

**United States Department of Commerce
Strategic Sustainability Performance Plan**

June 2010

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Section 1: Agency Policy and Strategy

I. Agency Policy Statement

The U.S. Department of Commerce (DOC) will maintain our long-held commitment to creating a sustainable environment and energy future through both our policies and actions. We adopt this policy to increase our nation's prosperity, promote energy security, protect the interests of taxpayers, and safeguard the health of the environment. To further demonstrate our commitment we will annually update and publish a Strategic Sustainability Performance Plan (SSPP) containing our agency priorities, performance targets and planned investments and projects for the coming year.

Over the next twelve months DOC will:

- Conduct our initial greenhouse gas inventory,
- Implement the Federal Energy Data program at DOC headquarters,
- Ensure five percent, at a minimum, of our electricity comes from renewable energy,
- Right-size our vehicle fleet,
- Empower employees to approach energy-conservation challenges creatively--through energy working groups, employee "Green Teams," and energy-awareness campaigns,
- Maintain and where appropriate establish working relationships with other federal agencies to augment limited resources and take advantage of expertise from across the Federal Government,
- Continue implementation of the Environmental Protection Agency's ENERGY STAR[®] Portfolio Manager to track energy usage and overall building performance across DOC facilities, and
- Comply with all relevant environmental and energy statutes, regulations, and Executive Orders (EOs).

Additionally, because DOC views the requirements of EO 13514, *Federal Leadership in Environment, Energy, and Economic Performance*, and the pursuit of a robust sustainability policy, as laid out in our SSPP, as central to our agency's core values and mission, every employee within DOC is charged with encouraging and personally supporting sustainability within the Department. To further efforts toward a transparent government, progress on these targets will be reported on the publicly accessible DOC Web site.

John F. Charles
Deputy Assistant Secretary for Administration
Senior Sustainability Officer

II. Sustainability and the Agency Mission

DOC has created a balanced scorecard to align business activities to the vision and strategy of the agency. The synergies between sustainability and the balanced scorecard make achieving the goals laid out in the SSPP crucial to the success of DOC's mission. That mission is to create the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship. Economic growth is supported by DOC through the following activities:

- Advanced technology,
- Sustainable development,
- Increased trade, and
- Information analysis.

Long-term economic growth depends on the natural resources that sustain such growth. DOC supports the economy and the environment by engaging in activities that support sustainable development and by implementing internal policies to promote environmental stewardship. Meeting the targets of EO 13514 and implementing the SSPP will help DOC to:

- Fulfill the agency's mission,
- Achieve the agency's vision for reducing its environmental impact and protecting natural resources, and
- Meet federal mandates and goals.

The effects of increased greenhouse gasses, rising energy prices, and natural resource constraint all negatively affect economic growth in the United States. Promoting sustainable development and sound environmental practices are crucial to expanded economic growth and opportunity. DOC must inspire sustainable responsibility and lead by example. The strategies in this SSPP outline DOC's opportunity to act as a federal leader in environment, energy, and economic performance.

Meeting these targets does pose some challenges. Every aspect of these goals faces a new urgency, given intensifying national needs related to the economy, the environment, and public safety. Recognizing the urgency of sustainability, DOC has made promoting environmental stewardship one of its three agency-wide strategic goals. As a strategic goal, DOC is recognizing the effect its organizational activities can have on sustainability. This aligns the targets in the SSPP with operational initiatives. Through meeting the mandates of EO 13514 and pursuing its strategic goal, DOC will ensure that the success of its mission is supported and strengthened by DOC's sustainability initiatives as laid out in this plan.

III. Greenhouse Gas Reduction Goals

DOC recognizes that increased greenhouse gas (GHG) concentrations in the atmosphere can stifle economic growth through adverse effects on the environment, and DOC is committed to reducing GHG emissions produced by its own activities. Policy is being established that will fulfill the mandates for GHGs laid out in EO 13514.

DOC has established a 21% reduction target for agency-wide Scope 1 and 2 greenhouse gas emissions in absolute terms by fiscal year 2020, relative to a fiscal year 2008 baseline. This

target has been submitted to the Council on Environmental Quality (CEQ) and the Office of Management and Budget (OMB) in accordance with EO 13514, section 2(a), Goals for Agencies.

DOC has established a 6% reduction target for agency-wide Scope 3 greenhouse gas emissions in absolute terms by fiscal year 2020, relative to a fiscal year 2008 baseline. This target has been submitted to the CEQ and OMB in accordance with EO 13514, Section 2(b), Goals for Agencies.

IV. Plan Implementation

The Senior Sustainability Officer (SSO) is responsible for leading the internal coordination and communication of this plan within DOC. The SSO also ensures communication between all appropriate offices within the agency including the General Counsel, Chief Information Officer, Chief Acquisition Officer, Senior Procurement Executive, Chief Financial Officer, and Senior Real Property officers, and other offices as necessary. The SSO is supported by the SSPP Working Group, with representatives from each of the above offices as well as representatives from DOC's bureaus. This working group ensures that procedures, timelines, and policies outlined in the SSPP integrate with other DOC plans, policies, and activities including the DOC budget-planning process.

Coordination and dissemination to the field is crucial for successful implementation of the SSPP. Communication with the field will occur via a variety of mechanisms. The SSPP working group will integrate SSPP information into existing communication pathways. A Web site will be constructed to serve as a one-stop shop for DOC related sustainability and energy information. The Web site will direct field staff to current reporting requirements, existing DOC policy, and implementation guidelines.

The SSO will provide leadership within DOC in carrying out the objectives of the SSPP and will be responsible for reaching targets and complying with federal mandates. Additionally, the SSO bears the responsibility for implementation of the plan across the agency and submitting annual updates to the CEQ Chair and OMB Director. The SSO provides the Secretary with an annual report on progress made toward reaching the targets laid out in this plan.

The table below illustrates how various documents and policies will be coordinated with the goals of the SSPP. The following abbreviations are used.

- Y = Yes; the policy and the goal are coordinated
- YWC = Yes, Will Coordinate; coordination between the policy and the goal will occur in the future
- N/A = Not applicable; no coordination between the policy and the goal is needed

Originating Report / Plan	Scope 1 and Scope 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
GPRA Strategic Plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Y
A-11 300s	YWC	YWC	N/A	Y	Y	N/A	YWC	N/A	YWC	Y
Annual Energy Data Report	Y	YWC	YWC	Y	NA	Y	N/A	N/A	N/A	Y
EISA Section 432 Facility Evaluations/Project Reporting	YWC	YWC	YWC	Y	YWC	Y	NA	Y	Y	Y
Budget	YWC	YWC	YWC	Y	YWC	Y	Y	Y	YWC	Y
Asset Management Plan / 3-Year Timeline	YWC	YWC	N/A	YWC	Y	N/A	N/A	N/A	N/A	Y
Environmental Management Manual	YWC	YWC	YWC	Y	Y	Y	Y	Y	Y, YWC	Y
Green Procurement Program	YWC	YWC	YWC	YWC	N/A	Y	Y	Y	Y	Y
Circular A-11 Exhibit 53s	N/A	N/A	N/A	YWC	YWC	N/A	N/A	YWC	YWC	Y
OMB Scorecards	YWC	YWC	YWC	Y	YWC	Y	YWC	Y	Y	Y
DOE's Annual Federal Fleet Report to Congress and the President	YWC	YWC	YWC	N/A	Y	N/A	N/A	Y	N/A	Y
Data Center Consolidation Plan	YWC	YWC	YWC	N/A	YWC	N/A	N/A	YWC	YWC	YWC
Environmental Management System	YWC	YWC	YWC	Y	Y	Y	Y	Y	Y	Y
Other (e.g., reports, policies, plans)										

Activities within the SSPP are prioritized by their ability to help DOC meet mandated targets and by life-cycle cost benefit to the agency. Funding will be requested in the annual budget submission for high-priority projects and activities. Communication with the budgeting office will occur through the SSPP working group and be overseen by the SSO. OUs are responsible for creating budget estimates and submitting budget requests as necessary to meet mandates and reach targets. DOC will continue to submit reporting requirements on all federal mandates as specified by those mandates, including OMB scorecards and annual reports. The SSPP specified by EO 13514 is updated annually, highlighting progress made to date and plans for the coming year.

V. Evaluating Return on Investment

Both monetary and non-monetary factors are accounted for when prioritizing projects and initiatives. To meet the goals in the SSPP, DOC must implement a variety of initiatives and projects. These projects are subject to cost-benefit analysis and discussion focused on life-cycle costs; return on investment (ROI); and economic, environmental, and social factors. As discussed in OMB Circular A-4, there are general issues involved in regulatory analysis, including defining a scope of analysis, developing a baseline, evaluating alternatives, and the ability for reproducibility and transparency of results.

a. Economic Life-Cycle Cost and Return on Investment

Life-cycle costs and return on investment are understood in the context of monetary units over the life span of a project. Life-cycle costs often refer to the “cradle-to-grave” accounting that incorporates the sum of all phases of a project. DOC will consider total life cycle cost when identifying and investing in sustainability projects and initiatives to lower costs, achieve sustainable design principles, reduce energy and water consumption, and reduce DOC’s environmental impact.

The consideration of life-cycle costs for projects that fulfill the goals of EO 13514 includes:

- Using life-cycle cost analysis in making decisions about investments in energy and sustainability projects, and
- Utilizing the SSPP to develop a cohesive approach and maximize performance and success.

High-performance green building initiatives are well suited for economic life-cycle assessment because the economics of such capital projects often improve when operating and maintenance costs are included. In many cases, the life-cycle assessment might prove economically feasible but the high up-front costs keep a project from moving forward. DOC intends to utilize alternative financing to fund such projects whenever practical. These financing mechanisms enable DOC to realize cost savings over the life of a project. Alternative financing mechanisms that can be used include power purchase agreements (PPAs), energy savings performance contracts (ESPCs), and Utility Energy Services Contracts (UESCs).

b. Social Costs and Benefits

Social costs and benefits are not typically expressed in monetary units. This presents challenges when prioritizing projects or initiatives in the planning and budgeting process. In most cases the economic estimates are not available for prioritizing social benefits and costs. When this is the case, DOC will take both measureable and non-measurable factors into account during project evaluation. Per guidance provided in OMB C-4, clear discussion will be provided as to the strengths and limitations of the qualitative information. When social benefits and costs are analyzed, a thorough rationale behind project prioritization must be provided for policy justification. When considering the social costs and benefits of sustainability-related DOC projects and initiatives, DOC will strive to strengthen the vitality and livability of the communities in which DOC facilities are located.

c. Environmental Costs and Benefits

DOC will consider the environmental costs and benefits of key programs, initiatives, and efforts and will adhere to statutory requirements, EOs, and the Code of Federal Regulation (CFR) mandates, including the following:

- National Energy Conservation Policy Act (NECPA) of 1978, Public Law 95-619,
- Energy Policy Act of 1992 (EPAAct 1992), Public Law 102-486,
- Energy Policy Act of 2005 (EPAAct 2005), Public Law 109-058,
- Energy Independence and Security Act (EISA 2007), Public Law 110-140,
- EO 12375, *Motor Vehicles*, dated August 4, 1982,
- EO 13221, *Energy Efficiency Standby Power Devices*, dated July 31, 2001,

- EO 13423, *Strengthening Federal Environmental, Energy and Transportation Management*, dated January 26, 2007, and
- EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.

The consideration of environmental compliance and stewardship requirements into prioritization of key programs, initiatives, and efforts will be consistent with DOC *Environmental Management Manual*, which states that Departmental offices and OUs must:

- Comply with laws, regulations, and EOs and cooperate with federal, state, and local agencies to improve the quality of the environment,
- Plan, develop, and implement all programs and activities in a manner preventing or minimizing adverse impacts on environmental quality, and
- Coordinate with appropriate legal counsel regarding all reports of liability, permits, agreements, notices of violations, and enforcement actions.

