

U.S. General Services Administration

FY 2010-2015 Strategic Sustainability Performance Plan

Section 1: Agency Policy and Strategy

**Contents**

**1.1 Agency Policy Statement..... 2**

**1.2 Sustainability and the Agency Mission ..... 3**

**1.3 Greenhouse Gas Reduction Goals..... 4**

**1.4 Agency Successes and Challenges..... 4**

**1.5 Plan Implementation..... 6**

    1.5.1 Leadership..... 6

    1.5.2 Collaboration and Communication ..... 8

    1.5.3 Planning, Policy, and Budget Integration and Alignment..... 9

**1.6 Evaluating Return on Investment..... 10**

**1.7 Transparency ..... 12**

## 1.1 Agency Policy Statement

The U.S. General Services Administration (GSA) will eliminate its impact on the natural environment and use its government-wide influence to reduce the environmental impact of the Federal government. GSA will minimize and offset its consumption of energy, water, and other resources and will eliminate all waste and pollution in all GSA operations and activities. GSA will use its purchasing power to drive the market to produce a wider variety and greater number of products, services, and workspaces that are more sustainable. GSA will exceed the requirements of all environmental and energy statutes, regulations, and Executive Orders, and will use its expertise to help other Federal agencies exceed these standards.

GSA's Zero Environmental Footprint goal provides a single, unifying purpose to:

- align private sector incentives with public policy;
- modernize the way that the Government sources, develops, and implements new ideas;
- accelerate innovation in green technology, business practices, and collaboration;
- attract and retain the best talent in a galvanized Federal workforce; and
- change the culture.

GSA will continually reassess its operations to wring out waste, eliminate pollution, and align all of its activities to deliver a Zero Environmental Footprint. GSA will seek out green technologies, practices, and ideas, test them, and weave them into the agency's processes, relationships, and culture. GSA will develop an agile culture that quickly adopts viral, game-changing behaviors and spreads them throughout the Federal government. Because GSA can accept higher risks than the private sector business model can tolerate, it can deliver a Government that produces more while consuming less and drives the nation to a resource-neutral, post-carbon economy.

GSA's priorities and significant efforts for the coming year demonstrate the agency's commitment to increasing its sustainability while laying the groundwork for a Zero Environmental Footprint.

- *GSA will Green its Supply Chain.*—GSA will analyze responses from the top 200 Federal contractors in the Carbon Disclosure Project's (CDP) 2010 annual survey of greenhouse gas (GHG) emissions and will partner with the Environmental Protection Agency's (EPA) Climate Leaders program to help at least 60 small businesses complete their own GHG inventories by September 30, 2011;
- *GSA will Eliminate Waste in its Operations and Activities.*—GSA will increase recycling across its inventory of Federal buildings by at least 10 percent by September 30, 2011; and
- *GSA will Use its Influence to Reduce the Environmental Impact of the Federal Government.*—GSA will identify 12 Government-wide administrative policies that can enhance Federal sustainability and will collaborate with Federal agency partners to change those policies by September 30, 2011.



Martha N. Johnson  
Administrator  
U.S. General Services Administration  
September 7, 2010



Stephen Leeds  
Senior Sustainability Officer  
U.S. General Services Administration  
September 7, 2010

## 1.2 Sustainability and the Agency Mission

GSA's mission is to support other Federal agencies in their missions. GSA is the central agency for acquiring products, services, and workspace for the Federal government. GSA provides office space to over one million Federal employees in over 9,600 Federal buildings and leases, and offers over 12 million products and services to other Federal agencies. GSA plays a key role in developing and implementing administrative policies that affect all government agencies, and is a leader in developing citizen-driven information and services and citizen engagement tools. GSA is funded primarily by reimbursements from other Federal agencies for the goods and services that GSA provides. In FY 2009, GSA had a business volume of \$62 billion, representing over 11 percent of the Government's total procurement spending.

GSA's broad reach over the acquisition, management, and disposal of Federal assets provides a unique *opportunity* to influence the environmental performance of the entire Government. GSA has expertise and a history of leadership in green government, and has demonstrated its *capability* to deliver significant improvements in its own environmental performance. Most importantly, GSA recognizes that it has a *responsibility* to increase the sustainability of the Federal government by reducing the environmental impact of its buildings, products, and services, as well as its processes and activities. GSA's mission statement recognizes the convergence of opportunity, capability and responsibility in a new commitment to achieve a Zero Environmental Footprint:

*GSA's mission is to use expertise to provide innovative solutions for our customers in support of their missions and by so doing foster an effective, sustainable, and transparent Government for the American people.*

GSA's mission is supported by three Strategic Goals, representing dimensions of performance in which GSA must excel: Innovation, Customer Intimacy, and Operational Excellence. GSA must demonstrate continuous improvement in all three dimensions in order to achieve its mission and realize the Zero Environmental Footprint goal.

- *Innovation.*—GSA will be a green proving ground that demonstrates the viability of new green technology and practices. GSA will test innovative solutions in its own operations, and offer those solutions to other agencies through its government-wide contracting and policy-making authorities.
- *Customer Intimacy.*—GSA will lead with its expertise to drive the market for high-performance green products, services, and solutions that support its customer agencies' missions and meet or exceed their sustainability goals. GSA's agents, including the contractors who execute work on GSA's behalf, will contribute to a Zero Environmental Footprint by setting their own greenhouse gas reduction goals in line with and supporting those of GSA.
- *Operational Excellence.*—GSA strives for performance excellence, continuous improvement, and the elimination of waste in all of its operations. GSA will create agency operating conditions under which humans and nature can exist in productive harmony while maintaining financial viability and fulfilling the social, economic, and environmental needs of present and future generations of Americans.

### 1.3 Greenhouse Gas Reduction Goals

By FY 2020, GSA will reduce its annual greenhouse gas (GHG) emissions by 30 percent from its FY 2008 levels. GSA will reduce its GHG emissions from sources owned or controlled by GSA, including fuel consumed on-site to heat or power Federal buildings and fuel consumed by motor vehicles (“Scope 1” emissions) and GHG emissions resulting from the generation of electricity, heat, or steam that is purchased by GSA (“Scope 2” emissions) by 28 percent by FY 2020. GSA will also reduce its GHG emissions from indirect sources (“Scope 3 emissions”), including employee commuting and business travel, contracted waste disposal, and transmission losses from purchased electricity, by 44 percent by FY 2020.

In FY 2008, GSA generated an estimated 2.6 million metric tons of carbon dioxide equivalents; by FY 2020, GSA will shrink its GHG emissions to just 1.8 million tons of carbon. Today, 97 percent of GSA’s GHG emissions come from energy consumption in Federal buildings and leased space; GSA’s overall strategy to minimize its GHG emissions and achieve a Zero Environmental Footprint focuses on increasing the energy efficiency of its Federal buildings and leases:

- GSA will increase its investment in energy and water conservation projects across its inventory of owned Federal buildings in order to reduce facility energy intensity to 48,926 BTU/GSF by FY 2020. Energy intensity is measured as the average energy consumed in British thermal units (BTU) per gross square foot (GSF) of space.
- GSA will design all new Federal buildings to deliver energy performance at least 30 percent below industry standards for energy efficiency in non-residential buildings, achieve the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Gold certification, and meet Energy Star standards.
- GSA will introduce new education and awareness initiatives to motivate tenants, GSA contractors, and GSA employees to make behavioral changes to reduce energy and water consumption.

### 1.4 Agency Successes and Challenges

GSA has a history of leadership in energy conservation, sustainable building design, and sourcing environmentally-preferable products and services. GSA’s early accomplishments in green government demonstrate the agency’s commitment to exceeding sustainability targets and goals. These achievements establish a foundation for the tremendous effort, innovation, and cultural change required to realize a Zero Environmental Footprint.

- *GSA is Reducing Energy Consumption in Federal Buildings.*—Since FY 2003, GSA has reduced its energy intensity by 14.3 percent in GSA-owned buildings and those leases where GSA is responsible for making utility payments. GSA has reduced its total, annual energy consumption over the period FY 2003 to FY 2009 by nearly 878 billion BTUs, and is well ahead of its energy intensity reduction target of 12 percent by FY 2009. (These figures include “credits” for the purchase of renewable energy from energy suppliers.)

- *GSA is Practicing Sustainable Design.*—As of June 2010, GSA has achieved 48 LEED certifications in 47 buildings and leases. LEED certification provides third-party verification that a building was designed and built to standards that improve energy savings, reduce water consumption, improve indoor air quality, and use more sustainable resources, when compared to existing buildings. Since 2003, GSA has designed all of its new Federal buildings to achieve LEED certification.
- *GSA is Reducing Fuel Consumption in Federal Motor Vehicles.*—In FY 2009, GSA used funds provided by the American Recovery and Reinvestment Act (Public Law 111-5, “Recovery Act”) to replace over 17,000 motor vehicles in 21 Federal agencies with newer, more energy efficient motor vehicles. The new vehicles had a combined fuel economy 7.8 miles per gallon higher than the vehicles replaced. GSA’s acquisition included 3,106 hybrid-electric vehicles, the Federal government’s largest one-time purchase of hybrid vehicles.
- *GSA is Practicing Electronic Stewardship to Reduce Energy Consumption.*—Ninety-nine percent of GSA electronic assets are Energy Star qualified and EPEAT-registered. Energy Star is a joint program of the EPA and the Department of Energy (DoE) which establishes minimum standards for energy efficient consumer products. The Green Electronics Council’s Electronic Product Environmental Assessment Tool (EPEAT) is an international registry of environmentally preferable IT products.

GSA faces serious challenges in achieving a Zero Environmental Footprint. These issues represent potential risks to agency sustainability efforts, and GSA is developing strategies and actions to mitigate risk.

- *GSA’s Baseline for Measuring GHG Emissions Reductions is Incomplete.*—GSA’s baseline for GHG emissions excludes energy consumption in leased facilities where GSA is not responsible for making utility payments to energy providers, including office buildings where GSA leases less than the entire building and Contractor-Owned, Contractor-Operated data centers. GSA’s emissions baseline also excludes GHG emissions from GSA suppliers, contractors, and delivery services.

GSA is actively participating in interagency efforts to develop Federal standards for accounting for GHG emissions. GSA is working with DOE to address treatment of GHG emissions from leased space, and has developed preliminary estimates for planning purposes. In addition, GSA is working to obtain voluntary GHG emissions disclosures from large Federal contractors and will soon begin working with a group of small businesses to help them estimate their GHG emissions and set their own emissions reduction targets.

