policies, practices and technology to expand the Department’s sustainability mission beyond what is required in EO 13514 and beyond what is described elsewhere in this document.

**a. Goal description –**

Develop innovative practices, technologies, or techniques that can be used to achieve the goals contained within this plan, which include but are not limited to: I. Best practices II. Data systems III. Technology to facilitate communication and innovation

**b. Department lead for goal –**

The Assistant Secretary for Administration is the designated Agency lead for innovation and government-wide support.

**c. Implementation methods –**

Though the Department’s higher-tier EMS, DOT will use the framework to implement, monitor, and continuously improve the programs and projects identified in the SSPP. By following the “plan-do-check-act” process in its

higher-tier EMS, DOT will be able to identify new, innovative practices to address many of the goals within this SSPP.

**d. Positions –**

Additional resources are needed at HQ and the OA level to help identify and develop innovative practices and technologies.

**e. Planning Table –**

The Department’s planning table for this goal can be found at the end of this section.

**f. Department Status –**

DOT is an active participant in many of the Federal Interagency Workgroups that have been formed to address the sustainability goals of EO 13423 and EO 13514. In particular, DOT has been involved with the following groups:1. Interagency Energy Management Task Force 2. Sustainable Acquisition Materials Management Workgroup3. Federal Electronic Challenge Workgroup4. Federal Electronic Stewardship Workgroup5. Federal Working Group on GHG Accounting and Reporting6. Interagency Sustainability Workgroup7. INTERFUELS8. EISA Section 432 CTS InterAgency Task Force Working Group

In addition to participating interagency workgroups, DOT has developed tools or provided assistance to other agencies in meeting Federal/Congressional reporting requirements.

DOT is taking a leadership role in promoting more transportation choices, promoting affordable housing and valuing communities through its interagency collaboration and leadership. By chairing the interagency team and working with the General Services Administration, EPA, Department of Housing and Urban Development and in coordination with the Department of Homeland Security and DOD, DOT developed the Guidelines for Sustainable Locations for Federal Facilities required by the EO. The impact of this work is significant as the Guidelines are to be used by all Federal agencies in determining future site locations.

Additionally, the U.S. DOT Volpe Center has contributed to the greater Federal GHG inventory effort by creating and providing the advanced methodology for scope 3 Federal commuter emissions through designing the “Commuter Choice Survey.” The White House Council on Environmental Quality (CEQ) recognized the Volpe survey as the “best available method” for estimating GHG associated with Federal commutes and recommended its use to all Federal agencies for calculating their scope 3 emissions for the GHG inventory. DOT used this Volpe survey tool to survey all employees across the Department to measure their FY10 commuting emissions and achieved a reasonable response rate.

Finally, DOT will participate in regional and local transportation planning by integrating comprehensive stakeholder participation into current operating policy. DOT will continue to provide comprehensive information on Greenhouse Gases, Climate Change, Adaptation and Transportation through its Transportation and Climate Change Clearinghouse (TCCC). Through the TCCC website, DOT provides regional and local transportation planning leaders around the world access to state-of-the-art research and technical guidance surrounding this global issue.

Internally, DOT will work to establish a “green travel” policy which outlines carbon reduction strategies for employees on official travel, including recommendations for fuel-efficient vehicles and "green" lodging services. These strategies will be refined and enhanced in future annual updates of this Plan.

**g. Return on Investment –**

At this time, DOT does not have any projects that have been deliberately cancelled, suspended, or expanded due to ROI considerations. However, given the limited resources, progress on some initiatives is slower than expected. DOT will provide more specific information in future plans as these types of decisions are made.

**h. Highlights –**

DOT formed an organization-wide green team to address many requirements of EO 13424 and EO 13514 in the HQ building. This group contains members from each of the OAs and is responsible for identifying and implementing many sustainability-related activities in the HQ building which can reduce energy and water consumption, paper use, and/or increase recycling.