Accounting for environmental cost and benefits incorporates both non-monetary and monetary factors in the planning and budgeting process. Similar to social costs and benefits, the environmental costs and benefits often are difficult to monetize; however, the goals and the objectives of the SSPP often are defined in quantifiable environmental language. The SSPP defines clear goals that relate to environmental factors, such as GHG reduction, increased water-use efficiency, and environmental management. Although SSPP environmental goals are explicitly stated in quantifiable language, not all of the environmental costs and benefits of implementing these programmatic goals are quantifiable. When considering the environmental costs and benefits of certain projects and initiatives, DOC considers quantitative cost-benefit data (when available), and performs thorough documentation of non-quantifiable factors.

d. Mission-Specific Costs and Benefits

DOC creates the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship. Increased greenhouse gases, rising energy prices, and natural resource constraints all negatively affect economic growth in the United States. Promoting sustainable development and sound environmental practices is crucial to expanded economic growth and opportunity. DOC must inspire sustainable responsibility and lead by example. The strategies in this SSPP outline DOC's opportunity to act as a federal leader in environment, energy, and economic performance. The nexus between DOC's mission and sustainability means that mission execution must be considered when prioritizing projects. Projects that offer strong environmental attributes but which might not be the most cost-effective option are likely justifiable if they strengthen or forward DOC's mission.

e. Operations, Maintenance, and Deferred Investments

DOC will consider operations and maintenance (O&M) and deferred investments when analyzing programmatic return on investment. Operations and maintenance and deferred investments considerations are especially germane to the goals of EO 13514. Investments in real property and DOC facilities directly affect DOC's efforts towards improving nearly every effort listed in Section 2 of this document. Architectural, mechanical, and electrical investments are directly related to achieving the goals of the EO.

Decision making for O&M and deferred investments exists at the OU level. OUs units have their own real property program goals and strategies to consider. Within the OUs, stewardship

decisions are made pertaining to the property portfolio. DOC, however, must analyze which current O&M and deferred investments must be shifted to capture the greatest return on investment and compliment the goals of the SSPP/EO. This is considered for all real property that is owned or within a delegated lease. DOC will coordinate on cost-benefit decisions with the real property management offices of the OUs.

f. Climate Change Risk and Vulnerability

There is consensus among scientists that global warming leads to climate change. DOC could be vulnerable to such climate changes and will make an effort to mitigate the risks associated with climate change. In particular, some of NOAA's fishery facilities are located in coastal areas and could be especially susceptible to rising sea levels. Although DOC does not have a central policy in place at this time that addresses climate change risk and vulnerability, it is something that will be addressed by the newly formed GHG Working Group. Decisions, policy, and planning around climate change vulnerability for the Department will be enhanced by NOAA's significant involvement and its expertise regarding climate change.

VI. Transparency

DOC is launching an energy Web site to serve as a virtual hub for information related to energy and the SSPP. This Web site is designed for DOC staff both at headquarters and in the field, and it will serve as a communication hub for information on federal mandates, reporting requirements, and DOC policy relating to sustainability. News from the SSPP working group and SSO will be disseminated through the site including success stories, progress, and challenges in implementing the SSPP. DOC employees will be notified of the energy Web site location and contents via email and newsletters. Groups that will be notified of site updates include energy, environmental, sustainability, SSPP, and GHG email lists. Updates and announcements also will be communicated at Green Team meetings.

Hard copies of the SSPP will be delivered to the SSO and a designated alternative SSO. A hardcopy of the SSPP also will be kept on file by the Energy, Environmental, and Transportation Division, and an electronic version of the report also will be archived. The annual SSPP report is made available to the public via publication on the DOC energy Web site. A hard copy of the Document is available upon request.

Section 2: Performance Review and Annual Update

I. Summary of Accomplishments

DOC has achieved significant accomplishments over the past year and continues to stay on track with federal mandates. DOC exceeded its targets for reducing both energy and water intensity in its buildings. A further significant success for DOC has been designing 100% of new buildings to be 30% more energy efficient than specified in the October 2006 building code. The importance of these metrics was highlighted on DOC's OMB Energy Scorecard in both status and progress. Furthermore, DOC scored a "green" for both progress and status on its OMB Environmental Stewardship Scorecard. This score reflects the progress DOC has made in environmental management, green purchasing plans, sustainable design, and electronic stewardship. Lastly, DOC was able to improve to "green" in progress on the OMB Transportation Scorecard. Efforts contributing to this improvement included a requirement that

75% of new vehicles acquisitions be alternative fuel vehicles and a reduction in petroleum usage by at least 8% across the fleet. DOC also has initiated a fleet audit to help right-size the fleet and generate a strategy for meeting federal mandates, including the targets defined in EO 13514.

II. Goal Performance Review

Goal 1. Scope 1 and 2 Greenhouse Gas Reduction

a. Goal Description

A 21% reduction target has been established for agency-wide Scope 1 and 2 greenhouse gas emissions in absolute terms by fiscal year 2020, relative to a fiscal year 2008 baseline. This target was submitted to the CEQ and the OMB in accordance with EO 13514, Section 2(a), Goals for Agencies.

b. Agency Lead for Goal

The SSO has primary responsibility for Scope 1 and 2 GHG emission reduction target development, implementation, and oversight. The SSO is the Deputy Assistant Secretary for Administration. To meet the requirements of EO 13514, the SSO ensures that all actions under this plan are accomplished. The Director for the Office of Administrative Services, Associate Director for the Office of Real Estate Policy and Major Programs, and the Chief of the Energy, Environmental, and Transportation Division execute the actions on behalf of the SSO.

c. Implementation Methods

DOC will meet its Scope 1 and 2 GHG emissions reduction target through energy intensity reduction within the DOC building inventory, increased use of renewable and alternative energy, and reduced use of fossil fuels through fleet optimization. Implementing these actions will achieve an overall target of 21% GHG emissions reduction by 2020 relative to a fiscal year (FY) 2008 baseline.

To codify the importance of GHG accounting and management within the DOC's comprehensive commitment to environmental stewardship and sustainability, DOC's Environmental Management System will be updated to include Scope 1 and 2 GHG emissions-reduction programs, policies, and objectives. Synergies between greenhouse gas reduction and planned energy efficiency and renewable energy policies and practices will be identified within DOC's relevant policy documents, and updates will be made to reflect the inclusion of GHG targets.

1. Buildings

Based on the FY 2008 baseline developed to establish the agency-wide reduction target, electricity and natural gas consumption in goal-subject facilities represent the most significant sources of DOC's GHG emissions (approximately 76% from electricity and 18% from natural gas, FY 2008). The Department has proposed a 20.9% GHG reduction target for goal-subject facilities and a 6% GHG reduction target for goal-excluded facilities. DOC will meet its Scope 1 and 2 GHG reductions for buildings through the following initiatives:

- *Reducing facility energy intensity:* DOC has committed to reducing energy intensity in goal-subject facilities by 30% by 2015, relative to an FY 2003 baseline, as required by EO 13423 and EISA 2007. DOC is on track to meet this goal; in FY 2009, the agency already had reduced its energy intensity by 23.4%, and it will continue to work towards the 30% target for FY 2015. Complying with existing regulations alone will result in a 13.6% GHG

- DOC headquarters assists organizations in meeting energy reduction targets by:
 - Participating in interagency meetings and working groups, and
 - Providing education to bureaus about available options for meeting these goals and assisting them in selecting the most appropriate options for the circumstances.
- The bureaus meet these targets by:
 - Developing and following action plans that identify facilities with the greatest energy-use rates and evaluate options for achieving the goals at priority sites, and
 - Implementing comprehensive projects at high-priority sites, such as those sites with high energy consumption and high utility rates.
- *Renewable energy installation and use:* DOC has committed to meeting 5% of its electricity consumption with renewable resources from FY 2010 through FY 2012. Beginning in FY 2013, 7.5% of the Department's electricity will come from renewable resources as required by EPC Act 2005. By FY 2020, the Department will meet an additional 2% of its energy consumption through on-site renewable energy generation.
 - In addition to deploying on-site renewable energy projects, DOC will purchase renewable energy certificates (RECs) as appropriate to meet or exceed renewable energy goals. The proposed increase in on-site generation in conjunction with direct renewable energy purchase and REC purchases will increase the Department's renewable energy use to approximately 13.4% of overall energy consumption by FY 2020,
 - At least half of the renewable energy consumed by DOC in a fiscal year will come from new renewable sources and, to the extent feasible, DOC will utilize the renewable energy generation from projects on DOC property.

DOC headquarters will meet its renewable energy targets by:

- Educating bureaus about available options to identify and fund projects, and assisting them in selecting the most appropriate options for the circumstances,
- Ensuring that DOC Energy Team members and other appropriate staff attend alternative finance workshops. Options include power purchase agreements (PPAs), ESPCs, and UESCs, and
- Supporting a program aimed at installing photovoltaic technologies in public buildings, once the U.S. General Services Administration (GSA) establishes a photovoltaic commercialization program for the procurement and commercialization of photovoltaic systems in new and existing federal buildings.

The bureaus will meet these targets by:

- Keeping the DOC Energy Program Manager apprised of the installation of on-site renewable energy projects, and the purchase of renewable power or RECs,
- Determining the feasibility of renewable technologies in all energy projects and bundling renewable energy measures with short-payback energy and water-efficiency measures as often as practical,
- Evaluating various means of financing these projects, including appropriated funds and alternative financing options, and
- Implementing comprehensive renewable energy projects at high-priority sites.

2. Fleet

DOC has proposed a 22.3% reduction in GHG emission from its fleet by FY 2020. Although fleet represents a smaller portion of GHG emissions as compared to facilities, it offers the agency's greatest opportunity for improvement: Since FY 2005, DOC has reduced its covered petroleum consumption by 29% and its total petroleum consumption by 15%. DOC proposes to continue this trend with significant reductions in diesel and gasoline use, combined with a conversion to more fuel-efficient vehicles and the increased use of alternative fuels.

DOC will meet its Scope 1 and 2 GHG reductions for fleets through the following initiatives:

- Reduction in overall fleet size: The Department will reduce its overall inventory of fleet vehicles (2,169 domestic vehicles) by (1) eliminating low-use vehicles wherever possible and (2) implementing a car-sharing program at garage locations where it is feasible,
- Maximize alternative fuel vehicle (AFV) investments. All future AFV acquisitions will be placed in locations that currently have access to alternative fuel or hold the most promise for continued alternative fuel infrastructure development. DOC also could relocate those AFV assets from sites without alternative fuel to sites with alternative fuel,
- Maximize the use of hybrid electric vehicles (HEV): The Department will replace eligible gasoline-powered vehicles with HEVs in locations that lack access to alternative fuels, and
- Implementation of electric vehicles (EV). The FY 2020 target proposes an increase in electric vehicle fleet conversion to account for approximately 8% of overall fuel use. The initial stages of this effort will explore opportunities to replace existing low-use vehicles in campus type settings with low-speed electric vehicles (LSEV). The LSEVs do not count as a "vehicle" in a fleet inventory figures but their electricity usage can be counted towards alternative fuel use goals—each traditional vehicle replaced by an LSEV achieves a 100% reduction in petroleum use and 100% increase in alternative fuel use. DOC will explore the possibilities to implement the use of plug-in hybrid electric vehicles (PHEV) and all-electric vehicles when they are commercially available. This scenario will necessitate DOC's investment in electric vehicle charging infrastructure at facilities where it is feasible.