- *GSA May Require a Methodology for Baseline Adjustments to its GHG Reduction Targets.*—GSA GHG emissions from owned Federal buildings are “Scope 1 & 2” emissions; however, GSA anticipates that the final standards for Federal carbon accounting will characterize emissions from leased space as “Scope 3”. GSA is currently making a concerted effort to help other agencies consolidate their workspaces into owned Federal buildings and out of more expensive leased space. GSA also has separate reduction goals for Scope 1 & 2 emissions and Scope 3 emissions. Moving agencies out of leased space and into owned space may temporarily increase GSA’s Scope 1 & 2 GHG emissions above its annual targets, while reducing Scope 3 emissions below targeted levels. GSA may need a methodology to re-baseline its separate targets for Scope 1 & 2 and Scope 3 emissions --

within a consistent aggregate GHG emissions reduction target – as it transitions more agencies out of leased space. GSA is optimistic that the final standards will allow for the realignment of baseline GHG emissions between Scope 1 & 2 and Scope 3 reduction targets.

- *GSA's Sustainability Goals Require Changes in its Customers' Behaviors.*—The majority of the energy and water consumption and waste and pollution impacts associated with GSA-owned Federal buildings are generated by other Federal agency tenants. The most effective strategies for improving the environmental performance of Federal buildings require voluntary actions by tenants, including using space more efficiently to decrease the total space required, using power management features in electronic equipment, and participating in recycling programs. GSA faces similar challenges in its acquisition activities where, in most cases, GSA is not a mandatory source of supply. As GSA greens its supply chain, it may face increased competition from vendors who offer less-sustainable products and services at a lower price.

GSA is deploying a variety of initiatives to promote sustainable practices and influence customer behaviors. GSA has developed a number of tenant education and awareness initiatives to reduce energy and water consumption in Federal buildings and leases. GSA is deploying advanced utility meters and conducting solid waste audits of Federal buildings to provide its tenants with actionable data and recommendations for reducing waste, pollution, and energy and water consumption. In addition, GSA is developing a comprehensive green purchasing education program to help contracting officials in other agencies to understand and comply with regulations that require them to give preference to green products and services. GSA will be more competitive when customer agencies include environmental procurement preference standards and requirements in their contracting requirements.

## 1.5 Plan Implementation

The Zero Environmental Footprint goal will require unprecedented flexibility and agility from GSA's leaders. GSA must be a proving ground for cutting-edge and innovative management practices, as well as green technologies. GSA must adopt a "fail fast" culture, where new ideas are solicited internally and externally and are adapted for agency use, closely monitored against discrete measures of success, and quickly discarded if necessary. GSA must stretch its inventive nature and its risk tolerance to identify, test, and deploy "closed-loop" systems, where the waste produced by one production cycle fuels others.

GSA must constantly scan an ever-changing horizon, to identify and extract game-changing practices from asymmetrical and discontinuous sources. GSA must demonstrate visionary leadership, use collaborative tools to develop innovative solutions, and tightly align agency policies, practices, and resource allocations with the Zero Environmental Footprint goal.

### 1.5.1 Leadership

GSA's Zero Environmental Footprint goal requires substantial and uncompromising leadership. GSA's leaders must develop strategic partnerships with industry, non-governmental organizations, and other Federal agencies, to develop innovative solutions to challenges in

sustainable design, development, and implementation. GSA's leaders must constantly seek a more intimate understanding of and resonance with their customers, so that other agencies trust GSA to test new technologies and new practices. GSA's leaders must also have a clear understanding of their internal operating environments, must challenge and reward their employees for innovation and sustainable behaviors, and must seek continuous improvement in their operations, to remove waste, close loops, and reduce their environmental impact.

GSA began its journey to a Zero Environmental Footprint with a Leadership Conference, held May 25-27, 2010, which introduced sustainability as a single, unifying leadership theme. The conference, attended by GSA executives and mid-level leaders from across the country, centered on the "cradle-to-cradle" philosophy of author William McDonough, in which products and processes are designed so that waste produced by one production cycle fuels others. The conference included a visit to InterfaceFLOR, where GSA leaders saw how a major carpet manufacturer has implemented "cradle to cradle" design in all of its processes. This conference helped to cement a collective vision of a GSA with no harmful impact on the natural environment, and started a cultural change that will ultimately result in realization of the Zero Environmental Footprint goal.

- *Accountability.*—GSA's leaders must now set a vision for their own organizations, model sustainable behaviors, and lead new strategies and actions to exceed statutory and regulatory sustainability goals. GSA's leaders are also expected to support the sustainability of the Agency by placing renewed focus on succession planning and developing the next generation of leaders. In FY 2010, all GSA executives have new performance agreements that focus on: (1) accomplishments and innovations in operations and customer relationships; (2) leadership development and growing competencies inside the agency; and (3) changing the culture to increase transparency and collaboration. Beginning in FY 2011, executive performance agreements and employee performance plans will include measures of progress against sustainability goals, and GSA will develop incentive and award programs to recognize exceptional individual, team, and enterprise-wide performance in implementing sustainability goals.
- *Governance.*—GSA has established an Executive Steering Committee to ensure that GSA's sustainability goals, strategies, and actions are coordinated, integrated, and demonstrate consistent progress towards target levels of performance. GSA's Sustainability Steering Committee is chaired by the Agency Senior Sustainability Officer and includes leaders from GSA's major policy and operational organizations. The Committee reports to GSA's Senior Management Team, which is the highest management council in GSA, and operates under their guidance and direction. *The Committee is responsible for resolving challenges in achieving GSA's sustainability goals* or, where applicable, recommending resolutions to GSA's Senior Management Team.
- *Coordination and Dissemination to the Field.*—GSA's Zero Environmental Footprint goal eliminates the distinction between "sustainability" and "operations". GSA will ensure dissemination and implementation across the agency by aligning existing management practices to consistently and routinely consider sustainability and the environmental performance of the agency. GSA's sustainability goals and objectives will be disseminated completely across GSA's 11 geographic regions and its headquarters through internal and external communications, management councils and committees, and in employee performance plans and expectations. GSA will ensure implementation by monitoring and

tracking performance in individual performance evaluations, organizational performance reviews, and in every aspect of daily operations.

- *Methods for Evaluating Progress.*—GSA’s Sustainability Steering Committee will establish a mechanism for monitoring and reporting progress against sustainability goals through an enterprise-wide Environmental Management System (EMS). An EMS is a management framework to identify, manage, and improve sustainable practices; an EMS must be reviewed at least annually and audited by an independent third party at least every three years. GSA is currently developing an enterprise-wide EMS and is considering the International Standards Organization’s standard ISO 14001, *Environmental Management Systems*, as well as existing accountability and control mechanisms from Office of Management and Budget Circular A-123, *Management’s Responsibility for Internal Control*.

## 1.5.2 Collaboration and Communication

GSA’s sustainability communications strategy is to take the Zero Environmental Footprint goal “viral,” by encouraging it to evolve organically. Zero Environmental Footprint can only be successful if it is quickly adopted by employees in Central Office and across GSA’s 11 Regions, if it spreads to GSA’s suppliers, customers, and stakeholders, and if it builds a community of interest and influence beyond GSA. GSA’s Zero Environmental Footprint goal will make the business of Government so interesting that GSA will draw a motivated and engaged audience to seek out GSA for its expertise in sustainable design, policies, and practices.

GSA’s Zero Environmental Footprint goal is a shared mindset, a common commitment, and a strategy to empower individuals and organizations to take action to correct imbalances between supply and demand for natural resources. GSA will galvanize its employees, other Federal agencies, and Federal contractors through communications and collaborative tools designed to realize the following objectives:

- Empower GSA employees to continuously cultivate and develop ideas to achieve a Zero Environmental Footprint;
- Engage employees in brainstorming and collaborating on solutions to realize GSA’s sustainability goals;
- Provide information to the public regarding GSA’s sustainability work and progress; and
- Engage customers, suppliers and other stakeholders in working with GSA to achieve their agency sustainability goals.

GSA will develop a sustainability web page as its primary source for public sustainability information. GSA will regularly post relevant, accessible news, stories, and information on related efforts outside of GSA. GSA will identify and support training opportunities for Federal employees, including GSA employees, to develop and enhance their expertise. GSA will develop a practitioner community by sharing technical and policy guidance, case studies, best practices, and benchmarks. GSA will use social media and collaborative tools to engage in public dialogues with its suppliers, Federal agency customers, and stakeholders, including the public. GSA will source ideas from traditional and new media channels, and will use networking and collective intelligence technologies to turn ideas into solutions.

### 1.5.3 Planning, Policy, and Budget Integration and Alignment

GSA uses a structured process, the Performance Management Process (PMP), to develop strategies, identify actions, and align resources to support agency priorities. The PMP is an annual process that allows leaders at all levels to: validate or change their goals and objectives; update their strategies and planned actions; monitor status and progress against goals; and review and update plans against actual performance. The PMP ensures that GSA's plans, policies, and budget are integrated, aligned, and focused on the highest priorities of the agency.

GSA will use the PMP to drive the Zero Environmental Footprint goal throughout the organization. The PMP is a six-phase process that develops cascading plans and goals that reinforce and ensure delivery of agency priorities at every level of the agency:

- *Phase 1, the Administrator's Guidance*, begins when the Administrator establishes policy direction and guidance for the agency for the coming fiscal year. The Administrator's Guidance memorandum communicates: key strategies and policy goals; performance expectations and priorities; and resource allocation priorities.
- *Phase 2, Strategic Assessment*, asks senior leaders to assess the health and direction of their organizations and to validate organizational strategies, goals, and performance measures against the Administrator's Guidance. Senior leaders cascade the Administrator's guidance through their organizations and establish their own direction and expectations.
- *Phase 3, Strategy and Action Planning*, asks leaders at multiple levels of the organization to identify and prioritize the specific actions necessary to achieve the goals identified in the Strategic Assessment phase. Strategy and Action Plans include an assessment of available resources and may support new resource requests.
- *Phase 4, Performance Planning and Budget Justification*, formalizes and publishes GSA's policy goals, performance expectations, and estimates of resources required to achieve GSA policy objectives.
- *Phase 5, Business Planning*, allows organizational leaders to develop operating business and financial plans to implement GSA policies and objectives. Program managers prepare operational plans that articulate how they will implement agency and organizational strategies and actions.
- *Phase 6, Performance Management*, is a continuous cycle of activities that includes all of the preceding PMP phases. Establishing policy objectives, and developing cascading plans and performance goals are critical steps in managing performance. As a separate stage of the PMP process, *Performance Management* adds: Monitoring, reporting, and evaluating activities and accomplishments.