DOT is pleased to provide a short summary of innovations for the previous year by OA:

FAAIn November 2009, FAA began the Greening Initiative – an FAA-wide, collaborative effort to address EO 13514 and other related mandates. The vision for the Greening Initiative is “to strengthen FAA energy and environmental management to enhance stewardship and compliance, and foster an FAA-wide culture change.” The Greening Initiative is comprised of nine program areas: greenhouse gas (GHG) emissions, energy efficiency, water resources, regional planning, high performance sustainable buildings (HPSB), pollution prevention, green procurement, electronics stewardship (ES), and environmental management system (EMS). This initiative is managed and facilitated by a cross-FAA Sustainability Senior Executive Council (SEC) and working groups for each program area. The Sustainability SEC serves in an advisory role and provides input, approval, resources, and recommendations to FAA upper management, as needed. The program area working groups identify near-, medium-, and long-term sustainability activities.

The FAA currently houses NOAA for contract weather support (CWP) throughout the airports in the United States to support the National Air Safety System. Further the FAA allows other agencies to use space in some of the technical facilities as well as use of some of the radar systems in the US. Additionally, The FAA has four buildings at the William J. Hughes Technical Center in Atlantic City that are used by the Department of Homeland Security.

FAA funded Airport Sustainability Master Plan Pilot Projects in 2010 at 10 Regional Airports  
<http://www.faa.gov/airports/environmental/sustainability/>

MARADThe OA continues to meet with local and regional officials in developing an environmental sound, safe and secure maritime transportation system. In support of the goals, the OA is working with local and regional planning officials to improve efficiency and reduce truck traffic by instituting marine highway, infrastructure, and port development projects nationwide.



Recognizing existing community transportation infrastructure, MARAD is working to increase the effectiveness of local planning for energy choices by ensuring planning for new facilities and new leases include considerations for environmentally-sustainable and pedestrian-friendly areas. MARAD is also analyzing impacts from energy usage and alternative energy sources by the National Environmental Policy Act process.

NHTSANHTSA's mission is to save lives, prevent injuries, and reduce economic costs due to road traffic crashes. NHTSA also implements the Corporate Average Fuel Economy (CAFE) program and the Medium and Heavy Duty fuel efficiency improvement program, which aim to reduce energy consumption by increasing the fuel efficiency of vehicles on our Nation's roads. Employing sustainable practices complements NHTSA's ongoing work. EO 13514 emphasizes the importance of data-driven analysis, requiring that agencies prioritize actions based on a full accounting of economic and social benefits and costs, and drive improvement by annually evaluating performance, extending or expanding projects with net benefits, and reassessing or discontinuing under-performing projects. NHTSA is committed to using scientifically sound methods to ensure the quality and integrity of data underpinning our regulations and policies. An emphasis on sustainability will further the OA's work, enhancing decision-making and efficiency across its key priorities.

In addition to enhancing motor vehicle safety, energy conservation is a key OA function. NHTSA advances national efforts to reduce energy use and associated GHG emissions. The OA is actively working on multiple historic initiatives to improve the efficiency of our Nation's vehicle fleet – from passenger cars to heavy-duty tractor-trailers – and in doing so, to make great strides in reducing petroleum consumption and vehicle emissions. NHTSA and EPA have proposed first-ever joint regulations to reduce the energy consumption by greenhouse gas emissions from medium- and heavy-duty commercial trucks. This comprehensive national program is projected to reduce GHG emissions by nearly 250 million metric tons and save 500 million barrels of oil over the lives of the vehicles produced within the program's first five years.

Finally, at NHTSA and DOT, we believe that alternative fuel and electric drive vehicles have an important role to play in our continued goal of increasing fuel efficiency and decreasing greenhouse gas emissions. NHTSA is actively working to support President Obama's goal of putting one million plug-in electric vehicles (EVs) on the road by 2015. Under NHTSA's fuel economy program, manufacturers receive a special credit for their EVs' fuel economy, and the credits NHTSA provides incentivize the production of EVs. To support this growing sector, NHTSA is also undertaking research related to electric vehicle safety and advanced batteries. For example, NHTSA has purchased a 2011 Chevrolet Volt and a 2011 Nissan Leaf for compliance testing to various Federal Motor Vehicle Safety Standards (FMVSS). Both vehicles are currently at our labs undergoing testing.