These initiatives fall under the umbrella goal of meeting all legal and EO requirements for federal fleets, as well as achieving a "green" status on the Transportation Management Scorecard submitted bi-annually to OMB. Beginning with the FY 2011 vehicle ordering cycle, DOC will utilize an optimization tool being developed at the National Renewable Energy Laboratory (NREL) to achieve the optimal mix of fleet vehicles to achieve the maximum possible reductions in GHG emissions while minimizing the cost of these initiatives and ensuring that mission needs are not compromised.

3. Other

The following efforts also will contribute to DOC's Scope 1 and 2 emissions reductions:

- *Environmental compliance audits.* Audits conducted throughout DOC will include the review of refrigerant leak calculations to ensure that refrigeration equipment is being maintained in accordance with Clean Air Act regulations. Properly maintained equipments will result in a reduction in fugitive emissions,
- *Reduction of process energy loads, non-covered fleet mobility fuel use, and other energy use currently not subject to energy reduction goals.* As noted above, DOC has established a 6% reduction in Scope 1 and 2 GHG emissions from goal-excluded facilities. Where possible, DOC also will reduce petroleum use and increase alternative fuel consumption in goal-excluded fleet vehicles using the fleet strategies outlined above,
- *Utility Meter Installation.* Electric meters are being installed throughout DOC facilities to ensure that energy is being tracked accurately. This allows high-intensity operations to be identified and evaluated for energy savings. A supplement to DOC's current electric metering plan is being developed. This supplement will include guidance on natural gas and steam metering,
- *EISA Section 432 requirements to evaluate (audit and commission) designated facilities; assign energy managers, benchmark, and implement projects.* Per Section 432 of the Energy Independence and Security Act of 2007, DOC will continue to perform energy and water audits on designated facilities once every four years and implement the energy and water conservation measures that are identified as a result of these audits. Additionally, DOC will continue to input energy-use data for all of its facilities into the ENERGY STAR® Portfolio Manager. This enables DOC to benchmark and track energy use in its facilities. The ENERGY STAR® Portfolio Manager serves as a means to educate DOC employees about energy use and conservation within DOC facilities, and
- *Behavioral and cultural change initiatives.* DOC conducts energy-awareness campaigns to help educate staff on conservation measures, such as turning off lights when not in use or purchasing energy-efficient equipment. This helps to reduce Scope 2 GHG emissions at the facilities. Telecommuting also is encouraged as appropriate. This not only reduces Scope 3 GHG emissions, but also reduces energy consumption by the office. Activities that DOC encourages include the following:
 - Increasing the utilization of alternative work schedules, to decrease energy consumption in DOC facilities,
 - Increasing the utilization of videoconferencing as a substitute for business travel using DOC federal fleet,
 - Providing education and training promoting energy conservation and GHG emissions reductions in the workplace. These educational initiatives can take the form of signage (e.g., encouraging employees to turn their computers off before leaving the office) and mandatory and/or voluntary training, and
 - Utilization of alternative energy sources, such as fuel cells.

4. Costs and Funding Sources

DOC will use several tools and strategies to execute its GHG reduction strategies. Funding sources for projects include direct appropriations (i.e., leveraged investment from existing budget authority that contributes to GHG reduction goals as a secondary benefit) and alternative

investment in the form of ESPCs, UESCs, public benefit funds, ratepayer incentives, and retained savings from energy conservation projects.

A general guidance memorandum issued by CEQ in August 2007 recommends agencies invest an amount equivalent to 20% of their annual energy costs into energy efficiency enhancements. DOC's FY 2008 annual energy report to the Department of Energy reported total energy costs (excluding non-covered fleet) of approximately \$54 million. Based on this annual energy cost and CEQ guidance, DOC's projected energy efficiency enhancements for the period of FY 2008 through FY 2015 should total approximately \$38 million. DOC's primary funding mechanism for these efforts will continue to be addressed via alternative finance projects. Any additional amount not available via alternative finance projects will be addressed through the Department's normal budgeting process.

5. Challenges

Several variables impact DOC's ability to meet its Scope 1 and 2 greenhouse gas emissions reduction targets. Specific challenges include guaranteeing funding (particularly through alternative financing) for energy efficiency and renewable energy projects; training DOC staff to implement operational and behavioral energy conservation initiatives; and monitoring individual facility- and bureau-level actions.

d. Positions

The environmental and energy program managers at the Department level, as well as the environmental and energy manager at the bureau level, will assume collateral duties to support the development and implementation of the agency's Scope 1 and Scope 2 greenhouse gas reduction plan, generally through DOC's energy management plan. At the facility level, managers also take on collateral duty. Currently no new hires will support this work.

e. Planning Table

The table below details DOC's annual targets and milestones for energy reduction, renewable energy use, and petroleum reduction in fleets in support of its Scope 1 and 2 GHG reduction target.

		Unit	FY 08 ¹	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	...	FY 20
Buildings	Energy Reduction Goals (BTU/SF reduced from FY 03 base year)	%	9%	15%	18%	21%	24%	27%	30%	hold	...	hold
	Planned Energy Reduction (BTU/SF reduced from FY 03 base year)	%	19.9%	24.5%	25.6%	26.7%	27.8%	28.9%	30%	...	...	33.5%
	Renewable Electricity Goals (percent of electricity from renewable sources)	%	3%	5%	5%	5%	7.5%	hold	hold	hold	hold	hold
	Planned Renewable Electricity Use (percent of electricity from renewable sources)	%	3.6%	5%	5%	5%	7.5%	7.5%	8.5%	9.5%	...	13.4%
Fleet	Petroleum Use Reduction Targets (percent reduction from FY 05 base year)	%	6%	10%	12%	14%	16%	18%	20%	22%	...	30%
	Planned Petroleum Use Reduction ² (percent reduction from FY 05 base year)	%	15.1%	19%	21%	23%	25%	27%	29%	32%	...	40%
	Alternative Fuel Use in Fleet AFV Target (percent increase from FY 05 base year)	%	33%	61%	77%	95%	114%	136%	159%	hold	.....	hold
	Planned Alternative Fuel Use in Fleet AFVs (percent increase from FY 05 base year ³)	%	1,287%	3,179%	3,507%	3,868%	4,265%	4,701%	5,181%	5,710%	...	8,406%
Other, as defined by agency	Scope 1 & 2 Reduction Targets (reduced from FY 08 base year)	%	—	2%	4%	6%	8.5%	11%	13.5%	15%	...	21%
	Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, ARRA)	\$ M	—	\$5.4M	\$5.4M	\$5.4M						
	Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	—	0	0	0						
	Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	—	\$0.25M	\$1.5M	\$1.5M						
<p>1. FY 2008 actual progress towards goals has been included as a reference point for FY 2010-20 plans.</p> <p>2. DOC's planned petroleum-use reduction includes covered fleet vehicles as well as law enforcement, foreign, and other non-covered fleet vehicles.</p> <p>3. The DOC FY 2005 baseline alternative fuel consumption was 1,085 gasoline gallon equivalents (GGE). In FY 2009, DOC reported 32,346 GGE of alternative fuel consumption, an increase of 2,881% from the FY 2005 baseline. The planned alternative fuel use percentages shown here reflect a 10% per year increase from the 32,346 GGE reported in FY 2009, but are shown in terms of a percentage increase from the FY 2005 baseline.</p>												

f. Agency Status

Although FY 2010 marks the beginning of coordinated DOC efforts to develop and implement a Scope 1 and 2 GHG reduction plan, DOC has been reducing its fossil fuel consumption—and thereby its GHG emissions—through reduced energy intensity in federal facilities, increased use of renewable energy, and decreased fuel consumption in its fleet over the past several years. In FY 2009, DOC had reduced its energy intensity in goal-subject building by 23.4% relative to a FY 2003 baseline, nearly double the federal target of 12% energy intensity reduction by FY 2009. Additionally, in FY 2009 renewable generation contributed to 3.8% of DOC’s electricity use. The Department also demonstrated environmental leadership in reducing its petroleum consumption for its covered fleet by 29.3%, well exceeding the FY 2009 federal target of 8% petroleum reduction. In FY 2010, DOC continues to meet and exceed its energy goals while accounting for Scope 1 and 2 greenhouse gas emissions reductions.

Goal 2. Scope 3 Greenhouse Gas Reduction

a. Goal Description

DOC has established a 6% reduction target for agency-wide Scope 3 greenhouse gas emissions in absolute terms by fiscal year 2020, relative to a fiscal year 2008 baseline. This target has been submitted to CEQ and OMB in accordance with EO 13514, Section 2(b), Goals for Agencies.

b. Agency Lead for Goal

The DOC SSO has primary responsibility for Scope 3 GHG emission reduction target development, implementation, and oversight. The SSO is the Deputy Assistant Secretary for Administration. The SSO ensures that all actions under this plan are accomplished to meet the requirements of EO 13514. The Director for the Office of Administrative Services; Associate Director of the Office of Real Estate Policy and Major Programs; and the Chief of the Energy, Environmental, and Transportation Division execute the actions on behalf of the SSO.

c. Implementation Methods

DOC will meet its Scope 3 GHG emissions reduction target by implementing initiatives to reduce emissions from the following sources:

1. Transmission and Distribution Losses from Purchased Electricity

DOC has established a 13% reduction target for agency-wide Scope 3 emissions from transmission and distribution (T&D) losses, relative to a FY 2008 baseline. This Scope 3 category is required to be included in the reduction target submitted by DOC in FY 2010. DOC will consider in this target the T&D losses from purchased electricity, but not purchased steam and purchased chilled water.

2. Federal Employee Travel

DOC has established a 4.7% reduction target for agency-wide Scope 3 emissions from employee business travel and commuting, relative to a FY 2008 baseline. This Scope 3 category is required to be included in the reduction target submitted by DOC in FY 2010. DOC will consider in this target emissions from:

- Business air travel,
- Business ground travel, and
- Federal employee commuting.

DOC will consider the following initiatives to reduce Scope 3 GHG emissions from employee travel:

- Increasing the utilization of teleworking,
- Increasing the utilization of alternative work schedules,
- Encouraging and facilitating ridesharing programs, and
- Providing bikers and walkers with access to on-site showers and lockers.

3. Contracted Waste Disposal

DOC has established a 14.9% reduction target for agency-wide Scope 3 emissions from contracted waste disposal, relative to a FY 2008 baseline. This Scope 3 category is required to be included in the reduction target submitted by DOC in FY 2010. DOC will consider in this target the emissions from contracted solid-waste disposal and contracted wastewater treatment.

These additional Scope 3 categories are not required for inclusion in the target submitted by DOC in FY 2010, but might be required in future years. DOC could elect to include any of the following emissions sources in its Scope 3 target:

- Emissions from leased buildings,
- Vendor and contractor emissions,
- Emissions from drinking-water transmission and distribution,
- Emissions from contracted disposal of construction and demolition materials and debris,
- Emissions avoided through federal buildings that meet the “Guiding Principles for Federal Leadership in High-Performance and Sustainable Buildings”, and
- Other emissions sources unique to DOC operations and facilities.

4. Data Collection

A variety of sources and tools are currently available and/or being developed to assist with data collection of Scope 3 GHG emissions. DOC will utilize those sources and tools which are noted in accordance with Section 9 of EO 13514, Recommendations for Greenhouse Gas Accounting and Reporting. Once this guidance is completed, DOC will identify specific data collection methodology in an inventory management plan (IMP).

5. Challenges

Reducing Scope 3 GHG emissions is a relatively new initiative for DOC and will involve several challenges. The ability of the agency to meet its reduction targets will depend on several factors. These include collecting accurate and consistent Scope 3 emissions data across the Department; capturing employee commuting data and determining GHG emissions associated with fully-serviced building leases.

d. Positions

The environmental and energy program managers at the Department level, as well as the environmental and energy manager at the bureau level, will assume collateral duty to support the development and implementation of the agency’s Scope 3 greenhouse gas reduction plan. At the facility level, facility managers will also take on collateral duty. No new hires will support this work at this time.

e. Planning Table

The following table details DOC’s annual targets and milestones for reducing Scope 3 GHG emissions from required and optional categories.