Overall, the PMP reduces risk to the agency by ensuring that GSA has the strategic direction, resources, and process controls necessary to achieve a Zero Environmental Footprint. The PMP produces work products that articulate GSA's sustainability goals, objectives, status and progress to external stakeholders and also communicate expectations to internal programs and to GSA employees. The PMP is GSA's process for ensuring that agency plans, policies, and

resources are integrated, aligned with agency priorities, and focused on the success of GSA's Zero Environmental Footprint goal.

## 1.6 Evaluating Return on Investment

GSA has government-wide responsibility and authority for the acquisition, management, and disposal of a wide variety of Federal assets. GSA maintains separate investment decision-making processes to accommodate different statutory and regulatory requirements, stakeholder interests, and customer expectations. GSA's programs and activities routinely incorporate return on investment into asset planning, acquisition, and disposal decisions, but do so subject to different processes, assumptions, and constraints.

In general, GSA bases its investment decisions on customer mission requirements, financial return, and social and environmental policies. Broadly, GSA programs and activities tend to identify investments based on customer needs, prioritize investments based on financial benefits to GSA, and select investments that conform to or maximize social or environmental benefits; however, most organizations incorporate all four factors into their investment decision-making processes in some way.

- *Economic Life Cycle Cost.*—Most GSA investment decisions and asset management plans include some consideration of life cycle costs and financial return over the life of the investment. GSA is financed primarily from reimbursements from other agencies, and GSA must ensure that its rates and fees include the full costs of asset acquisition, operations and maintenance, and disposal. Many programs and activities routinely conduct life cycle cost analysis to compare alternative approaches or technologies, and to select the solution with the lowest overall cost of ownership, consistent with quality standards and customer requirements. GSA is both a steward of taxpayer dollars and a competitor in the marketplace who recognizes that adopting solutions with lower life cycle costs will generate savings for customers, which makes GSA more competitive. GSA will work to implement DOE's guidance on estimating total Economic Life Cycle Cost as it is released.
- *Mission-Specific Costs and Benefits.*—GSA's primary consideration in its business decision-making has been the mission requirements of its customer Federal agencies in the past. In many cases, GSA's focus on its customer missions aligns closely with its sustainability goals and the Zero Environmental Footprint. Our task ahead is to foster this alignment. Public-facing customer agencies such as the Internal Revenue Service and the Social Security Administration must be located in close proximity to public transportation, which helps GSA to build Federal buildings and select leases that have sustainable locations, and are better integrated with local transportation plans. Similarly, GSA is investing Recovery Act funds to design a net zero facility at the Columbus, NM Land Port of Entry (border station). This new building will reduce GHG emissions by generating as much renewable energy as it consumes, and supports U.S. Customs and Border Protection's mission need to maintain critical systems in the event of a complete loss of utilities.

**Table 1: Critical Planning Coordination**

The following table illustrates the relationship between GSA’s sustainability plan and other planning and reporting efforts across the agency. Each cell responds “Yes” or “No” to indicate whether the sustainability goal has been integrated into a specific report or plan. An “N/A” response indicates that the goal is not applicable to the subject report or plan.

Originating Report or Plan	Scope 1 & 2 GHG Reduction	Scope 3 GHG Reduction	Agency Comprehensive GHG Inventory	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	Vendor and Contractor GHG Emissions
<i>OMB Circular A-11, Preparation, Submission and Execution of the Budget:</i>										
GPRA Strategic Plan	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Budget Justification	yes	yes	yes	yes	no	no	yes	yes	yes	yes
Exhibit 53s	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Exhibit 300s	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Capital Asset Management Plans and Reports:</i>										
Asset Mgmt Plan										
Data Center Consolidation Plan	yes	yes	yes	n/a	n/a	n/a	yes	n/a	yes	yes
<i>Energy and Environmental Performance Reports:</i>										
Annual Energy Data Report	yes	yes	yes	n/a	n/a	yes	n/a	n/a	n/a	n/a
Annual Federal Fleet Report	yes	n/a	yes	n/a	n/a	n/a	n/a	yes	no	no
EISA Section 432 Reports	yes	yes	yes	n/a	n/a	yes	n/a	n/a	n/a	n/a
Environmental Management System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
OMB Energy Scorecard	yes	yes	yes	yes	n/a	yes	n/a	n/a	n/a	n/a
OMB Environmental Scorecard	n/a	n/a	n/a	yes	n/a	n/a	yes	yes	yes	yes

- *Environmental Costs and Benefits.*—GSA considers the environmental impacts of its business decisions and incorporates sustainability goals into its investment decision-making processes. In many cases, GSA has established minimum standards that all potential investments must meet. For example, all new construction projects will be designed to achieve LEED Gold certification, to be at least 30 percent more energy efficient than industry standards, and to meet Energy Star standards. Similarly, GSA will maximize the number of hybrid-electric vehicles in the GSA Fleet. Because these vehicles are available to the government in limited quantities, GSA has procured as many hybrids as possible, given the obvious benefits of moving to hybrids.

In other cases, such as small energy and water savings projects, potential projects are ranked and prioritized based on financial return, estimated energy or water savings, and potential GHG emissions reductions. GSA uses Lean Six Sigma methodologies to review programs and processes to eliminate wasted effort; GSA is currently developing a “Green Six Sigma” methodology to review programs and processes to reduce or eliminate wasted energy, water, and other resources, as well.

- *Social Costs and Benefits.*—GSA ordinarily includes social factors in its business decision-making. GSA considers local economic conditions when evaluating sites for new Federal buildings and leases, and often selects locations where a large Federal presence will stimulate new economic development. GSA supports the economic growth of small and disadvantaged businesses through set-asides on certain procurements and by structuring long-term service contracts to ensure that small businesses can compete. GSA also actively supports the AbilityOne program and, in FY 2009, GSA sold more than \$170 million worth of AbilityOne products to other Federal agencies. GSA currently employs over 3,000 Full-Time Equivalents (FTE) through service contracts with AbilityOne vendors.

## 1.7 Transparency

GSA’s Zero Environmental Footprint goal is grounded in continuous and open communications, collaboration, and engagement with employees, customers, suppliers, stakeholder organizations, and the American public. GSA will post its Strategic Sustainability Performance Plan in its entirety on the agency website, [www.gsa.gov](http://www.gsa.gov), once it has received appropriate clearance from OMB and CEQ. GSA will include its sustainability goals, metrics, progress, and performance in all of its annual performance reports, including its Congressional Budget Justification, Annual Performance Plan, Annual Financial Report, and Citizen’s Report, and will keep the public informed on the government’s progress through USA.gov.

GSA will use collaborative tools and new media to engage in public dialogues to seek ideas, practices, and technologies to move toward a more sustainable agency. This Plan was drafted using an on-line document management platform. All employees were able to access and contribute narratives and comments throughout the process. During formulation of this Plan, GSA used a web-based public dialogue tool that allowed employees to share, discuss, and vote on their sustainability ideas. In the future, GSA will maintain and expand this community of interest to maximize transparency, innovation, and collaboration to meet its sustainability goals and realize a Zero Environmental Footprint.

U.S. General Services Administration

FY 2010-2015 Strategic Sustainability Performance Plan

Section 2: Performance Review and Annual Update

Contents

**2.1 Summary of Accomplishments ..... 2**

**2.2 Goal Performance Reviews ..... 4**

2.2.1 Scope 1 & 2 Greenhouse Gas Emissions Reductions ..... 4

2.2.1.1 Scope 1 & 2 Greenhouse Gas Emissions Reductions in Federal Buildings ..... 4

2.2.1.2 Scope 1 & 2 Greenhouse Gas Emissions Reductions in Motor Vehicles ..... 10

2.2.2 Scope 3 Greenhouse Gas Emissions Reductions ..... 13

2.2.2.1 Scope 3 Greenhouse Gas Emissions from Federal Employee Travel ..... 13

2.2.2.2 Scope 3 Greenhouse Gas Emissions from Solid Waste Disposal and Wastewater Treatment ..... 15

2.2.2.3 Scope 3 Greenhouse Gas Emissions from Transmission and Distribution Losses ..... 17

2.2.3 Develop & Maintain Agency Comprehensive Greenhouse Gas Inventory . 18

2.2.4 High-Performance Green Buildings and Sustainable Design ..... 21

2.2.5 Regional and Local Planning ..... 26

2.2.6 Water Use Efficiency and Management ..... 30

2.2.7 Pollution Prevention and Waste Elimination ..... 34

2.2.8 Sustainable Acquisition ..... 39

2.2.9 Electronic Stewardship and Data Centers ..... 43

2.2.9.1 Electronic Stewardship ..... 43

2.2.9.2 Data Centers ..... 46

2.2.10 Vendor and Contractor Greenhouse Gas Emissions ..... 49

## 2.1 Summary of Accomplishments

GSA has a proud history of providing environmentally sound or sustainable products and services, reducing waste and pollution, and providing Federal employees with a healthy work environment. The success stories below represent some of the best examples of GSA's innovation and willingness to take risks to achieve sustainability.

- *GSA is a leader in sustainable design.*—As of June 2010, GSA has achieved the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification in 47 Federal buildings and leases. LEED certification provides third-party verification that a building was designed and built to standards that improve energy savings, reduce water consumption, improve indoor air quality, and use more sustainable resources, when compared to existing buildings. A recent review of 12 of these properties found that that they produced 33 percent lower carbon emissions, used 26 percent less energy, and used 3 percent less water than equivalent US commercial buildings.
- *GSA prioritizes building investments by energy consumption and return on investment.*—GSA identifies energy and water investment projects based on the energy consumption and energy intensity of each building, as well as each building's historical progress in reducing energy consumption. Projects are selected based on life cycle cost and return on investment. GSA's experience in planning energy and water conservation projects allowed GSA to quickly begin work on Recovery Act building projects with the maximum economic and environmental benefits. Today, GSA Recovery Act projects are planned or underway in 252 buildings and are expected to have a significant impact on reducing the overall energy consumption in these buildings.
- *GSA is a proving ground for new green building technologies.*—GSA will install a state-of-the-art photovoltaic roof at the Major General Emmett J. Bean Federal Center in Indianapolis, Indiana. This innovative new roof will feature nearly 6,000 solar panels, and is expected to produce over 1.8 megawatts of electricity. GSA's installation includes a smaller array of four different photovoltaic systems, to allow for a comparative evaluation of commercially available photovoltaic solar panels operating in Midwest climates. In total, the photovoltaic systems on this building are expected to reduce its peak electrical usage by as much as six percent.
- *GSA is reducing energy consumption and increasing renewable energy in Federal buildings.*—In FY 2009, GSA procured 10.8% of its total electricity from renewable sources. GSA facilities generated nearly 7,500 million BTUs of on-site, renewable energy in FY 2009, from 20 photovoltaic arrays, five solar-thermal collectors, and one geothermal project. Ten out of eleven GSA regions had competitive electricity supply contracts in place that required at least 3% renewable energy. In FY 2010, GSA added two new co-generation plants to its inventory, for a total of five.
- *GSA is reducing waste in Federal buildings.*—GSA is piloting a bio-organic waste disposal system in the National Capital Region. The disposal system, designed for use in commercial cafeterias, converts food waste and bio-based compostable dinnerware to a nutrient-rich liquid, eliminating solid waste that would otherwise be destined for landfill. GSA will expand use of system to other facilities and will encourage other agencies to inspect and purchase the system. GSA has also incorporated requirements into its food service

contracts for use of bio-based, biodegradable, compostable, or recyclable flatware and use of environmentally-friendly cleaning products.