RITAThe RITA has a long commitment to improving environmental performance and has already made progress in meeting EO 13514 goals. In 2006, the Volpe Center created a center-wide Green Team with representatives across disciplines. RITA formed a headquarters Green Team in 2010. RITA headquarters has worked with the Volpe Center to connect both Green Teams and advance sustainability across the OA. In FY 2010, RITA achieved the following accomplishments:• Established the RITA-wide Green Team;• Created and shared Federal Commuter Choice Survey for inventorying commuter greenhouse gases – survey tool was distributed to all Federal agencies as the best method available for accounting for Federal employee trips to and from work;• Volpe Center full roll-out of the Demand Response program with ISO New England at the Volpe Center;• Joined the US Green

Building Council as a member on behalf of the DOT; and• Released beta version of the AEDT to calculate aviation pollution and greenhouse gas emissions for all flights in the United States and across the globe.

FHWAThe FHWA has incorporated participation in regional transportation planning (recognition and use of existing community transportation infrastructure) into existing policy and guidance. The FHWA currently cooperates and provides guidance on surface transportation issues nationwide. The FHWA is providing support to State and regional agencies on guidance and technical support. The FHWA will begin reviewing State transportation climate action plans, and sponsorship of peer exchanges to assist agencies in developing effective planning practices under existing regulations. The FHWA is now assessing public transportation in future site locations of administrative offices.

FHWA launched the beta version in 2010 of the Sustainable Highways Self Evaluation Tool to promote environmentally sustainable roadway projects nationwide: <http://www.sustainablehighways.org/>.

SLSDCThe SLSDC operates and maintains the U.S. infrastructure and waters of the St. Lawrence Seaway, while performing trade development activities focused on economic development for the Great Lakes St. Lawrence Seaway System. Its mission is to serve the marine transportation industry by providing a safe, secure, reliable, efficient and competitive deep draft international waterway, in cooperation with the Canadian St. Lawrence Seaway Management Corporation. By providing a safe, secure, reliable, efficient and competitive deep draft international waterway, the SLSDC will promote more waterborne transportation of goods which creates less GHG emissions per ton mile than moving the same goods on trains or trucks. The reduction of trucks on the nation's highway system will reduce GHG emissions not only from those trucks but also from other vehicles that are delayed in traffic due to that congestion. The SLSDC also meets annually with U.S. and Canadian Mohawk representatives to discuss ice breaking activities prior to the opening of each navigation season.

PHMSAThrough PHMSA, the DOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.3 million mile pipeline transportation system and the nearly 1 million daily shipments of hazardous materials by land, sea, and air. The OA goals include reducing the risk of harm to the environment due to the transportation of oil and hazardous materials by pipeline and other modes, as well as reducing the consequences (harm to people, environment, and economy) after a pipeline or hazmat failure has occurred.

PHMSA provides support to State and Federal agencies by collaborating with teams around the country, including Coast Guard and EPA, to protect the environment; including finding sources to ensure local citizens have clean drinking water.

Below is the planning table for this goal.

**GOAL 8: (New) Agency Innovation & Government-Wide Support (Planning Table)**

<b>AGENCY INNOVATION &amp; Government-Wide Support</b>	<b>Units</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>...</b>	<b>FY20</b>
Programs, Projects, Initiatives that support Gov-wide efforts	Number of Innovations	3	TBD	TBD	TBD	TBD	TBD		TBD
Other, as defined by agency									

**GOAL 8: (New) Agency Innovation & Government-Wide Support (Goal-Specific Items)**

The goal-specific items were addressed within the basic performance section above.