Scope 3 GHG Target	Units	FY 10	FY 11	FY 12	FY 13	FY 14	....	FY 20
Overall Agency Scope 3 Reduction Target (reduced from FY 08 base year)	%	1	1	2	3	4		6
Sub-Target for Federal Employee Travel	%	1	1.5	2	2.5	3	....	4.7
Sub-Target for Contracted Waste Disposal	%	3	6	9	12	13	....	14.9
Sub-Target for Transmission and Distribution Losses from Purchased Energy	%	2	4	6	8	10	....	13
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, or ARRA)	\$ M	5.4	5.4	5.4				
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0	0				
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	.25	1.5	1.5				

f. Agency Status

DOC is submitting its Scope 3 GHG reduction targets to CEQ concurrently with the submission of this sustainability plan. In FY 2010, DOC will conduct a full inventory of its Scope 3 emissions from T&D losses, employee travel, and contracted waste disposal. DOC headquarters the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Patent and Trademark Office (USPTO) have previously developed some Scope 3 greenhouse gas estimations for their activities. This information will be considered together with information gathered from other federal agencies (including Census Bureau data on average commuting) to assist in the development of the reduction target.

Goal 3. Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory

a. Goal Description

Beginning in FY 2010, the DOC will establish and report to CEQ and OMB a comprehensive inventory of its absolute Scope 1, 2, and 3 emissions.

b. Agency Lead for Goal

The DOC SSO has primary responsibility for the Department’s GHG emission inventory development. The SSO is the Deputy Assistant Secretary for Administration. The SSO ensures that all actions under this plan are accomplished to meet the requirements of EO 13514. The Director for the Office of Administrative Services and the Chief of the Energy, Environmental, and Transportation Division execute the actions on behalf of the SSO.

c. Implementation Methods

In developing its GHG inventory, DOC follows the policies and methodologies given in the Federal Greenhouse Gas Accounting and Reporting Guidance.

1. Inventory Management Plan

DOC plans to develop a GHG inventory management plan (IMP) following the submission of the SSPP and Scope 3 GHG reduction target. The IMP will help DOC and its Bureaus establish

consistent organization boundaries and data collection throughout the Department. A GHG Workgroup has been established with representatives from headquarters and several bureaus. This workgroup will lead the IMP development effort.

2. Data Collection

A variety of sources and tools are currently available and/or being developed to assist with data collection of Scope 1, 2, and 3 GHG emissions. DOC will utilize those sources and tools which are noted in accordance with Section 9 of EO 13514, Recommendations for Greenhouse Gas Accounting and Reporting. Once this guidance is completed, DOC will identify specific data collection methodology in an inventory management plan (IMP).

3. Calculation Methodology

As noted, DOC will utilize methodologies recommended in final *Federal Greenhouse Gas Accounting and Reporting Guidance* for federal agencies. This information will be referenced in DOC's IMP.

4. Challenges

Fiscal year 2010 marks the first year in which DOC will develop an agency-wide GHG inventory. Although many data sources (e.g., fleet and electricity consumption) already are well-managed and reported within the Department, compiling a comprehensive inventory requires new data-collection and management processes, particularly for Scope 1 fugitive emissions and Scope 3 emissions. DOC will collect the minimum required data for all reporting categories in FY 2010 and strive for continuous improvement in developing a more robust data set.

d. Positions

The environmental and energy program managers at the Department level, as well as the environmental and energy manager at the bureau level, will assume collateral duty to support the development and implementation of the agency's comprehensive GHG inventory development. At the facility level, facility managers also will take on collateral duty. No new hires will support this work at this time.

e. Planning Table

None needed.

f. Agency Status

DOC is currently developing its first agency-wide comprehensive inventory for Scope 1, Scope 2, and required Scope 3 emissions. From FY 2009 to FY 2010, DOC (headquarters and the National Institute of Technology's (NIST) Gaithersburg campus) participated in an interagency "road test" of the Public Sector Standard for GHG Accounting and Reporting to provide input into the development of the federal GHG accounting and reporting guidance. This experience also allowed DOC to develop internal GHG inventory development experience.

Goal 4. High-Performance Sustainable Design / Green Building

a. Goal Description

DOC commits to meeting all the requirements under EO 13514 that pertain to high-performance sustainable design and green buildings. These include the following:

- Beginning in FY 2020, all new federal buildings are designed to achieve zero-net energy by FY 2030,
- All new construction, major renovation or repair, and alteration of federal buildings complies with the “Guiding Principles for Federal Leadership in High-Performance and Sustainable Buildings (Guiding Principles),”
- At least 15% of agency’s existing buildings and building leases meet guiding principles by FY 2015 (5,000 GSF threshold for existing buildings and building leases),
- Demonstrate annual progress toward 100% 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 agency deferred maintenance costs,
- Optimize performance of the agency’s real property portfolio—examine opportunities to decrease environmental impact through consolidation, reuse, and disposal of existing assets prior to adding new assets, and
- Ensure use of best practices and technology in rehabilitation of historic federal properties.

The vision of DOC is to exercise responsible stewardship for the environment by using energy, water, and materials more efficiently in Department facilities and to create a healthful indoor working environment for Departmental personnel. To execute this vision and to meet federal mandates, DOC has developed extensive policy around sustainable buildings, which is contained within the High-Performance and Sustainable Buildings Implementation Plan.

In February 2006, DOC signed the “Federal Leadership in High-Performance and Sustainable Buildings Memorandum of Understanding” (MOU) to promote and encourage common strategies for planning, acquiring, siting, designing, building, operating, and maintaining high-performance and sustainable buildings. EO 13514 strengthens many requirements already addressed in previous mandates, including EO 13423, and establishes some new targets. DOC will update its High-Performance and Sustainable Buildings Implementation Plan to reflect the new EO and codify within the Department’s policy an implementation plan for meeting EO 13514 requirements.

b. Agency Lead for Goal

The DOC SSO has primary responsibility for implementing high-performance green building mandates. The Deputy Assistant Secretary for Administration serves as the SSO. To meet the requirements of EO 13514, the SSO ensures that all actions under this plan are accomplished.

The Chief of the Real Estate Division (Office of Real Estate) is the high-performance sustainable design/green buildings program lead for DOC and is responsible for developing and issuing policy and guidance for the Department’s 13 bureaus. The bureaus are responsible for ensuring that sustainable building practices as outlined by this goal are incorporated into all stages of a building’s life cycle—planning, construction, management, and re-investment or disposition. Bureaus will develop their own specific implementation plans in response to the Department’s policy, plans, and guidance.

Many individuals play key decision-making roles related to the implementation of DOC's High-Performance and Sustainable Buildings Implementation Plan. Roles and responsibilities are shared between the SSO, the heads of the bureaus, and facility managers. Definitions of these roles and responsibilities are contained within the High-Performance and Sustainable Buildings Implementation Plan, which will be updated to reflect EO 13514.

c. Implementation Methods

1. Schedule

DOC has outlined a schedule for ensuring that 15% of the agency's existing buildings and building leases meet guiding principles by FY 2015. This schedule is illustrated in the table below. This schedule also demonstrates annual progress toward 100% conformance with the Guiding Principles for the entire building inventory. Over the next decade, DOC will continue to train members of design teams to implement a process to ensure that all buildings designed in FY 2020 and beyond are net-zero energy.

2. Cost

In implementing the High-Performance and Sustainable Design/Green building goal, DOC will consider the life-cycle cost and build the business case for implementing the mandates contained within this goal on a project-by-project basis. The Sustainable Buildings Implementation Plan is being updated and will specify business case requirements and direction. The business case will be built in accordance with OMB Circular A-11, Exhibit 300, Capital Asset Plan and Business Case Summary. The priority is to identify and prioritize projects and renovations that leverage funds through annually recurring existing budget items such as capital improvements or O&M budgets. American Recovery and Reinvestment Act funding is being used to support some high-performance green building projects, including a NIST net-zero test building. Many of the mandates under this goal are cost-effective because the renovations save money over the lifetime of the facility. For projects that are identified as priorities, but which require significant capital investment, the capital for building projects can be requested through appropriations. Alternative financing also will be explored. ESPCs and UESCs can be utilized to cover the capital cost of energy efficiency and renewable energy projects by using the energy savings expected from these investments to finance their initial costs.

A multi-million dollar renovation project is being conducted at DOC's headquarters at the Herbert C. Hoover Building (HCHB) in Washington, D.C. The renovation includes high-performance building measures in accordance with the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standard. However, funding is being provided by the General Service Administration and has not been included as a DOC investment in this section. There is an appropriated budget for high-performance green building measures for FY 2010 (\$0.14 million) and FY 2012 (\$0.08 million). To meet the objectives in this SSPP, more funding must be secured to cover the increased capital costs of high-performance green building renovations and building designs. DOC intends to use alternative financing to fund some of the high-performance green building measures: \$0.2 million in FY 2010 and escalating to \$1.5 million in FY 2012.

3. Performance

Objective: Beginning in FY 2020, all new federal buildings are designed to achieve zero-net energy by FY 2030.

- The sustainable building implementation plan will be updated to reflect this objective and offer details on implementation.
- DOC will assess current policies and training to identify areas in the Department’s sustainable building program that must be changed to meet this objective. Policies and training that do not address this objective will be amended and updated.
- DOC will provide training for Integrated Project Team members on applying zero-net energy principals at the earliest stages of project planning.
- DOC will ensure that identification of key players in the real estate project approval process has been made and integrated project teams for capital asset acquisition are created at the earliest stages of project planning (i.e., pre-funding, conceptual design) for all capital asset projects involving new buildings. DOC will also ensure that the zero net energy mandate is considered at that time.

Objective: All new construction, major renovation, or repair and alteration of federal buildings complies with, “Guiding Principles for Federal Leadership in High-Performance and Sustainable Buildings (Guiding Principles).”

- DOC, through the High-Performance and Sustainable Buildings Implementation Plan, has an extensive policy in place to meet this objective.
- DOC will follow implementation strategies outlined in the High-Performance and Sustainable Buildings Implementation Plan to meet this objective.
- The High-Performance and Sustainable Buildings Implementation Plan will be updated to meet the new mandates of EO 13514.

Objective: At least 15% of agency’s existing buildings and building leases meet guiding principles by FY 2015 (5,000 GSF threshold for existing buildings and building leases).

- DOC, through the High-Performance and Sustainable Buildings Implementation Plan, has an extensive policy in place that will meet this objective.
- DOC will follow implementation strategies outlined in the High-Performance and Sustainable Buildings Implementation Plan to meet this objective.
- Each DOC bureau must have at least 15% of its existing buildings meet guiding principles.
- The High-Performance and Sustainable Buildings Implementation Plan will be updated to meet the new mandates of EO 13514.
- DOC will develop an “Existing Building Strategy” which identifies priority facilities and environmental aspects, including energy use, addresses minor renovations, and utilizes re-commissioning as a tool to identify and implement opportunities to incorporate the *Guiding Principles* into the existing building stock.

Objective: Demonstrate annual progress toward 100% conformance with guiding principles for entire building inventory.

- DOC has a compliance schedule in which incremental progress is made every year toward 100% conformance with guiding principles.
- This schedule puts DOC on track to meet the 15% by 2015 mandate and on track toward achieving 100% conformance.
- DOC will ensure that all new construction and major renovations comply with the guiding principles by incorporating the guiding principles into criteria, leases, contract language,

Objective: Optimize performance of the agency’s real property portfolio—examine opportunities to decrease environmental impact through consolidation, reuse, and disposal of existing assets prior to adding new assets.