- *GSA provides Alternative Fuel Vehicles (AFV) to the Federal government through its motor vehicle leasing program.*—GSA's motor vehicle fleet includes nearly 89,000 AFVs, including 1,656 hybrid-electric motor vehicles. In FY 2010, GSA plans to increase the AFV fleet to approximately 98,000 vehicles, including 7,500 hybrids. GSA's planned vehicle acquisitions will double the Federal government's hybrid fleet this fiscal year.
- *GSA is piloting car-sharing technology to reduce the size and fuel consumption of the Federal motor vehicle fleet.*—Beginning in June 2010, GSA will perform a six-month pilot using an automotive navigation and vehicle tracking system and a web-based reservation system in San Diego, California in conjunction with the U.S. Navy using 15-20 GSA vehicles. This pilot will demonstrate the viability of using car-sharing technology as a strategy to reduce the size of the Federal motor vehicle fleet. If successful, GSA will work with its customers to expand use of this new technology.
- *GSA offers procurement tools to help other Federal agencies meet their sustainable acquisition requirements.*—GSA is implementing a pilot program to create a product offering exclusively for non-industrial copiers (less than 100 pages per minute) that meet Energy Star requirements. By the end of FY 2010, GSA will identify five additional product offerings exclusively for sustainable products.
- *GSA is a trusted source of supply for sustainable products and services.*—As of June 2010, GSA offers 48 bio-based products, more than doubling the number available last year. GSA recently introduced a line of bio-based flatware, made from 50% wheat-based resin. In addition, GSA converted three items of supply into bio-based products, including cleaners supplied by AbilityOne, which generated \$1.5 million in sales in the first quarter of FY 2010.
- *GSA is reducing its physical and environmental footprint.*—GSA recently migrated its core financial system to a new hosting environment. By increasing virtualization, GSA reduced the number of servers used from 48 to 35, reducing its energy consumption by an estimated 273 million British thermal units (BTU) per year. By the end of FY 2010, GSA will reduce the number of physical servers dedicated to small financial applications from 238 to 174, for an estimated savings of 1,331 million BTUs per year.

## 2.2 Goal Performance Reviews

### 2.2.1 Scope 1 & 2 Greenhouse Gas Emissions Reductions

- **By FY 2020, GSA will reduce Scope 1 & 2 Greenhouse Gas (GHG) emissions by 28.7% compared to FY 2008 baseline estimates.** GSA will reduce its GHG emissions from sources owned or controlled by GSA, including fuel consumed on-site to heat or power Federal buildings and fuel consumed by motor vehicles (“Scope 1” emissions) and GHG emissions resulting from the generation of electricity, heat, chilled water, or steam purchased by GSA (“Scope 2” emissions). The FY 2008 baseline for motor vehicle emissions was formulated by capturing fuel consumption by fuel type for FY 2008, and applying standard formulas to convert fuel consumption into estimated GHG emissions in metric tons of carbon dioxide equivalents (MTCO<sub>2e</sub>).
- **In FY 2008, GSA produced an estimated 2.4 million tons of carbon from direct (Scope 1 & 2) sources.** The majority of these emissions (99.8%) came from GSA-owned and leased Federal buildings. The remaining emissions were generated by GSA’s internal motor vehicle fleet.
- **By FY 2020, GSA will reduce its Scope 1 & 2 GHG emissions by 684,157 tons of carbon.** Nearly all of the GHG emissions reductions will come from GSA’s Federal buildings. Because GSA has adopted different strategies for reducing the GHG emissions of buildings and motor vehicles, each emissions source is considered separately below.

#### 2.2.1.1 Scope 1 & 2 Greenhouse Gas Emissions Reductions in Federal Buildings

- a. *Goal Description.*—By FY 2020, GSA will reduce Scope 1 & 2 GHG emissions by 28.7% below the FY 2008 baseline for all buildings. Also by FY 2020, GSA will reduce total energy consumption per square foot of space by 37.5% compared to the FY 2003 baseline for buildings subject to the energy intensity reduction goal.
  - **By FY 2015, GSA will reduce facility energy intensity by 30% from the FY 2003 baseline.** Section 431 of the Energy Independence and Security Act of 2007 (“EISA 2007”, Public Law 110-140) requires all Federal landholding agencies to meet this target for reducing energy consumption per gross square foot of space. GSA’s efforts to meet this goal will reduce its annual Scope 1 & 2 carbon emissions by nearly 450,000 tons of carbon, a 23.3% reduction from current estimates.
  - **GSA will reduce facility energy intensity by an additional 1.5% per year from FY 2016 through FY 2020.** This will reduce GSA’s Scope 1 & 2 carbon emissions by an additional 211,000 tons of carbon, a 14% reduction from FY 2015 to FY 2020.
  - **GSA will increase renewable energy production and procurement to 30% of annual energy consumption by FY 2020.** This will produce additional, permanent carbon emissions reductions.

*Goal Scope.*—GSA’s target for buildings emissions includes GSA-owned buildings and those leases where GSA is responsible for making utility payments directly to utility providers. GSA’s target does not include leased space where utilities are provided by the landlord and included in the lease payment. (GSA leads an interagency working group to improve Federal reporting of energy use in leased space.) GSA’s target also excludes buildings meeting Department of Energy exclusion criteria.

GSA’s energy intensity reduction goals only include reduced energy consumption in subject buildings and increased use of on-site renewable energy. GSA energy intensity reduction goals do not include credits for the purchase of renewable energy generated by others (“renewable energy credits”).

*b. Agency Lead for Goal.*—

Mark Ewing  
Director, Energy Division  
Public Buildings Service

*c. Implementation Methods.*—**GSA will meet Scope 1 & 2 GHG emissions reduction targets in Federal buildings by reducing facility energy intensity to 48,926 British thermal units (BTU) per gross square foot of space (GSF) by FY 2020.** This amounts to a 37.5% reduction from the FY 2003 baseline of 78,282 BTU/GSF.

GSA will use a structured management process to: (1) set annual energy reduction targets; (2) identify, prioritize, and implement energy and water saving projects; and (3) track energy consumption and measure results to inform future-year goals and project selection criteria.

1. **GSA will continue to implement energy conservation projects in its inventory of owned Federal buildings,** based on life-cycle cost-effectiveness.
  - a. GSA typically invests approximately \$20 million per year in the **Energy and Water Retrofit and Conservation program**, which provides funds for small-scale building alterations or retrofits of building systems, to reduce on-site energy consumption in existing Federal buildings. Projects are evaluated and prioritized based on financial and environmental performance factors.
  - b. **GSA selects energy conservation projects based on their ability to demonstrate both a financial return and quantifiable improvements in environmental performance.** GSA prioritizes its existing buildings by environmental and financial performance, and actively develops project proposals to implement life-cycle cost effective energy saving measures. GSA collects project proposals as a part of the annual budget process, and then evaluates and ranks potential projects based on financial return on investment, estimated energy savings per dollar invested, and anticipated reductions to GHG emissions.

2. **GSA will increase EISA Energy and Water Evaluations, deploy advanced meters in all covered buildings, and integrate evaluation and metering data into agency decision-making.**
  - a. **GSA will conduct Energy and Water Evaluations**, as required by EISA section 432, **and retro-commission 25% of covered facilities every year** so that all covered facilities are evaluated every four years. GSA's "covered buildings" under EISA are the 198 buildings that represent 75% of GSA's total energy usage. Retro-commissioning is a systematic investigative process to ensure that building equipment and systems are operating efficiently as a system. GSA is using Recovery Act funding to retro-commission 82 of its covered facilities by FY 2011.
  - b. **GSA will install advanced electricity meters in all covered buildings and all Recovery Act projects by FY 2012 and expand the advanced metering program to measure natural gas and steam usage by FY 2016.** Advanced utility meters provide real-time energy consumption data to operators of building. Operators can use this data to adjust building conditions to reduce peak demand, or to identify and correct sub-optimal performance.
  - c. **GSA will integrate energy and water evaluations and advanced meter data into agency decision-making processes.** GSA uses energy consumption data to benchmark building performance and to prioritize buildings for energy and water projects. However, GSA has historically installed a single meter to monitor energy consumption on multi-building campuses. Advanced meter data will allow GSA to identify opportunities to optimize building systems and prioritize investments.
3. **GSA will produce and procure 30% of its energy consumption from renewable sources by FY 2020** and increase reliance on alternative sources of electricity.
  - a. **GSA will increase renewable energy production and procurement to between 10% and 15% of total agency-wide energy usage in fiscal years 2010 through 2013, and up to 30% of annual energy consumption by FY 2020.** GSA will meet this goal by including renewable energy requirements in its electricity purchase contracts with local utility companies, and by contracting specifically for renewable energy. GSA is also expanding its inventory of on-site energy generation projects.
  - b. **GSA will continue to utilize electricity generated at Combined Heat and Power Plants (Co-gen) in GSA facilities.** GSA co-gen plants use natural gas to generate electricity and use the heat of the electricity generation process for heating office space. GSA will also look for opportunities to install new co-gen plants.
4. **GSA will design new construction projects and major building modernizations to exceed industry standards for energy efficiency.**
  - a. **Beginning in FY 2010, GSA will design new construction projects to deliver energy performance at least 30% below ASHRAE standard 90.1 (2007).** The American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) prepares voluntary, consensus-based standards for design, testing, and

use of building systems. ASHRAE standard 90.1 provides minimum energy standards for commercial buildings. Beginning in FY 2011, GSA will design all new construction projects to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold certification (except in highly-secure areas where LEED standards may conflict with security requirements) and meet Energy Star standards.

- b. **All major building modernization projects will consume energy at a level no more than the average BTU/GSF for comparable GSA facilities in the same geographic region.** GSA sets targets based on regional averages because of wide variances in energy consumption across geographic regions and climates: Benchmarking against a national average would create a less aggressive standard for some parts of the country.