**Goal 8 (optional image)**

**Section 3: Agency Self Evaluation**

**Agency Self Evaluation**

<b>Agency Self Evaluation</b>	<b>Answer</b>
Does your Sustainability Plan incorporate and align sustainability goals, GHG targets and overarching objectives for sustainability with the Agency Strategic Plan?	Yes
Does it provide annual targets, strategies and approaches for achieving the 2015 and 2020 goals?	Yes
Is the Sustainability Plan consistent with the FY2012 President's Budget?	Yes
Does the Sustainability Plan integrate all statutory and Executive Order requirements into a single implementation framework for advancing sustainability goals along with existing mission and management goals, making the best use of existing and available resources?	Yes
Does your plan include methods for obtaining data needed to measure progress, evaluate results, and improve performance?	Yes

**Explanations & Other Key Questions for 2011**

1. Did your agency meet by 12/30/10 due date and/or is it now able to demonstrate comprehensive implementation of the EO 13423 Electronic Stewardship goals?

- Acquire at least 95% EPEAT-registered electronics

- Enable energy star or power management features on 100% of eligible PCs
- Extends the life and/or uses sound disposition practices for its excess or surplus electronics

(If these goals have not been met and demonstrated, then agency should describe its plan and milestones to demonstrate full compliance.)

**DOT is able to demonstrate implementation of most of the EO 13423 Electronic Stewardship goals. DOT has acquired at least 95% EPEAT-registered electronics. DOT also extends the life and/or uses sound disposition practices for its excess or surplus electronics.**

**DOT is 80% power management enabled for eligible PCs and is still in the process of enabling power management on 100% of all eligible PCs. Enabling power management on all eligible desktop and laptop computers has proven to be extremely challenging in the Window XP environment. DOT did not have funds available to purchase a vendor solution and had to achieve this goal by leveraging internal capabilities. Several technological issues still remain and work-arounds or mitigation strategies are being developed. Due to the issues inherent with enabling power management settings at the enterprise level in a predominant Windows XP environment DOT is working hard to demonstrate full compliance as soon as possible.**

2. Is your agency tracking and monitoring all of its contract awards for inclusion of requirements for mandatory federally-designated green products in 95% of relevant acquisitions?

(If it is finding non-compliance issues, then it should identify corrective actions the agency is taking this year to demonstrate compliance with the 95% sustainable acquisition goal by the end of FY2012.)

**DOT is monitoring its contract awards by sampling 5% of its contracts each quarter as instructed for inclusion of requirements for mandatory federally-designated green products in 95% of relevant acquisitions. For the cases of non-compliance, DOT has identified and begun implementing corrective actions such as improved training and revisiting procurement procedures to incorporate green products. Contracts found to be missing green clauses during the 5% quarterly sampling will be subject to appropriate corrective actions that could include modifications, additional guidance, and/or additional training.**

3. Has your agency completed energy evaluations on at least 75% of its facilities?

(If agency has not met this goal, then it should describe plans for catching up on this requirement in the next 6 months.)

**Yes**

4. Will your agency meet the deadline of October 1, 2012 (EPACT'05 Sec 103) for metering of energy use? (Agency should provide current status of buildings metered and plans for meeting the deadline).

**DOT is on track to meet the 2012 metering deadline. Based on the data collected in January 2011, for the 2010 GHG Inventory, 95% of buildings have electricity meters and 85% have natural gas meters.**

5. If your agency reports in the FRPP, will it be able to report by December 2011 that at least 7% of its inventory meets the High Performance Sustainable Guiding Principles?

(If no, agency needs to provide schedule and plan for actions to be taken in the next six months.)

**No, DOT does not expect to be able to report that 7% of its inventory meets the HPSB Guiding Principles by December 2011. DOT is actively focusing efforts to increase the number of its buildings that meet the HPSB guiding principles. Many buildings are in the initial stages of assessment and implementation. Most of these projects will take several years to complete and financial resources are not certain, therefore they will not be ready by December 2011. However, DOT will be adding three more buildings to its HPSB inventory in 2011.**

**Resource/Investment Allocation by Goal**