- DOC is currently developing a facility consolidation plan. The intent is to reduce inefficiently used space within the Department. Where possible and cost-effective, offices within one or several bureaus will be merged into a single space.
- DOC’s Office of Real Estate seeks opportunities for consolidation or reuse before specifying new building projects.
- Update the High-Performance and Sustainable Building Implementation Plan to reflect this new mandate.
- Each OU is responsible for identifying opportunities to consolidate existing assets.

Objective: Ensure the use of best practices and technology in rehabilitation of historic federal properties.

- Update the High-Performance and Sustainable Building Implementation Plan to establish a policy that identifies feasible options for rehabilitation projects carried out on DOC historic buildings and which utilizes best practices and technologies and meets the mandates of EO 13514.
- Ensure rehabilitation projects promote long-term viability of the buildings in accordance with historic preservation policies and guidelines.

4. Challenges

Although DOC intends to meet all the goals laid out in this section, several challenges must be addressed. The challenges include the following:

- Although DOC is committed to providing training to all staff members involved in the designing and operating energy efficient and net-zero buildings, restrictions on employee travel and shrinking budgets for in-house training could limit the scope of training,
- DOC has an aggressive schedule in place to ensure that 15% of existing buildings meet the stipulations of the guiding principles. A first step in meeting this target is establishing a building baseline that identifies priority facilities based on size, energy use, and overall building performance. Compiling this list requires significant time, extensive data calls, and in some cases upgrades to metering and monitoring. Funding and employee resources must be prioritized to establish this baseline, and
- DOC intends to meet the objective that, beginning in FY 2020, all new federal buildings be designed to achieve zero net energy by 2030. Zero net energy building has increased construction costs, however, and new construction budgets must be increased to meet this mandate.

d. Positions

The energy and environmental program managers at the Department level will assume collateral duty. Five people will be hired at the Department level to support the HCHB renovation and modernization. At the bureau level, appropriate staff members also will take on collateral duty.

e. Planning Table

Buildings Meeting Guiding Principles	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Owned Facilities Targets	%	2.58%	5.06%	7.55%	10.03%	12.52%	15%
Leased Facilities Targets	%	0.56%	3.45%	6.34%	9.22%	12.11%	15%
Total Facility Targets	%	0.56%	3.45%	6.34%	9.22%	12.11%	15%
Investment—Annual/Recurring (Appropriated)	\$ M	\$4M	\$4.14M	\$4.22M			
Investment—One Time (Appropriated)	\$ M	\$0.14M	\$0	\$0.08M			
Investment—Alternative (Non-Appropriated)	\$ M	\$0.2M	\$1M	\$1.5M			

f. Agency Status

DOC has a strong high-performance green building program that will be strengthened through activities to meet EO 13514. On the OMB Environmental Stewardship scorecard, which includes sustainable design and green building, DOC has scored “green” in both progress and status. DOC has a robust implementation plan as outlined in DOC High-Performance and Sustainable Building Implementation Plan and is on track to implement the policies laid out in that plan. NIST received ARRA funding to build a net zero energy test building at the Gaithersburg campus and to install PV array.

Goal 5. Regional and Local Integrated Planning

a. Goal Description

Properly executed regional and local planning requires a considerable amount of stakeholder involvement in the planning process, more sustainable approaches to long-range growth, and life-cycle accounting of facilities. This often requires the involvement of other federal agencies, state governments, non-governmental agencies, city planners, area occupants, experts, consultants, and the general public. DOC already works closely with these stakeholders as part of the National Environmental Policy Act (NEPA) process, but has yet to expand this participatory process to other Departmental policies. Additionally, some aspects of integrated planning already are addressed in the Department’s High-Performance and Sustainable Buildings Implementation Plan’s “Integrated Design Principles” (HPSBIP/IDP). Although this plan currently does not address EO 13514, it will be updated accordingly and concurrently with the development of this new policy.

The goal of both the updated plan and the new policy is to lead the effort to design, construct, maintain, and operate high-performance sustainable buildings in sustainable locations and to strengthen the vitality and livability of the communities where DOC facilities are located. The most effective method of accomplishing this is through an interactive process that incorporates and evaluates local and regional planning efforts.

The goals of EO 13423 and DOC regional and local planning goals include the following:

- Incorporate participation in regional transportation planning (recognition and use of existing community transportation infrastructure) into existing policy and guidance,
- Align agency policies to increase effectiveness of local energy planning,
- Incorporate sustainable building location into policy and planning for new federal facilities and leases,

- Update agency policy and guidance to ensure that all Environmental Impact Statements and Environmental Assessments required under NEPA for proposed new or expanded federal facilities identify and analyze impacts associated with energy usage and alternative energy sources, and
- Update agency 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. Agency Lead for Goal

The DOC SSO has primary responsibility for meeting regional and local planning goals and objectives. The SSO is the Deputy Assistant Secretary for Administration. The SSO ensures that all actions under this plan are accomplished to meet the requirements of EO 13514. The Chief of the Real Estate Division (Office of Real Estate) is the regional and local integrated planning program lead for DOC and is responsible for developing and issuing policy and guidance for the Department's OUs.

c. Implementation Methods

1. Schedule

EO 13514 does not mandate a specific timeline for goal implementation. It is understood, however, that DOC will implement the goals and initiatives during the course of FY 2010 through FY 2020. The goal attainment is reasonable and feasible and DOC plans to incorporate the goals listed in EO 13514.

2. Cost

DOC will assess the cost-effectiveness of the planning measures, as well as account for the social and local economic benefits that regional and local planning provide. Anticipated planning costs include staff time for participation in regional transportation planning meetings. Anticipated regional and local planning costs also include real estate appraisal, development costs, and drafting comprehensive plan documents surrounding placement of facilities in rural, transit-oriented, or town-center development patterns.

Implementation of regional and local planning activities mirrors a pre-existing protocol utilized for integrated design principles. In this established process, major real property project proposals are reviewed and endorsed by the Department's Acquisition Review Board (ARB) as part of the budget process. Project proposals must identify cost-effective, energy-efficient, and environmentally sustainable techniques and practices to be used, where feasible.

3. Performance

Objective: Incorporate participation in regional transportation planning (recognition and use of existing community transportation infrastructure) into existing policy and guidance.

- Increase awareness of local/regional energy issues through regular reviews of local/regional energy Web sites, state energy program updates, and working group message boards.
- Hold a yearly working group meeting (energy, environment, and NEPA) devoted solely to identifying and discussing local and regional energy issues. Request that OUs located in different regions report on their unique requirements.

- Include transportation “tips” in DOC Energy and Environment Newsletter or other energy-related newsletters distributed at the bureau level.
- Integrate regional and local planning principles, as appropriate, into updated versions of the High-Performance and Sustainable Buildings Implementation Plan, the Strategic Implementation Plan for Energy Management, and *Environmental Management Manual*.

Objective: Align agency policies to increase effectiveness of local energy planning.

- Integrate regional and local planning principles, as appropriate, into the Strategic Implementation Plan for Energy Management, specifically emphasizing the need to increase the effectiveness of local energy planning in areas where DOC operates.

Objective: Incorporate sustainable building location into policy and planning for new DOC facilities and leases.

- DOC will assess current policies and training to identify gaps in the Department’s sustainable building program. Policies and trainings that do not address this objective will be amended and updated.
- DOC will provide training for appropriate members on applying integrated design principals at the earliest stages of project planning.
- Ensure that key players in the real estate, environmental, and energy functional areas are included at the earliest stages of project planning as appropriate (e.g., pre-funding, conceptual design) for all capital asset projects involving new buildings, and also make sure that sustainable building location is considered at that time.
- Incorporate the following considerations into new facility planning:
 - Pedestrian friendly,
 - Near existing employment centers,
 - Accessible to public transportation, and
 - Emphasizes existing central cities and, in rural communities, existing or planned town centers.

Objective: Update agency policy and guidance to ensure that all environmental impact statements and environmental assessments required under NEPA for proposed new or expanded federal facilities identify and analyze impacts associated with energy usage and alternative energy sources.

- DOC will provide energy efficiency and alternative energy training for staff members that create environmental assessments and environmental impact statements.
- DOC, beginning December 30, 2010, requires incorporating impacts from energy use and alternative energy in all environmental impact statements. These impacts must be aligned with the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq).

Objective: Update agency 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.

- DOC will ensure that all staff members responsible for writing or approving NEPA documentation are aware of federally mandated consultation requirements and compliance issues associated with each of the environmental laws and regulations.

4. Challenges

The DOC intends to meet all the objectives listed in the Local and Regional Planning section of this SSPP; however, this requires overcoming some challenges.

- Additional costs are anticipated with increased regional and local planning. These costs must be addressed in future budget requests. Costs include staff time to participate in regional transportation planning meetings, real estate appraisal, development cost, and comprehensive plan documents surrounding the placement of facilities in rural, transit-oriented, or town-center development patterns.
- Staff must be trained to implement local and regional planning initiatives. Restricted funds for travel and limited budgets for in-house training could limit the speed at which local and regional planning initiatives can be accomplished.
- Siting buildings in transportation hubs could require greater capital investment. This must be accounted for in future budget requests.

d. Positions

At the Departmental level, collateral duty is performed out of the energy, environmental, and transportation division to meet these mandates. Appropriate staff members at each bureau also will perform collateral duties.

e. Planning Table

Regional and Local Planning	Units	FY 10	FY 11	FY 12	FY 13	....	FY 20
Fleet Assessment	-	Complete					
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, etc. or ARRA)	\$ M	\$0.1M	0	0			
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0	0			
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	0	0	0			

f. Agency Status

DOC currently does not have one Departmental plan for incorporating regional and local environmental and energy plans into the day-to-day decisions made by the OUs. DOC, however, does have numerous plans, processes, and individual performance plans that address many of these issues. DOC energy, environment, and NEPA managers all are required to serve on inter-agency working groups that address cross-cutting federal issues, participate in Webinars and training sessions, and perform expertise-specific outreach to the general public. Information obtained from these outreach sessions then is shared throughout the DOC. As an example, a representative from the International Trade Administration mentioned a working group he attended that was helping to promote greater use of fuel cells in federal buildings. The DOC Energy Manager attended several meetings, and not only brought the information back to DOC OUs for evaluation, but also included fuel cells as a discussion topic at the weekly renovation meeting with GSA. The GSA currently is evaluating the effectiveness of utilizing the fuel-cell

technology in the HCHB renovation project. Similarly, the green roof being deployed as part of that same project was initiated by DOC Energy Manager and was an outgrowth of a DOC Green Team suggestion. Additionally, many of the OUs already incorporate some degree of regional planning in their projects. NOAA, for instance, works closely with the Chesapeake Bay Foundation and NIST Gaithersburg is required to consult the National Capital Planning Commission on all building projects.

The NEPA process requires coordination with appropriate federal, state, local, and tribal governments to ensure that any environmental, historic, and cultural resources issues are resolved prior to project implementation. As an example, the National Telecommunications and Information Administration (NTIA) recently obtained permission to utilize and modify the Federal Communication Commission (FCC) Tower Communication Notification System to notify federally recognized tribal governments of proposed NTIA projects that either encroach on tribal lands or could impact historic culturally sensitive areas. Local issues always have been a major part of the NEPA process and now, with the requirement to address energy concerns in the environmental assessments and environmental impact statements, Departmental Administrative Order (DAO) 216-6 is being re-written to reflect those requirements. Additionally, DOC has teamed with NOAA to draft a Departmental-wide guidance document to identify how to address greenhouse gas emissions, climate change, and energy-conservation issues listed in the NEPA document (per EO 13514).