GSA has also found that using the average performance of GSA facilities is a more aggressive standard than benchmarking against energy intensity in commercial buildings. The most recently available commercial benchmark from the Department of Energy reports that the national average energy intensity in commercial buildings was 89,800 BTU/GSF in 2003; GSA's energy intensity in 2003 was 78,282 BTU/GSF and its 12-month average building energy intensity through June 2010 was 70,757 BTU/GSF.

5. **During FY 2011, GSA will work jointly with the Department of Energy to expand energy and sustainability training for Federal facility managers to adopt a curriculum-based approach.** GSA already provides training through its Federal Infrastructure Fundamentals Training (FIFT) for property managers. This training covers operations and maintenance issues including heating, ventilation, and air conditioning (HVAC), electrical systems, elevators, and fire systems. Penn State University provides a three-day course taught in the classroom and in the field. Field instruction provides practical instruction on equipment generally found in Federal buildings. Since January 2006, GSA has provided training to over 1,200 Federal facility management employees.

*Challenges.*—GSA's implementation plan faces a number of challenges. GSA has already initiated actions to address or mitigate many of these risks and will continue identify new solutions to overcome these challenges.

1. **E.O. 13514 GHG reduction targets do not allow for adjustments to accommodate increases in the GSA inventory of covered buildings.** E.O. 13514 Scope 1 & 2 GHG emissions reduction targets measure tons of carbon emissions against a fixed baseline. The energy consumption of any new workspace deployed must be offset by additional energy reductions elsewhere.

GSA's FY 2003 baseline of covered buildings was 181 million gross square feet (of owned and leased space); in FY 2008, that number was 179 million and in FY 2010, that number is currently 180 million. This suggests that GHG emissions from new workspace should be offset by the disposal of existing buildings, minimizing the risk associated with the E.O. GHG reduction goals.

2. **The energy saving impact of Recovery Act projects is not included in GSA's GHG emissions reduction targets.** The Recovery Act provided GSA with \$5.546 billion in funding for Federal buildings, including \$1.05 billion for new construction and \$4.5 billion for measures necessary to convert GSA facilities to high-performance green buildings.

GSA's Recovery Act projects will deliver substantial improvements in energy and water efficiency, and is working to capture and report efficiency improvements. GSA's Recovery Act project review process includes the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (Guiding Principles are discussed in greater detail in subsection 2.2.4). Each major building modernization project has an energy efficiency target. GSA will verify the environmental performance of the delivered systems and buildings for each project.

- d. *Positions.*—GSA's Public Buildings Service currently dedicates 25 full-time equivalents (FTE) to its Energy Division, which is responsible for the procurement and management of energy and for monitoring and reporting energy consumption.
- e. *Agency Status.*—
- **As of FY 2009, GSA had reduced energy intensity in covered buildings by 15.4% over the FY 2003 baseline**, well ahead of its target reduction of 12%. GSA has reduced its energy consumption through the sustainable design of new buildings and the energy-efficient management of existing Federal buildings. (This includes credits for renewable energy purchased.)
  - **In FY 2009, GSA purchased or generated 10.8% of its total electricity from renewable sources.** GSA facilities generated nearly 7,500 million BTUs of on-site, renewable energy in FY 2009. Ten out of eleven GSA regions had competitive electricity supply contracts in place that required at least 3% renewable energy. In FY 2010, GSA added two new co-generation plants to its inventory, for a total of five.
  - **As of May 2010, 47 GSA Federal building projects and leases had achieved some level of LEED certification, including one lease that has achieved a LEED Platinum rating.**
  - **As of FY 2009, GSA had installed advanced meters at 209 facilities**, representing 41% of energy consumed in that year, and re-commissioned 34 covered facilities.
- f. *Planning Table.*—The following table reflects GSA's commitment to meeting Scope 1 & 2 GHG emissions targets and EISA energy reduction goals for FY 2015. GSA has made an additional commitment to reduce facility energy intensity by 1.5% per year for fiscal years 2016 through 2020. GSA will increase consumption of renewable energy to 30% by FY 2020.

**Scope 1 & 2 GHG Emissions Reduction Targets and Resources – Federal Buildings**

SCOPE 1 & 2 GHG TARGET	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	....	FY 20
<b>EISA Mandated Energy Reduction Goals (BTU/SF reduced from FY 2003 base year)</b>	15%	18%	21%	24%	27%	30%	hold	...	hold
GSA Planned Energy Intensity Reduction (BTU/SF reduced from FY 2003 base year)	15%	18%	21%	24%	27%	30%	31.5%	...	37.5%
<b>Mandated Renewable Electricity Goals (Percent of electricity from renewable sources)</b>	5%	5%	5%	7.5%	hold	hold	hold	hold	hold
GSA Planned Renewable Electricity Use (Percent of electricity from renewable sources)	10%	12%	14%	16%	18%	20%	22%	...	30%
GSA Scope 1 & 2 Reduction Target (Reduced from FY 2008 base year)	7%	10%	13%	17%	20%	21.3%	22.8%	...	28.7%

### 2.2.1.2 Scope 1 & 2 Greenhouse Gas Emissions Reductions in Motor Vehicles

- a. *Goal Description.*—By FY 2020, GSA will reduce Scope 1 & 2 GHG emissions from its motor vehicles by 1.5% compared to the FY 2008 baseline.
- **By FY 2020, GSA will reduce its consumption of gasoline and diesel fuels by 30% over the FY 2005 baseline.** GSA will meet this target by reducing usage of traditional fuels by 2% in each fiscal year from 2005 through 2020. Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, establishes this target for all Federal agencies with a fleet of 20 or more light-duty vehicles.
  - **By FY 2015, GSA will increase its consumption of alternative fuels by 159% over the FY 2005 baseline.** GSA will realize this goal by increasing alternative fuels usage by 10% per year through FY 2015. This target was established by E.O. 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*.
  - **At least annually, GSA will review its internal fleet, to ensure that the size and capacity of each vehicle matches its mission requirement and actual usage.** GSA will use these reviews to optimize vehicle usage, right-size the fleet, and identify opportunities to decrease petroleum use. GSA will report on agency status and progress against targets no less than quarterly.

*Goal Scope.*—GSA's target for motor vehicle emissions includes only those vehicles owned or leased for internal use by GSA employees. GSA Scope 1 & 2 GHG emissions estimates and reduction targets exclude motor vehicles that GSA leases to other Federal agencies for their use, as well as non-road vehicles.

- b. *Agency Lead for Goal.*—

Kathleen Turco  
Associate Administrator  
Office of Government-wide Policy

- c. *Implementation Methods.*—This section constitutes GSA's agency plan for achieving GHG emissions reduction targets and meeting petroleum and alternative fuels targets. This section is intended to satisfy the planning requirements of E.O. 13514 and Section 142 of the Energy Independence and Security Act of 2007 ("EISA 2007", Public Law 110-140).

GSA has adopted the guiding principles of the Department of Energy's "Guidance for Federal Agencies on E.O. 13514 Section 12 – Federal Fleet Management" to form its strategies for reducing petroleum consumption and increasing the use of alternative fuels: (1) **GSA will reduce vehicle miles traveled**; (2) **GSA will increase fleet fuel economy**; and (3) **GSA will increase use of alternative fuels**. GSA is reviewing data on actual usage and intends to establish quantifiable targets and action plans.

1. **By July 2010, GSA will document a comprehensive Vehicle Allocation Methodology for the internal fleet.** GSA is developing an optimal vehicle allocation methodology based on mission requirements, to document objective criteria that determine vehicle requirements
  
2. **By November 2010, GSA will develop a plan to transition the current fleet to the optimized vehicle allocation and increase fleet fuel efficiency.** GSA will turn in motor vehicles that are currently leased in locations or numbers in excess of the optimal allocation. GSA will exchange leased motor vehicles for smaller vehicles where a smaller vehicle will satisfy local requirements. GSA will use hybrid-electric and low-speed electric vehicles where available.
  
3. **By December 2010, GSA will develop a long-term strategy for reducing petroleum consumption and increasing alternative fuel usage in the GSA internal fleet.**
  
4. **Beginning in FY 2011, GSA will collaborate with the Department of Energy to review legislation and regulations impacting Federal fleet management.** GSA will work with other Federal agencies to identify barriers to improved environmental performance in Federal motor vehicle fleets. GSA will coordinate the development of a new government-wide legislative strategy for fleet management, if it is needed to address issues identified in the review.

*Challenges.*— GSA's implementation plan faces several challenges. GSA has already mitigated many of these risks and will continue to identify new solutions to overcome these challenges.

1. **Until recently, GSA internal fleet acquisition and utilization decisions were decentralized.** This dispersed management system did not promote accountability and has limited GSA's ability to implement fleet-wide standards and performance goals.

GSA has addressed this concern by naming the Associate Administrator for Government-wide Policy as the single accountable official for managing GSA's internal fleet. The Associate Administrator is responsible for establishing policies, standards, and plans for optimizing the GSA internal fleet and for meeting agency targets for reducing petroleum use and increasing the use of alternative fuels.

2. **Limited alternative fuels infrastructure creates challenges in meeting alternative fuel consumption targets.** GSA has not been successful in meeting alternative fuel consumption goals in the past, largely due to the lack of fueling stations, or restricted access to government fueling stations.

GSA addresses this risk by seeking access to alternative fueling sites under management and control of other Federal agencies, and State and local governments.

d. *Positions.*—GSA’s agency-wide internal motor vehicle management program presently has one full-time equivalent (FTE). GSA regions and organizations have assigned Vehicle Controlling Officials (VCO) who coordinate motor vehicle activities at a local level; however, all VCOs currently perform this responsibility as a collateral duty.

e. *Agency Status.*—**In FY 2009, GSA’s internal fleet petroleum consumption was 24.2% below the FY 2005 baseline.** GSA’s total annual consumption of 434,234 gallons of petroleum was 17.6% below our targeted consumption for FY 2009. GSA’s FY 2010 petroleum consumption goal is 450,000 gallons.

f. *Planning Table.*—The following table reflects GSA’s commitment to meeting Scope 1 & 2 GHG emissions targets and EISA alternative fuel consumption goals for FY 2015.

**Scope 1 & 2 GHG Emissions Reduction Targets and Resources – Motor Vehicles**

SCOPE 1&2 GHG TARGET	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	...	FY 20
Mandated Petroleum Use Reduction Goals (Gross Gallon Equivalents from FY 2005 base year)	10%	12%	14%	16%	18%	20%	22%	...	30%
GSA Planned Petroleum Use Reduction (Gross Gallon Equivalents from FY 2005 base year)	10%	12%	14%	16%	18%	20%	22%	...	30%
Mandated Alternative Fuel Use in Fleet AFV Goal (Gross Gallon Equivalents from FY 2005 base year)	61%	77%	95%	114%	136%	159%	hold	...	hold
GSA Planned Alternative Fuel Use in Fleet AFV (Gross Gallon Equivalents from FY 2005 base year)	61%	77%	95%	114%	136%	159%	hold	...	hold
GSA Scope 1 & 2 Reduction Target (Reduced from FY 2008 base year)	hold	...	...	...	...	...	...	...	1.5%

## 2.2.2 Scope 3 Greenhouse Gas Emissions Reductions

- **By FY 2020, GSA will reduce Scope 3 Greenhouse Gas (GHG) emissions by 43.9% from the FY 2008 baseline.** GSA will reduce its GHG emission from indirect sources (“Scope 3” emissions), including employee commuting and business travel, contracted waste disposal, and transmission losses from purchased electricity.
- **In FY 2008, GSA produced an estimated 198,000 tons of carbon from indirect (Scope 3) sources.** GSA’s baseline for Scope 3 emissions captures carbon emissions from: purchased electricity lost during transmission and distribution of power, emissions from disposal of solid waste and treatment of wastewater from Federal buildings, and emissions from vehicles used in Federal employee travel, including commuting.
- **By FY 2020, GSA will reduce its Scope 3 GHG emissions by 87,000 tons of carbon.** Because GSA has adopted different strategies for reducing the GHG emissions from employee travel, waste and wastewater, and transmission and distribution losses, each emission source is considered separately below.

### 2.2.2.1 Scope 3 Greenhouse Gas Emissions from Federal Employee Travel

- a. *Goal Description.*—**By FY 2020, GSA will reduce Scope 3 GHG emissions from Federal employee travel by 25% from the FY 2008 baseline.** GSA’s FY 2008 baseline for employee commuting and business travel is 49,259 tons of carbon.

GSA will reduce Scope 3 emissions by 25% percent in each category of employee travel: air business-related travel, ground business-related travel, and employee commuting. By FY 2020, GSA will reduce scope 3 GHG emissions from employee travel by approximately 12,000 tons of carbon.

*Goal Scope.*—GSA’s targets are based on estimates of air and ground business-related travel and employee commuting patterns in FY 2008. GSA used actual data from its Travel Management Information System (TMIS) to obtain estimated GHG emissions from business air travel. GSA’s estimated emissions from business ground travel are based on car rental data from TMIS. GHG emissions from employee commuting are based on a survey of all GSA employees conducted in May 2010. Data from respondents was extrapolated to estimate emissions from the entire population of GSA employees.

- b. *Agency Co-Leads for Goal.*—

Wade Hannum  
Director, Performance and Worklife Policy Division  
Office of the Chief People Officer

Janet C. Dobbs  
Acting Deputy Associate Administrator  
Office of Travel, Transportation and Asset Management  
Office of Government-wide Policy

c. *Implementation Methods.*—GSA will minimize Scope 3 GHG emissions by reducing business travel by improving meeting management, making broader use of available meeting technology (e.g. webinars and videoconferences), and innovative local travel solutions, including centralized bike terminals and interagency shared shuttles. GSA encourage the use of public transportation and car pools and by increasing its use of work flexibilities, including alternate work schedules (AWS).

1. **GSA will reduce GHG emission from employee commuting by promoting workplace flexibility and increasing telework and alternate workplace participation rates to 60% by FY 2012.** GSA will review existing policy and programs related to work flexibilities and will develop a plan for increased use of work flexibilities in FY 2010. GSA will use data it gathered about nationwide employees' FY 2008 commuting habits to assess commuting patterns by region and determine approaches that may be taken to encourage use of alternative commuting opportunities. GSA will launch a telework/mobility promotion program by 2011.
2. **By FY 2020, GSA will reduce business travel by approximately 11,500 air segments and over 3 million ground miles.** GSA will modify its policies and technology to change the business travel practices and behaviors of its employees. GSA will explore using alternate forms of transportation such as trains and hybrid government automobiles for travel under 500 miles and use of bicycles for short distance inner-city meetings. GSA will also investigate and implement additional technology enablers such as videoconferencing, webinars, collaboration tools, and conference calls to conduct meetings without the need for travel.

*Challenges.*—**Culture is a strong inhibitor to changes in transit behaviors and reducing business travel.** GSA will educate and raise awareness within its workforce of the environmental impact of personal and management decisions related to travel, work schedule, and meeting management.

d. *Positions.*—This program will realign resources to support an agency-wide reduction in employee commuting and business travel.

e. *Agency Status.*—As of June 2010, over 55% of GSA employees participate in an AWS schedule and over 48% of eligible employees telework at least once per week.

f. *Planning Table.*—The following table reflects GSA's commitment to meeting Scope 3 GHG emissions reductions targets for Federal employee travel.

**Scope 3 GHG Emissions Reduction Targets and Resources – Federal Employee Travel**

SCOPE 3 GHG TARGET	FY 10	FY 11	FY 12	FY 13	FY 14	...	FY 20
GSA Scope 3 Reduction Target for Federal Employee Commuting	10%	15%	17%	19%	21%	...	25%
GSA Scope 3 Reduction Target for Business Travel	2%	6%	10%	14%	17%	...	25%

### 2.2.2.2 Scope 3 Greenhouse Gas Emissions from Solid Waste Disposal and Wastewater Treatment

a. *Goal Description.*—

- **By FY 2015, GSA will reduce Scope 3 GHG emissions attributed to contracted solid waste disposal by 50% from the FY 2008 baseline.** GSA's FY 2008 baseline for contracted waste disposal from GSA-owned buildings is 34,830 tons of carbon.
- **By FY 2020, GSA will reduce Scope 3 GHG emissions attributed to contracted wastewater treatment by 5% from the FY 2008 baseline.** GSA's FY 2008 baseline for wastewater treatment is 102 tons of carbon.

*Goal Scope.*—GSA's target for contracted solid waste disposal is based solid waste audits conducted at eighteen GSA-occupied office buildings in FY 2009, providing an initial measure of current volumes of solid waste disposed of at landfills, as well as at recycling facilities. GSA extrapolated data from those solid waste audits to estimate the scope 3 emissions associated with solid waste disposal across its inventory of owned Federal buildings.

GSA's target for wastewater treatment is based on 11,981 wastewater-subject employees and applies standard conversion factors to estimate carbon emissions.

b. *Agency Leads for Goal.* —

*Solid Waste Disposal.*— Raheem Cash  
Director, Environmental Division  
Public Buildings Service

*Waste Water Treatment.*— Wade Hannum  
Director, Performance and Worklife Policy Division  
Office of the Chief People Officer

- c. *Implementation Methods.*—GSA will reduce GHG emissions from solid waste disposal by increasing diversion of solid waste; GSA's strategy is detailed in subsection 2.2.7, "Pollution Prevention and Waste Elimination."

GSA will reduce GHG emissions from wastewater treatment by increasing work flexibilities to reduce water use in Federal buildings; GSA's strategy is detailed in subsection 2.2.2.1, "Scope 3 Greenhouse Gas Emissions from Federal Employee Travel."

- d. *Positions.*—GSA will complete the actions necessary to reduce GHG emissions from solid waste disposal and wastewater treatment with staff and resources assigned to and reported under other subsections (2.2.7 & 2.2.2.1).

- e. *Agency Status.*—GSA has established improving recycling rates across GSA’s owned inventory as one of its Agency High-Priority Performance Goals for FY 2011. GSA will educate its tenants and employees about recycling and will improve its recycling and solid waste data collection and management practices.
- f. *Planning Table.*—The following table reflects GSA’s commitment to meeting Scope 3 GHG emissions reductions targets for contracted solid waste disposal and wastewater treatment.

**Scope 3 GHG Emissions Reduction Targets and Resources – Waste and Wastewater**

SCOPE 3 GHG TARGET	FY 10	FY 11	FY 12	FY 13	FY 14	...	FY 20
GSA Scope 3 Reduction Target for Contracted Solid Waste Disposal	base	10%	20%	40%	50%	...	50%
GSA Scope 3 Reduction Target for Contracted Wastewater Treatment	base	0.5%	1.0%	1.5%	2.0%	...	5%

### 2.2.2.3 Scope 3 Greenhouse Gas Emissions from Transmission and Distribution Losses

a. *Goal Description.*—By FY 2020, GSA will reduce Scope 3 GHG emissions associated with transmission and distribution (T&D) losses of purchased energy by 50.3% from the FY 2008 baseline. GSA’s FY 2008 baseline for T&D losses from GSA-purchased electricity is 114,131 tons of carbon.

*Goal Scope.*—GSA’s target for T&D losses is based on annual estimates of purchased electricity in GSA-owned buildings and in leases where GSA is responsible for making utility payments directly to utility providers.

b. *Agency Lead for Goal.*—

Mark Ewing  
Director, Energy Division  
Public Buildings Service

c. *Implementation Methods.*—GSA will reduce GHG emissions from T&D losses by reducing energy consumption and increasing use of purchased and on-site renewable energy; GSA’s strategy is detailed in subsection 2.2.1.1, “Scope 1 & 2 Greenhouse Gas Emissions Reduction in Federal Buildings”.

d. *Positions.*— GSA will complete the actions necessary to reduce GHG emissions from T&D losses with staff and resources assigned to and reported under subsections 2.2.1.1.

e. *Agency Status.*—In FY 2009, GSA procured 10.8% of its total electricity from renewable sources. GSA facilities generated nearly 7,500 million BTUs of on-site, renewable energy in FY 2009. In FY 2010, GSA added two new co-generation plants to its inventory, for a total of five.

f. *Planning Table.*—The following table reflects GSA’s commitment to reducing Scope 3 GHG emissions from transmission and distribution losses of purchased energy.