Goal 6. Water-Use Efficiency and Management

a. Goal Description

Various EOs mandate policies for reducing potable-water consumption in federal facilities. These include EO 13123, *Greening the Government through Efficient Energy Management*; EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*; and EO 13514, *Federal Leadership in Environmental, Energy and Economic Performance*. Guidance for EO 13123 from the Department of Energy established that each federal agency should “reduce potable water usage by implementing life-cycle, cost-effective water efficiency programs that include a water management plan, and not less than four Federal Energy Management Program (FEMP) best management practices (BMPs).” EO 13123 was revoked by EO 13423, which requires reduction in water consumption through life-cycle cost-effective measures by 2% annually through the end of fiscal year 2015 or 16% by the end of fiscal year 2015.

EO 13514 strengthens existing water mandates and issues some new targets that require an update to DOC policy. EO 13514 requires a 2% annual reduction in water consumption with a 26% improvement in water efficiency by 2020 relative to a 2007 baseline. Objectives for water management include:

- Reduce potable water-use intensity by at least 26% by FY 2020,
- Reduce industrial, landscaping, and agricultural water use by at least 20% by FY 2020,
- Identify and implement water reuse strategies, and
- Achieve objectives established by Environmental Protection Agency (EPA) in *Stormwater Guidance for Federal Facilities*.

b. Agency Lead for Goal

DOC SSO has primary responsibility for implementation and oversight of the water-management program. In conjunction with the SSO, DOC Energy Manager is responsible for developing and managing DOC's water intensity reduction management program.

The *Environmental Management Manual* includes the list of responsibilities for the heads of Departmental offices and bureaus that are responsible for the overall policy implementation in their respective organizations and for "[t]aking action to implement all identified no-cost and low-cost energy and water conservation measures, and all energy and water conservation measures. . . ." This group will implement DOC policy to ensure the EO 13514 targets are met.

c. Implementation Methods

1. Schedule

The detailed performance goals found in EO 13514 are similar to the schedule set in existing DOC water-efficiency and management timelines. The difference between EO 13514 and EO 13423 is that the annual reduction is extended another 5 years from the previous EO timeline. The rates of reduction remain 2% annually and pre-existing DOC policies and schedules will be updated to reflect the new schedule outlined by EO 13514.

2. Cost

Existing DOC policy addresses cost issues surrounding water efficiency and management. Through guidance provided in the *Environmental Management Manual*, DOC has committed to the following:

- Taking action to identify and implement all no-cost and low-cost energy- and water-conservation measures, and all energy- and water-conservation measures having payback periods of less than 10 years as determined through use of life-cycle cost assessment methodology,
- Utilizing life-cycle cost assessment methodology in all procurement decisions involving the acquisition of energy-efficient goods and services including decisions relating to water-efficiency retrofits, and
- Participating to the maximum extent possible in all demand-side (customer) management programs and services, including utility rebates offered by water utilities.

As listed in the planning table below, DOC estimates from our total water utility costs that we invest \$0.4 million in water and energy mandates annually, including those outlined in this section. DOC plans to continue making these investments during future years. The table also lists \$165,000 in alternative financing for FY 2010. DOC already has completed an energy audit and is in the process of putting a contract in place with PEPCO for a UESC. Assuming that the contract can be put in place, DOC intends to continue establishing UESCs in FY 2011 and FY 2012.

3. Performance

The DOC *Environmental Management Manual* will be updated to reflect water use and efficiency management requirements put forth in EO 13514.

Objective: Reduce potable water-use intensity by at least 26% by 2020.

- DOC Energy Workgroup, composed of at least one staff member from DOC bureaus and OUs, will discuss water issues on an as-needed basis.
- DOC Energy Workgroup will create an implementation plan for meeting this mandate.
- DOC will analyze water usage and audits to establish a retrofit schedule for water conservation. At a minimum, waste-conservation measures will include:
 - Installing advanced metering,
 - Installing low-flow shower heads, waterless urinals, and low-flush toilets, and
 - Implementing rainwater harvesting and installing porous pavement where feasible.
- Auditing priority facilities (priority facilities will be determined by Energy Working Group) on a 4-year, rotational schedule to allow for improvements to be incorporated regularly.
- Creating a profile for all DOC facilities within the EPA's ENERGY STAR® Portfolio Manager and regularly inputting water usage data.

Objective: Reduce non-potable water use (industrial, landscaping, agricultural) by at least 20% by 2020.

- The Energy Workgroup will determine where to incorporate industrial, landscaping, and agricultural water consumption areas into audits, as appropriate to the various facilities.
- Compile and analyze the results of the water audits to establish areas of possible improvement and consider measures such as the following:
 - Cooling tower management,
 - Water-efficient landscaping,
 - Gray-water system integration,
 - On-site wastewater treatment systems,
 - Porous pavement,
 - Alternatives to water-intensive technologies/processes,
 - Improved boiler and steam systems, and
 - Improvements to single-pass cooling equipment.

Objective: Identify and implement water-reuse strategies.

- Identify water reuse strategies whenever DOC does water renovations or rebuilds.
- Determine where to implement water reuse strategies, as appropriate to the various facilities. These measures could include the following:
 - Using processes or systems which allow for water recycling or reuse within laboratories,
 - Utilizing harvested rainwater or runoff, and
 - Introducing gray-water designed in non-potable water systems.

Objective: Achieve objectives established by EPA in *Stormwater Guidance for Federal Facilities*.

- Integrate storm-water management practices into large-scale renovation projects and all new construction. This could include vegetated roofing, porous pavement, underground storage solutions that reduce polluted-site water runoff, or focused recharge points on

4. Challenges

The DOC intends to implement the objectives laid out in this SSPP; however, several challenges must be overcome to do so.

- DOC has the intention of auditing all priority facilities for water efficiency, however this undertaking requires collateral duty from DOC employees and also has a financial cost—both of which might be restricted.
- Financing expensive water-related retrofits and upgrades requires capital investments and depends on approval of budget requests for such measures.

d. Positions

At the Department level, collateral duty will be performed out of the energy, environmental, and transportation division to meet these mandates. Appropriate staff members at each bureau also will perform collateral duty.

e. Planning Table

Water-Use Efficiency & Management	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	....	FY 20
Potable Water Reduction Targets (gal/SF reduced from FY 07 base year)	%	6%	8%	10%	12%	14%	16%	....	26%
Planned Potable Water Reduction (gal/SF reduced from FY 07 base year)	%	6%	8%	10%	12%	14%	16%		26%
Industrial, Landscaping, and Agricultural Water Reduction Targets (gal reduced from FY 10 base year)	%	-	2%	4%	6%	8%	10%	....	20%
Planned Industrial, Landscaping, and Agricultural Water Reduction (gal reduced from FY 10 base year)	%	-	2%	4%	6%	8%	10%		20%
Other (as defined by agency)									
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, ARRA)	\$ M	.480	.480	.480					
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0	0					
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other assistance)	\$ M	0	.165	.165					

f. Agency Status

The HCHB management is in the process of implementing an energy and water data management program through an interagency agreement with the NTIS, a bureau of DOC. This program will enable DOC to monitor water usage in real-time at its headquarters, promoting awareness and encouraging conservation. Also, as required by the ESIA 2007, DOC evaluates its energy and water usage at facilities covering approximately 90% (although, only 75% is required) of its energy consumption once every 4 years. This provides DOC with continuous opportunities to implement water-conservation measures.

Goal 7. Pollution Prevention

a. Goal Description

Existing DOC policy which incorporates pollution prevention can be found in the *Environmental Management Manual*, which integrates federal mandates such as the Emergency Planning and Community Right-to-Know Act of 1986, the Pollution Prevention Act of 1990, the National Oil and Hazardous Substances Pollution Contingency Plan, EPA regulations on oil pollution prevention, occupational safety and health standards, safety and health regulations for construction, and the Clean Water Act. DOC currently reports in accordance with the requirements of the Emergency Planning and Community Right-to-Know Act of 1986 and will continue to do so.

In addition to the above-listed requirements, EO 13514 includes some new goals as well as further reduction targets. In response to EO 13514 and earlier policy, DOC strives to:

- Increase source reduction of pollutants and waste,
- Divert at least 50% of non-hazardous solid waste by FY 2015, excluding construction and demolition (C&D) debris,
- Divert at least 50% of C&D materials and debris by FY 2015,
- Reduce printing paper use,
- Increase use of uncoated paper that contains at least 30% postconsumer fiber,
- Reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials,
- 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,
- Decrease agency use of chemicals to assist agency in achieving FY 2020 GHG reduction targets (see sections II.1 and II.2, above), and
- Report in accordance with sections 301–313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. § 11001 et seq).

b. Agency Lead for Goal

The DOC SSO has primary responsibility for oversight and implementation of DOC pollution-prevention program. The SSO is the Deputy Assistant Secretary for Administration. The SSO ensures that all actions under this plan are accomplished to meet the requirements of EO 13514. In conjunction with SSO, the DOC Environmental Manager is responsible for developing and managing a DOC pollution-prevention system, as well as DOC hazardous materials and chemicals programs.

c. Implementation Methods

1. Schedule

EO 13514 establishes an abbreviated timeline for two of the goals mentioned in the pollution prevention sub-goals.

- Divert at least 50% non-hazardous solid waste by FY 2015, excluding construction and demolition debris.
- Divert at least 50% C&D materials and debris by FY 2015.

A schedule will be determined for remaining sub-goals to fulfill EO 13514 pollution-prevention and waste-elimination targets.

2. Cost

Source reduction, pollution prevention, and issues relating to the handling of hazardous waste all carry different levels of cost-benefit relationships. Implementing greater levels of source reduction is an inherently cost-effective measure. Although the procurement of less harmful chemicals might not be the least-expensive option, these purchases can be justified through added benefits including environmental benefits, increased human health and safety, and reduced disposal costs. As hazardous material regulations continue to become more stringent, DOC has the opportunity to position itself ahead of the curve. Greater levels of initial investment in alternative chemicals and practices will yield a safer work environment while providing greater economic benefit.

3. Performance

Objective: Increase source reduction of pollutants and waste.

- Strive to reduce source use of toxic chemicals and eliminate priority chemicals as identified in the EPA priority list.
- Purchase recycled, recyclable, reusable, and environmentally preferable materials as is feasible (see Green Procurement Program in the *Commerce Acquisition Manual*).

Objective: Divert at least 50% of non-hazardous solid waste by FY 2015, excluding construction and demolition debris.

- DOC *Environmental Management Manual* explains responsibilities and requirements regarding non-hazardous solid waste.
- DOC will monitor the quantity of solid-waste disposed and will report that quantity annually.
- Departmental offices and OUs are responsible for diverting solid waste away from landfill disposal and meeting the goals established in EO 13423.
- Departmental offices and OUs will seek to establish waste contracts which recycle materials currently sent to landfill and introduce reuse programs as is possible.
- When possible, liaise with regional waste facilities to identify opportunities for improving waste and recycling programs.
- When possible and cost effective, offer domestic recycling opportunities to employees.

Objective: Divert at least 50% of C&D materials and debris by FY 2015.

- Strive to require all contractors and subcontractors to recycle construction and demolition waste in accordance with LEED certification criteria.
- Specify the reuse of suitable materials within construction projects that require initial demolition on construction sites.

Objective: Reduce printing paper use.

- DOC *Environmental Management Manual* explains responsibilities and requirements for reducing printer paper use.

Objective: Increase use of uncoated paper that contains at least 30% postconsumer fiber.

- Ensure all paper purchased contains at least 30% postconsumer fiber and, as possible, is sourced from sustainable resources and is not bleached.
- Update Green Procurement Program to reflect this objective.

Objective: Reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials.

- DOC *Environmental Management Manual* explains responsibilities and requirements for minimizing hazardous chemicals and materials.
- If environmentally preferable substitutions are feasible, then substitute these for toxic/hazardous materials.
- Monitor all hazardous and electronic waste materials to determine whether they are properly disposed of in accordance with federal regulation.

Objective: Implement integrated pest management and landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials.

- DOC *Environmental Management Manual* will be updated to reflect this new target.
- The Environmental Working Group will work with operational units to assess current pest-management practices and determine best practices for pest-management implementation plans.

Objective: Increase agency use of acceptable alternative chemicals and processes.

- DOC *Environmental Management Manual* explains responsibilities and requirements for increasing agency use of acceptable alternative chemicals and processes.

Objective: Decrease agency use of chemicals to assist agency in achieving FY 2020 GHG reduction targets.

- DOC *Environmental Management Manual* will be updated to reflect this new target.
- DOC will evaluate the chemicals used at DOC facilities and create an implementation plan to help achieve GHG reduction targets.

4. Challenges

DOC intends to meet all the pollution-prevention objectives laid out in this SSPP; however, several barriers must be overcome to do so, including the following:

- Establishing a Department-wide system to monitor all waste materials to determine whether they are properly disposed of in accordance with federal regulation will be difficult. Time and money are needed to implement such a system, and
- DOC supports the implementation of integrated pest management, but a full evaluation of our existing pest management practices still needs to be completed.

d. Position

At the Department level, collateral duty is performed out of the Energy, Environmental, and Transportation Division to meet these mandates. Appropriate staff members at each bureau also perform collateral duty.

e. Planning Table

Pollution Prevention and Waste Elimination	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Non-Hazardous Solid-Waste Diversion Targets (non C&D)	%	25	30	35	40	45	50%
Construction & Demolition Material & Debris Diversion Targets	%	25	30	35	40	45	50%
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, etc. or ARRA)	\$ M	0.293	0.293	0.303			
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0.09	0.17			
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	0	0.25	0.3			

f. Agency Status

Currently, the Department is in the process of developing a Department-level Environmental Management System (EMS). The DOC EMS will be operational in December 2010. At that time pollution prevention, which is a core tenant of the Department’s Environmental Policy will be managed via the EMS and at the Departmental level. The EMS will enable the Department to determine significant environmental aspects and to manage those significant aspects by setting annual objectives and targets. Programmatic execution will be with the OUs.

The *Environmental Management Manual* currently assigns roles and responsibilities for reducing the use of hazardous chemicals, increasing use of alternative chemicals, and reducing non-hazardous solid waste. DOC reports the quantity of non-hazardous waste it generates annually. DOC also currently tracks electronic waste to ensure proper disposal. DOC Green Procurement Plan in the Commerce Acquisition Manual details procurement measures for increasing the agency use of acceptable alternative chemicals and processes. At the HCHB and throughout DOC facilities, environmentally friendly, toxin-free cleaning chemicals are being used. DOC also currently offers some domestic recycling opportunities to its employees. At the HCHB, for example, unwanted cell phones, personal digital assistants (PDAs), and their accessories are collected and donated to local charities.

Goal 8. Sustainable Acquisition

a. Goal Description

It is DOC policy to implement federal green procurement practices to conserve resources, provide sound stewardship, and reduce negative impact on the environment. Green products and services will be acquired to the maximum extent practicable consistent with the requirements of the Federal Acquisition Regulation (FAR) and EO 13514 , which set the standard for sustainable acquisition. DOC will strive to meet EO 13514 objectives, including the following.

- Ensure that 95% 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 (ENERGY STAR[®] or FEMP-designed), water efficient, biobased, environmentally preferable (excluding EPEAT[®]-registered products), non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives.
- Update agency affirmative procurement plans (green purchasing plans and environmentally preferable purchasing plans), policies, and programs to ensure that all federally mandated designated products and services are included in all relevant acquisitions.

b. Agency Lead for Goal

The DOC SSO has primary responsibility for overseeing the implementation of DOC policy that meets sustainable acquisition objectives. The SSO is the Deputy Assistant Secretary for Administration. The SSO will strive to ensure that all actions under this plan are accomplished to meet the requirements of EO 13514. The Senior Procurement Executive is responsible for providing senior acquisition leadership for implementing the Department's green procurement program (GPP)—included in DOC's *Commerce Acquisition Manual (CAM)* at 1323.70—and for promoting compliance with EO 13514. This executive also works with the SSO and the OAS staff to review and analyze green procurement indicators and report on progress toward meeting EO 13514 goals. A discussion of roles and responsibilities of OU staff is contained in the CAM's GPP.

c. Implementation Methods

1. Schedule

The EO 13514 mandate that requires 95% of new contracts to meet green procurement requirements becomes effective in FY 2011. The implementing FAR regulation—entitled Sustainable Acquisition—is expected to be effective in late FY 2010 or early FY 2011. Within a week of issuance, DOC will send to the acquisition community a summary of the new FAR sustainable acquisition requirements. Within 6 months of issuance, DOC will revise the CAM GPP to incorporate FAR revisions on sustainable acquisition; it will be broadly disseminated and posted to the Office of Acquisition Management (OAM) Web site and OAS's Green Web site.

2. Cost

DOC will—to the maximum extent possible—specify and acquire sustainable products and services which meet performance requirements and offer the best value. Acquisition strategy will consider environmental factors such as sustainable design, life-cycle cost analysis, product or packaging take back (return to manufacturer for recycling or remanufacturing purposes), and maximization of energy and resource recovery.

Often, products that are energy efficient (ENERGY STAR[®] or FEMP designated), water-efficient, biobased, environmentally preferable, and non-ozone depleting are priced competitively with conventional products and services. In most cases, existing annual budgets should be adequate to acquire sustainable products and services. In some cases, depending on the requirement, its useful life, and the payback period, program offices could choose to seek additional funds or appropriations to cover greater up-front costs in exchange for increased savings overall. In appropriate cases, alternative financing arrangements can be explored for suitable projects—such as retrofitting lighting or renewable energy generation—that have relatively high up-front costs and long payback periods that often preclude the use of annual budgets. In all cases, the program office is responsible for obtaining adequate funding and seeking approval for alternative financing.

3. Program

Objective: Ensure that 95% of new contracts—including task and delivery orders under new contracts and existing contracts—require the supply or use of products and services that are energy efficient (ENERGY STAR[®] or FEMP-designated), water efficient, biobased, environmentally preferable (excluding EPEAT[®]-registered products), non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives.

- DOC will revise the *Commerce Acquisition Manual's* Green Procurement Program (GPP) to meet or exceed the 95% contract action targets established in EO 13514 and implemented in the FAR rule on sustainable acquisition. Upon modification of the Federal Procurement Data System (FPDS) to provide agencies the capability to identify, measure, and track awards and exceptions for sustainable acquisitions, DOC will use the system as a tool to measure achievement against the 95% goal.

Objective: Update agency affirmative procurement plans (green purchasing plans and environmentally preferable purchasing plans), policies, and programs to ensure that all federally mandated designated products and services are included in all relevant acquisitions.

- DOC will revise the *Commerce Acquisition Manual's* Green Procurement Program to reflect pertinent FAR revisions incorporating the mandates of EO 13514.
- DOC OAM will work collaboratively with OAS and the OUs to communicate revised green procurement program requirements, policies, and training opportunities, through various distribution venues such as e-mail, internal documents, appropriate conferences and workshops, notices of training opportunities, and postings to DOC green Web site.

4. Challenges

Although DOC intends to meet the goals presented in this section, the following challenges must be resolved or acknowledged.

- The FAR must be revised to implement EO 13514 before DOC revises the CAM to incorporate pertinent sustainable acquisition guidance.
- A government-wide system for identifying, reporting, and managing green contract actions and exceptions is needed to ensure that such actions can be measured and tracked against green goals. Currently, the Federal Procurement Data System includes only two top-level environmental data elements: EPA-designated products(s) and recovered material clauses.
- Data and information required for purposes of reporting on green acquisition is not readily available and obtaining it requires a manual process.
- Environmental requirements are diverse, complex, and not easily understood.
- The level of understanding of green procurement and sustainable acquisition requirements generally is low, and better government-wide training is needed.
- Most key roles in the sustainable acquisition process (e.g., environmental designees under the CAM GPP) are fulfilled as collateral duties.

d. Position

At the headquarters level, OAM's Acquisition Workforce and Policy Division will assign sustainable acquisition responsibility to a procurement analyst as a collateral duty. At the OU level, acquisition office staff members will assume these responsibilities as collateral duties. At this time no funding is available for new acquisition hires at headquarters or at the OU level.

e. Planning Table

SUSTAINABLE ACQUISITION	Units	FY 10	FY 11	FY 12	....	FY 20
New Contract Actions Meeting Sustainable Acquisition Requirements	%	0%	95%	hold	hold	hold

Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	%	0	95%*	hold*	hold*	hold*
Water Efficient Products	%	0	95%*	hold*	hold*	hold*
Biobased Products	%	0	95%*	hold*	hold*	hold*
Recycled Content Products	%	0	95%*	hold*	hold*	hold*
Environmentally Preferable Products/Services (excluding EPEAT)	%	0	95%*	hold*	hold*	hold*
SNAP/non-ozone depleting substances	%	0	95%*	hold*	hold*	hold*
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, etc. or ARRA)	\$ M	0	0	0		
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0	0		
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	0	0	0		

* DOC will implement policy that meets or exceeds all required goals, however, measuring achievement will be problematic until the Federal Procurement Data System (FPDS) is modified to identify and collect reportable categories. DOC will use FPDS as a tool to measure achievement against goals.

f. Agency Status

DOC has recent and robust acquisition policy in place (CAM, 1323.70, Green Procurement Program) which has helped the Department earn a “green” on the Environmental Stewardship Scorecard for the current period. Upon issuance of the pending FAR sustainable acquisition rule, DOC will begin revising the GPP to address EO 13514 requirements.

Goal 9. Electronic Stewardship and Data Centers

a. Goal Description

It is DOC policy to promote an electronic stewardship program that reduces the environmental impact of DOC electronic equipment that is purchased, used, and excessed. This will be achieved through continuous improvements to the acquisition, design, specifications, materials choices, distribution, and use of new electronic equipment, and through the reuse, demanufacturing, and recycling of surplus electronic equipment. DOC commits to work toward fulfilling the following mandates prescribed by EO 13514:

- Establish and implement policy and guidance to ensure use of power management, duplex printing, and other energy-efficient or environmentally preferred options and features on all eligible agency electronic products,
- Update agency policy to reflect environmentally sound practices for disposition of all agency excess or surplus electronic products,
- Update agency policy to ensure implementation of best management practices for energy-efficient management of servers and federal data centers,
- Identify how the agency intends to meet technology energy-consumption reduction goals in its data centers,
- Develop agency plans to meet the technology energy-reduction goals in data centers and identify covered versus non-covered facilities, and
- Develop plans to increase the quantity of electronic assets disposed of through sound disposition practices, including how DOC is using or plans to use programs such as disposal through GSA Xcess, recycling through Unicor, donation through GSA’s Computers for

b. Agency Lead for Goal

The DOC SSO has primary responsibility for oversight and implementation of the DOC electronic stewardship and data center program. The SSO is the Deputy Assistant Secretary for Administration. To meet the requirements of EO 13514, the SSO ensures that all actions under this plan are accomplished. In conjunction with the DOC SSO, the DOC Environmental Manager is responsible for developing and managing a DOC electronic stewardship program. DOC's Chief Information Officer will be responsible for developing and managing and the data center consolidation program.

c. Implementation Methods

1. Schedule

DOC is committed to achieving electronic stewardship mandates laid out in EO 13423 and strengthened by EO 13514 by 2012. DOC will revise its policies to reflect EO 13514 mandates regarding data centers by FY 2012. DOC will submit a final asset inventory baseline on July 30, 2010, and a final data center consolidation plan by August 30, 2010.

2. Cost

Establishing and implementing policy and guidance to ensure use of power management, duplex printing, and other energy-efficient or environmentally preferred options and features on all eligible agency electronic products will either cost nothing, save money, or require small capital investments that will yield short payback periods. Implementing data center and server best practices might require greater capital investment. Alternative financing could be used to help finance energy-efficient products which cannot be procured with annual budgets. Appropriations can be requested as needed.