#### Scope 3 GHG Emissions Reduction Targets and Resources – T&D Losses

SCOPE 3 GHG TARGET	FY 10	FY 11	FY 12	FY 13	FY 14	...	FY 20
GSA Scope 3 Reduction Target for Transmission and Distribution Losses from Purchased Energy	5%	10%	15%	20%	25%	....	50%

### 2.2.3 Develop & Maintain Agency Comprehensive Greenhouse Gas Inventory

a. *Goal Description.*—

- **By January 2011, GSA will establish a comprehensive inventory of Greenhouse Gas (GHG) emissions across all three Scopes for fiscal year 2010.** GSA will establish an inventory and reporting tool to capture its GHG emissions from sources owned or controlled by GSA (“Scope 1” emissions), GHG emissions resulting from the generation of electricity, heat, or steam purchased by GSA (“Scope 2” emissions), and GHG emissions from source not owned or controlled by GSA, but related to GSA activities (“Scope 3” emissions).
- **On February 7, 2011, GSA will publish its FY 2010 GHG emissions inventory and FY 2011-2012 emissions projections in its FY 2012 Congressional Justification.** GSA will incorporate GHG emissions data into the FY 2012 budget formulation process, and will explicitly link requested investments and initiatives to increases or reductions in future-year GHG emissions.

b. *Agency Lead for Goal.*—

Micah Cheatham  
Director, Office of Budget  
Office of the Chief Financial Officer

- c. *Implementation Methods.*—GSA will establish a comprehensive GHG inventory by January 2011 utilizing all guidance made available by the Department of Energy, the Environmental Protection Agency, and the World Resources Institute’s Greenhouse Gas Protocol Initiative.

GSA has adopted the five generally accepted accounting and reporting principles established by the *Public Sector Standard Provisional Draft* prepared by Logistics Management, Inc. (LMI) and the World Resources Institute (WRI). GSA implementation methods will focus on assuring its GHG inventory is: (1) **relevant**, (2) **complete**, (3) **consistent**, (4) **transparent**, and (5) **accurate**.

GSA must complete the following actions to develop a framework for accounting and reporting its GHG emissions:

1. **By July 31, 2010, GSA will develop a catalogue of all metadata associated with Executive Order 13514, *Leadership in Environmental, Energy, and Economic Performance*, goal reporting.** The Strategic Sustainability Performance Plan template issued by the Office of Management and Budget (OMB) and the President’s Council on Environmental Quality (CEQ) includes nine goals, 46 sub-goals, and 31 quantifiable performance targets. As GSA prepares its Sustainability Plan, the agency is capturing metadata (“data about data”) on each sub-goal and target, including: data source, data collection process, scope of reporting, and calculation methodology. GSA will use Sustainability Plan metadata to ensure that its GHG inventory includes all activities for which GHG emissions must be measured (“relevance”), includes all GHG emissions

within reporting thresholds (“completeness”), and calculates GHG emissions consistently across all sources (“consistency”).

2. **By September 2010, GSA will develop a methodology for incorporating GHG emissions reduction goals into the budget formulation process and a template for reporting GHG emissions data and projections in annual budget requests.** GSA will report preliminary estimates of fiscal years 2010 through 2012 GHG emissions in its FY 2012 OMB budget submission. GSA will estimate the GHG emissions impact of the budget initiatives in the request and will use this data to justify capital investments and budget increases to OMB (“transparency”).
  
3. **By December 2010, GSA will develop a methodology for internal review and external verification of final inventory estimates and reports.** GSA will develop a system of internal controls for risk-based testing of the quality of its GHG measurement and reporting. GSA will identify and document risks that create uncertainty in its GHG emissions data, establish mitigating controls to improve data quality, and disclose identified weaknesses in its GHG emissions data. GSA will explore the use of independent third parties to validate, provide assurances, or audit GSA GHG emissions data (“accuracy”).
  
4. **By January 2011, GSA will establish a comprehensive inventory of Scope 1, 2, & 3 GHG emissions.** GSA has partnered with Noblis, Inc. to offer an on-line Carbon Footprint and Green Procurement Tool (<https://www.carbonfootprint.gsa.gov/>) to other Federal agencies. This tool will be pre-populated with agency GHG emissions data from: energy consumption in GSA-owned Federal buildings, GSA leased space where GSA makes utility payments, business air travel, and fuel consumed by motor vehicles leased from GSA Fleet. GSA will use this tool and include data from additional sources of GHG emissions to create a comprehensive inventory of GSA GHG emissions.

*Challenges.*—GSA’s implementation plan faces a number of challenges.

1. **There is a very small window of time remaining in FY 2010 to identify and capture GHG emissions data necessary for a complete FY 2010 GHG inventory.** GSA is using the Strategic Sustainability Performance Plan development process to capture metadata on GHG emissions, such as identifying data sources and data quality issues during the target-setting process to ensure that it can accurately report status and progress against performance targets in the Plan. GSA has already started working to improve data collection processes and capture GHG emissions data that is currently not collected.
  
2. **GSA must develop methodologies for estimating the GHG emissions impact of planned investments and initiatives in the early stages of budget formulation.** GSA currently lacks robust processes for estimating the energy consumption impact of its investments; energy consumption data is necessary to estimate GHG emissions.

GSA is gaining valuable experience in testing and evaluating new, green technologies in Recovery Act projects. The Recovery Act provided GSA \$5.55 billion for investments in Federal buildings, including \$4.5 billion for measures to convert GSA facilities to high-performance green buildings. GSA is using these funds to deploy existing and new green practices and technologies across the nation. This effort should produce a significant body of data and experience that can be used to estimate the GHG emissions impact of Federal building projects.

The Recovery Act also provided GSA with \$300 million to replace Federal motor vehicles with newer models, and required that the new vehicles be no less than 10% more efficient than the vehicles replaced. GSA gained valuable experience in estimating improvements in miles-per-gallon and fuel consumption for 17,246 motor vehicles, which were placed in nearly every Federal agency and in locations across the country.

- d. *Positions.*—GSA anticipates that the actions necessary to establish a comprehensive GHG inventory would be completed within existing staff and program resources.
  
- e. *Agency Status.*—**GSA has deployed an on-line GHG inventory tool which is populated with its Scope 1 & 2 GHG emissions data and some Scope 3 data.** GSA's Carbon Footprint and Green Procurement Tool (<https://www.carbonfootprint.gsa.gov/>) is automatically populated with GSA Scope 1 & 2 GHG emissions data from GSA Federal buildings and leases where utility data is available, as well as fuel consumed from GSA motor vehicles. The tool is also populated with Scope 3 emissions from business travel and GSA employee commuting. Building, motor vehicle, and business travel data is automatically populated by data feeds from GSA business systems and environmental management systems. GSA employee commuting data was collected through an on-line survey tool which is integrated into the Carbon Footprint Tool (more detail is provided in subsection 2.2.2, "Scope 3 Greenhouse Gas Emissions Reductions").

## 2.2.4 High-Performance Green Buildings and Sustainable Design

- a. *Goal Description.*—By FY 2015, 18% of GSA’s owned buildings greater than 5,000 gross square feet (GSF) and leases greater than 5,000 GSF will incorporate the sustainable practices in the **Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings**. The Guiding Principles are five high-level objectives for the design, construction, and operations & maintenance of high performance and sustainable buildings.

GSA is committed to designing, constructing, operating, and maintaining Federal buildings and leased space that comply with all five Guiding Principles:

- I. Employ Integrated Design Principles;
- II. Optimize Energy Performance;
- III. Protect and Conserve Water;
- IV. Enhance Indoor Environmental Quality; and
- V. Reduce the Environmental Impact of Building Materials.

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, requires Federal agencies to ensure that new construction, major renovations, and repairs and alterations of Federal buildings comply with the Guiding Principles. E.O. 13514 further requires that all Federal agencies:

- Incorporate the Guiding Principles into at least 15% of the building inventory by FY 2015, and demonstrate annual progress toward 100% compliance;
- Design all new Federal buildings to achieve zero-net-energy by FY 2030. Zero-net-energy buildings meet all of their energy requirements from renewable energy;
- Explore innovative strategies to minimize consumption of energy, water, and materials;
- Improve building system management as a strategy to improve environmental performance and reduce deferred maintenance liabilities without major building renovations;
- Identify opportunities to consolidate and dispose of existing assets, optimize the performance of the agency’s real-property portfolio, and reduce associated environmental impacts; and
- Ensure that rehabilitation of historic Federal buildings utilizes best practices and technologies in retrofitting to promote long-term viability of the buildings.

*Goal Scope.*—GSA’s target for incorporating Guiding Principles into building design, construction, and management applies to Federal buildings greater than 5,000 GSF and leases greater than 5,000 GSF. GSA currently controls 6,006 owned buildings and leases above 5,000 square feet.

b. *Agency Co-Leads for Goal.*—

Eleni Reed  
Chief Greening Officer  
Public Buildings Service

Don Horn  
Assistant Director  
Office of Federal High-Performance Green Buildings  
Office of Government-wide Policy

- c. *Implementation Methods.*—GSA has established a Sustainability / Green Buildings Council within the Public Buildings Service (PBS). PBS' Chief Greening Officer chairs the Council, which is responsible for implementation and oversight of high-performance sustainable design and green buildings goals within GSA's inventory of Federal buildings and leases. GSA's government-wide Office of Federal High Performance Green Buildings participates in the work of the Council and provides technical assistance.

The Chief Greening Officer and the Council have established the following goals and have identified actions necessary to implement the Guiding Principles across GSA's inventory.

1. **By December 2010, GSA will assess at least 5% of its owned buildings greater than 5,000 GSF (a minimum of 52 buildings) and at least 5% of its leases greater than 5,000 GSF (a minimum of 250 leases) for compliance with the Guiding Principles.** GSA will audit a representative sample of assessed buildings and leases to verify compliance.
  - a. GSA has identified Guiding Principles "champions" in each PBS program area. Project champions are responsible for tracking compliance in new and existing buildings, change management and employee training, and sharing best practices across program areas and geographic regions.
  - b. GSA will assess its owned buildings for compliance with the Guiding Principles using the *Federal High-Performance Sustainable Buildings Checklist* in the ENERGY STAR Portfolio Manager tool. GSA has already populated the *Checklist* with data from 153 GSA buildings, and assessments will begin immediately. By December 2010, GSA will launch a national competition among GSA regions to provide recognition to the regions that demonstrate the greatest percentage of buildings in compliance with the Guiding Principles by completing the *Checklist* and uploading all compliance verification documents on file.
  - c. GSA will use its new portfolio management information system to identify and track leased assets that already meet the Guiding Principles based on their certification under a third-party rating system, such as LEED. GSA is also exploring ways to improve energy efficiency of leased space, including increasing lease acquisitions in Energy Star labeled buildings. GSA will provide training for leasing specialists on the use of green lease clauses in lease solicitations. In FY 2011, GSA will begin internal peer review audits of its leases during development, and will use second-party Procurement Management Reviews to determine compliance with green lease provisions.