The dollar amounts in the table below represent the budget for moving the main DOC data center from Springfield, VA, to Oklahoma City, OK. This move will include implementation of some of the data center management goals outlined here. The dollar amounts also represent HCHB building renovation funding for information technology which will include implementation of some of the objectives outlined here.

3. Program

Objective: Establish and implement policy and guidance to ensure use of power management, duplex printing, and other energy-efficient or environmentally preferred options and features on all eligible agency electronic products.

- DOC has outlined policy for electronic stewardship through DOC Electronic Stewardship Program in the *Environmental Management Manual*. To comply with EO 13514, DOC will revise the Electronic Stewardship Program to reflect this objective.
- DOC has reduced its energy usage by enabling the ENERGY STAR[®] feature on 100% of eligible computers and monitors.
- DOC will continue to extend the useful life of electronics within the Department to a minimum of 4 years.

- DOC will use EPA guidance to improve the operation and maintenance of electronic products.
- In print and copy services, DOC will promote electronic alternative and best practices for printing and copying, such as utilizing the duplex feature. DOC's *Environmental Management Manual* outlines responsibilities at the Department level and in individual OUs for promoting double-sided printing and copying.

Objective: Update agency policy to reflect environmentally sound practices for disposal of all agency excess or surplus electronic products.

- DOC currently reuses or recycles 100% of its electronic products.
- The electronic stewardship section of DOC's *Environmental Management Manual* currently requires that the end-of-life practices meet this objective.
- DOC will comply with GSA procedures for transfer, donation, sale, and recycling of electronic equipment.
- DOC will strive to use national standards, best management practices, or national certification programs for recyclers.

Objective: Discuss how the agency is planning on meeting the technology energy-reduction goals in data centers. Include details on the investment plan, covered versus non-covered facilities, and how the agency identified the covered facilities. Identify how the agency intends to meet technology energy-consumption reduction goals in its data centers.

- DOC will reduce the number of agency data centers.
- DOC will increase the number of agency data centers operating at an average CPU utilization of 70%.
- DOC will increase the number of data centers operating at a PUE range of 1.3 to 1.6.
- The Office of the Chief Information Officer will form a working group to develop the final data center consolidation plan, which will outline DOC's commitment and plan for meeting the above objectives.
- The DOC data consolidation working group will submit a final asset inventory baseline on July 30, 2010. It will outline the data center inventory and identify covered and non-covered facilities.
- The DOC data consolidation working group will submit a final data center consolidation plan on August 30, 2010, that will clearly identify how DOC intends to reach energy-consumption reduction goals in its data centers.

Objective: Discuss how the agency will increase the quantity of electronic assets disposed through sound disposition practices. Include in the discussion how your agency is using or plans to use programs such as disposal through GSA Xcess, recycling through Unicor, donation through GSA's Computers for Learning or other non-profit organizations, and recycling through a private recycler certified under the Responsible Recyclers guidance or equivalent.

- DOC currently disposes of 100% of electronic products using sound disposition practices as described in the *Environmental Management Manual*. DOC has a process for disposing of electronic products that prioritizes reuse opportunities in DOC, followed by donation to other federal agencies through GSA Xcess, donation to the Computers for Learning program, and by recycling electronics through a private recycler. DOC will investigate other opportunities

4. Challenges

DOC intends to meet the objectives identified in this SSPP for electronic stewardship and data centers; however, there are several barriers that must be overcome to do so.

- Currently DOC does not have an energy baseline for its data centers, which makes it difficult to understand where the greatest inefficiencies are or where consolidation opportunities exist.
- Developing a data center energy baseline will be costly and time consuming. It will require the training of staff members that typically don't have experience with energy-related issues. This could delay implementation of data center programs.
- The data center consolidation plan is due after the due date of this SSPP. Many of the mandates outlined here will be addressed in that plan in greater detail. Those details will be updated into the SSPP next year.
- Although DOC policy can require that DOC enable energy-saving features and double-sided printing on all eligible electronic equipment, there is no system in place to track or enforce this policy.
- Although DOC policy can require purchase of energy-efficient electronic equipment, there is no mechanism in the Federal Procurement Data System to enforce compliance with this policy.

d. Positions

At the Departmental level, collateral duty will be performed by staff members from the energy, environmental, and transportation division to meet these mandates. Appropriate staff at each bureau will also perform collateral duty.

e. Planning Table

Electronic Stewardship & Data Centers	Units	FY 10	FY 11	FY 12	FY 13
Percentage of Device Types Covered by Current ENERGY STAR [®] Specifications that Must be ENERGY STAR [®] qualified	%	100%	100%	100%	hold
Percentage of Electronic Assets Covered by Sound Disposition Practices	%	100%	100%	100%	100%
Percentage of Cloud Activity Hosted in a Data Center	%	5%	30%	60%	hold
Percentage of Agency Data Centers Independently Metered or Advanced Metered and Monitored on a Weekly Basis	%	50%	90%	100%	hold
Reduction in the Number of Agency Data Centers	%	5%	20%	40%	hold
Percentage of Agency, Eligible Electronic Products with Power Management, and Other Energy-Efficient Environmentally Preferable Features (Duplexing) Actively Implemented and in Use	%	90%	95%	100%	hold
Percentage of Agency Data Centers Operating with an Average CPU Utilization of 60% to 70%	%	25%	50%	75%	hold
Percentage of Agency Data Centers Operating at a PUE range of 1.3 to 1.6	%	5%	25%	50%	hold
Percentage of Covered Electronic Product Acquisitions that Are EPEAT [®] -Registered	%	98%	98%	98%	hold
Percentage of Agency Data Center Activity Implemented via Virtualization	%	5%	30%	40%	hold
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, etc. or ARRA)	\$ M	9.9	9.9	9.9	X
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0	0	X
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	0	0	0	X

f. Agency Status

DOC currently tracks its electronic assets through the Sunflower Systems property management system. This tracking allows DOC to monitor the life of its electronic assets and ensure that 100% of its computers either are donated or recycled by certified third-party recyclers. Additionally, several DOC offices are members of the Federal Electronics Challenge, including the Office of Real Estate Policy and Major Programs, The National Weather Service Radar Operations Center, and the National Centers for Coastal Ocean Science. DOC’s Office of the Chief Information Officer (OCIO) recently pushed EZ GPO software to the computers of the entire Department. This automatically enabled power-saving features on 100% of eligible ENERGY STAR® computers. DOC will continue to strive for excellence in electronic stewardship. DOC’s OCIO is also currently developing a data center consolidation plan intended to increase computing efficiency and reduce power consumption throughout the Department.

Agency Innovation

The mission of DOC is to create the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship. DOC considers environmental stewardship and sustainable development as crucial to its ability to carry out its mission. For this reason, DOC is a leader in agency innovation—putting forth projects that go beyond federal mandates.

- A showcase project for DOC will be NIST’s net zero test building. This ARRA-funded project will be a model of high-performance green building, with significant care put into building envelope and monitoring systems.
- NOAA is taking energy efficiency beyond building walls by conducting energy audits on its ships.

DOC is implementing a program offered by its own NTIS. The NTIS program, which is open to all who wish to use it, provides metering audits and recommends metering upgrades. NTIS collects utility metering data and compiles into a central database that enables viewing of real-time energy usage through a Web portal. The DOC Energy Manager uses this system to monitor energy usage and building performance and to assist in reporting requirements. Additionally, screen displays in centrally located places, such as cafeterias, will serve as education tools that encourage behavior change. For FY 2010, \$100,000 has been allocated for this program.

DOC is investing \$22 million dollars in FY 2010 in the renovation of the HCHB. DOC is not missing the opportunity to re-design infrastructure within HCHB—built in 1932—to meet LEED Gold certification standards. As part of this renovation program, DOC is participating in the Sustainable Sites Initiative Pilot Program. This program is testing landscaping guidelines to create voluntary national guidelines and performance benchmarks for sustainable design, construction, and maintenance practices.

Agency Innovation	Units	FY 10	FY 11	FY 13	...	FY 20
Leveraged Investment (funded through annually recurring existing budget items, such as capital improvement, O&M, or ARRA)	\$ M	\$ 22.1M	0			
Incremental Investment (funded through new program budget requests specific to this EO)	\$ M	0	0			
Alternative Investment (funded through ESPC, UESC, EUL, PPA, rebates, or other funding assistance)	\$ M	0	0			

Section 3: Agency Self-Evaluation

I. Evaluation Table

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

II. Evaluation Narrative

DOC has a robust plan in place to accomplish mandated goals for leadership in environmental, energy, and economic performance. The two lists below highlight planned actions that DOC will undertake to reach performance objectives.

July to December 2010

- Implement utility energy services contract energy conservation measures at HCHB
- Update NOAA's electric metering plan
- Continue NOAA facilities energy audit program
- Conduct ESPC preliminary audit at NIST, Gaithersburg
- Expand and enhance DOC energy Web site
- Continue Department-level organizational EMS
- Revise current fleet management manual and realign responsibilities with new goals
- Develop strategic plan for greening DOC vehicles; incorporate electric vehicles into Pacific region
- Complete audit to right-size and "green" DOC fleet
- Develop and implement fleet-management information system to include maintenance module (pending GSA fielding), monitor inventory and track alternative fuel use
Evaluate potential for replacing 25% of current conventional vehicles with hybrids or by using car-sharing

January to June 2011

- Initiate implementation of energy data management program at HCHB through NTIS
- Continue NOAA facilities energy audit program
- Develop corporate EMS procedures manual
- Promulgate DOC environmental policy

Appendix 1: Acronyms

AFV	alternative fuel vehicle
ARRA	American Recovery and Reinvestment Act of 2009
BMP	best management practices
C&D	construction and demolition
CAM	<i>Commerce Acquisition Manual</i>
CEQ	Council on Environmental Quality
CFL	Computer for Learning
DOC	U.S. Department of Commerce
DOA	U.S. Department of Commerce Administrative Order
EISA 2007	Energy Independence and Security Act of 2007
EMS	environmental management systems
EO	Executive Order
EPA	Environmental Protection Agency
EPAct	1992 Energy Policy Act of 1992
EPAct 2005	Energy Policy Act of 2005
EPCRA	Emergency Planning and Community Right-to-Know Act
ESPC	energy savings performance contract
EUL	enhanced use lease
EV	electric vehicles
FAR	Federal Acquisition Regulation
FCC	Federal Communication Commission
FED	Federal Energy Data
FEMP	Federal Energy Management Program
FPDS	Federal Procurement Data System
FY	fiscal year
GGE	gasoline gallon equivalents
GHG	greenhouse gas
GPP	green procurement program
GSA	U.S. General Services Administration
HCHB	Herbert C. Hoover Building
HEV	hybrid electric vehicles
HPSBIP/IDP	High-Performance and Sustainable Buildings Implementation Plan, “Integrated Design Principles”
IMP	inventory management plan

LSEV	low-speed electric vehicles
MOU	memorandum of understanding
NECPA	National Energy Conservation Policy Act of 1978
NEPA	National Environmental Policy Act
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NREL	National Renewable Energy Laboratory
NTIA	National Telecommunications and Information Administration
NTIS	National Technical Information Service
O&M	operations and maintenance
OAM	Office of Acquisition Management
OMB	Office of Management and Budget
OU	operating unit
PDA	personal digital assistant
PHEV	plug-in hybrid electric vehicles
PPA	power purchase agreement
R2	Responsible Recyclers
REC	renewable energy certificate
ROI	return on investment
RPRB	real property review board
SF	square feet
SSO	senior sustainability officer
SSPP	Strategic Sustainability Performance Plan
T&D	transmission and distribution
UESC	utility energy service contract