- d. GSA will continue to use LEED certification to demonstrate compliance with the Guiding Principles. GSA will ensure that all new Federal buildings that have been certified LEED for New Construction also register for LEED for Existing Buildings Operations and Maintenance (LEED-EBOM) within five years of construction completion. GSA is currently evaluating the opportunity to participate in the USGBC's Portfolio Program, which allows organizations to pursue LEED-EBOM certification for multiple properties through volume certification.
  - e. By FY 2015, GSA will design at least half of its historic building renovations to achieve LEED Gold certification or better. GSA will identify and promote sustainable approaches for rehabilitating historic buildings, coordinating its sustainable preservation efforts with the Environmental Protection Agency, the Advisory Council on Historic Preservation, and the National Trust for Historic Preservation.
2. **GSA will incorporate the Guiding Principles into 100% of its design, construction, renovation, repair and alteration project requirements and contract solicitations.**

GSA will incorporate the Guiding Principles into all processes and procedures for the design, construction, renovation, repair, and alteration of Federal buildings. This includes updating project management guidelines, facilities standards, and building operations guidelines, and adding new language to Solicitation for Offers, standard scopes of work, and selection criteria for architects and engineers. GSA will develop employee training to ensure understanding and compliance with the new requirements.

3. **Beginning in FY 2010, GSA will identify three demonstration projects each year to begin designing toward zero net energy.** GSA will incorporate lessons learned from demonstration projects into the planning process for new buildings.
- a. GSA will review existing frameworks, such as the Natural Step, the Living Building Challenge, and the Four Lenses Strategic Framework, to achieve net-zero buildings by FY 2030.
  - b. GSA will establish project teams in each GSA region to identify net-zero energy demonstration projects. The teams will develop procurement language to assist in acquiring design services, consultants, and construction contractors to support this goal.
4. **GSA will demonstrate cost-effective, innovative building strategies to minimize consumption of energy, water, and materials by implementing innovative technologies in 15% of new construction and major renovation projects in each year beginning in FY 2010.**

GSA will develop a High-Performance Green Building Innovation Program to identify cost-effective, innovative strategies to meet agency goals for reducing consumption of energy, water, and materials. GSA will match strategies and technologies to appropriate demonstration projects and buildings, develop a testing and evaluation methodology to determine effectiveness of strategies, and share the results with other Federal landholding agencies and industry.

**5. GSA will identify and promote strategies to manage buildings and building systems to reduce consumption of energy, water, and materials. Where possible, GSA will look for alternatives to renovation to reduce the repairs and alterations needs of existing building systems.**

- a. GSA has developed comprehensive strategies to reduce energy and water consumption in Federal buildings and to eliminate waste, which are provided in the following sub-sections of this document: 2.2.1.1 (“Scope 1 & 2 GHG Emissions Reductions – Federal buildings”), 2.2.6 (“Water Use Efficiency and Management”), and 2.2.7 (“Pollution prevention and Waste Elimination”).
- b. GSA will engage building occupants in whole building sustainability initiatives to achieve the Guiding Principles and promote environmental practices. GSA is developing a tenant communication tool for its largest facilities, which will include content specifically designed to promote sustainable office operations. GSA will also enhance its external website [gsa.gov](http://gsa.gov) with sustainability information tailored to tenants, customer agencies, and other stakeholders. In addition, GSA is piloting a system that will provide tenants in some Federal buildings with real time information on energy use, which is expected to influence their behavior and reduce energy consumption. GSA will evaluate the results of the pilot and make necessary adjustments before expanding use of the tool.
- c. GSA will continue to work with the Department of Energy’s Federal Energy Management Program to publish best practices in energy conservation in all Federal buildings, including those delegated to other agencies for operations and maintenance. GSA will encourage information-sharing (including energy conservation measures) to increase government-wide performance.

**6. Beginning in FY 2011, GSA will identify and incorporate systematic sustainability analyses into its portfolio management practices.**

GSA will collect data to assess the sustainability of individual assets and the entire portfolio. GSA will amend its Asset Business Plans to include sustainability criteria, including Energy Star score and sustainable building certifications. GSA will accelerate its reporting of sustainability data for GSA assets in the Federal Real Property Profile, the government-wide database of Executive Branch owned and leased properties. GSA will continue to update its Real Property Asset Management Plan with current sustainability goals.

- d. *Positions.*—GSA currently has four full-time employees dedicated to fulfilling E.O. 13514 goals related to sustainable design and high-performance green buildings in the GSA inventory: The PBS Chief Greening Officer and three full-time sustainability managers in GSA regions. GSA anticipates hiring eight additional sustainability managers, so that each of GSA’s 11 geographic regions has a full-time position dedicated to sustainable buildings. Currently, most members of PBS Sustainability / Green Buildings Council serve as a collateral duty.

e. *Agency Status.*—

- **As of January 2010, 44 GSA buildings and leases had been evaluated and reported as sustainable buildings in the Federal Real Property Profile (FRPP)**, and none of the evaluated buildings and leases were determined to lack sustainable features. Based on square footage, the evaluated buildings and leases represent 3.2% of GSA’s inventory that is subject to E.O. 13514 sustainable design requirements.
- **As of FY 2009, 44 GSA projects had achieved some level of LEED certification, including 19 owned buildings and 25 leases**; one lease achieved a LEED Platinum rating. In FY 2010, GSA achieved LEED Certification in three additional buildings and leases, for a total of 47.
- **As of FY 2009, 186 GSA buildings have earned the Energy Star label and 320 buildings are pursuing the Energy Star label.** GSA is currently working with the Environmental Protection Agency (EPA) to import energy and water consumption data from GSA energy and water consumption tracking systems directly into the EPA’s Energy Star Portfolio Manager tool in order to pursue the Energy Star label for qualifying buildings.
- **In FY 2009, GSA implemented measures to ensure that all Recovery Act projects meet or exceed the Guiding Principles.** GSA has developed minimum performance criteria, guidance documents, and technical specifications for Recovery projects to ensure the completed projects incorporate sustainable practices of the Guiding Principles. These documents cover lighting, roofing, HVAC upgrades, water efficiency, advanced meters and photovoltaic panels. GSA posted the guidance and performance specifications on [www.gsa.gov](http://www.gsa.gov) for use across the Federal government.
- **GSA has embedded Guiding Principles into contract specifications.** GSA’s standard contract specifications for custodial services and building operations and maintenance contract require contractors to address environmentally preferable purchasing, green cleaning, recycling, integrated pest management, hazardous material management, and electronic stewardship. These specifications help GSA adhere to the Guiding Principles.

f. *Planning Table.*—GSA will exceed the Administration’s target for incorporating sustainable practices of the Guiding Principles into 15% of Federal buildings and leases greater than 5,000 GSF.

**High-Performance Green Buildings and Sustainable Design Targets and Resources**

SUSTAINABLE HIGH PERFORMANCE BUILDINGS (Buildings Meeting Guiding Principles)	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
GSA Target for Owned Facilities	5%	7%	10%	13%	15%	18%
GSA Target for Leased Facilities Targets	5%	7%	10%	13%	15%	18%

## 2.2.5 Regional and Local Planning

- a. *Goal Description.*—By FY 2011, GSA will issue updated policies and guidance that incorporate regional and local impacts into its planning activities, including energy planning, sustainable building locations, impact of Federal building projects on local ecosystems and watersheds, and National Environmental Policy Act (NEPA) impact statements and assessments.

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, establishes new goals to ensure that Federal agencies make greater consideration of local and regional impacts when planning Federal activities. GSA will achieve its regional and local planning goals through the following commitments:

- **By July 31, 2011, GSA will conduct transportation and long-range planning outreach pilots in 11 metropolitan areas**, and will use its experience to update existing policy and guidance to promote *participation in regional transportation planning*, including recognition and use of existing community transportation infrastructure.
- **By July 31, 2011, GSA will issue revised policies and guidelines for planning new Federal facilities and leases to incorporate sustainable building location criteria**, including consideration of sites that are pedestrian friendly, near existing employment centers, or are accessible to public transit.
- **By March 31, 2011, GSA will update its policy and procedures for preparing NEPA Environmental Impact Statements and Environmental Assessments for proposed new or expanded Federal facilities:**
  - (1) to identify and analyze impacts associated with energy usage and alternative energy sources; and
  - (2) to ensure coordination and consultation with Federal, State, Tribal and local management authorities regarding impacts to local ecosystems, watersheds and environmental management.
- **GSA will align agency policies to increase effectiveness of local energy planning and, by FY 2011, will ensure that all energy suppliers to Federal facilities obtain appropriate State or municipal renewable portfolio standards certifications.** Renewable portfolio standards require local energy suppliers to provide a certain percentage of energy capacity or generation from renewable sources. Certification ensures that renewable energy is being produced from a source, fuel, or technology approved by the State or local authority. Federal support of renewable portfolio standards will stimulate the development of new renewable energy sources by increasing demand.

*Goal Scope.*—GSA's objectives under this goal apply to its planning activities for all new Federal facilities, including new structures on existing Federal land, and all new leases.

b. *Agency Lead for Goal.*—

Frank Giblin  
Director of Urban Development  
Office of the Chief Architect  
Public Buildings Service

- c. *Implementation Methods.*—GSA's initial efforts, already underway, focus on an extensive policy review of all directives that affect agency location decisions and collaborative planning with regional and local officials.

Future activities will focus on implementing new policies and procedures for GSA-internal use, training GSA employees, and developing performance targets and reporting methodologies to track progress and focus improvement efforts. GSA will also lead with its expertise to incorporate regional and local planning objectives into government-wide policies and regulations, and provide training and outreach to other Federal agencies.

1. **Beginning in FY 2011, GSA will participate in regional planning efforts with metropolitan planning organizations (MPO) who are developing long-range regional transportation plans.** GSA will ensure that regional planning consultation between GSA, other Federal agencies, and MPOs takes place well ahead of – and helps to inform – future Federal project development.
  - a. In fiscal years 2010 and 2011, GSA -- in consultation with the Sustainable Communities initiative led by the Department of Housing and Urban Development (HUD), Department of Transportation (DOT), and the Environmental Protection Agency (EPA) -- will identify and select a group of metropolitan areas that would realize the greatest benefit from advanced planning and collaboration at the regional level, based on the size of GSA's inventory of Federal buildings and number of planned building projects in the area, as well as other factors.
  - b. In FY 2011, GSA will engage local planning officials in informal information sharing to ensure good coordination, build sound working relationships, and identify issues of mutual interest. For example, GSA envisions conducting workshops on key issues to facilitate collaboration with local planning organizations, stakeholders, and GSA representatives.
  - c. Successful practices identified in this pilot effort will be deployed in additional metropolitan areas and will be used to inform further policy development.
2. **By July 31, 2011, GSA will revise its processes for locating Federal buildings and leases to incorporate practices that uphold sustainability and community development goals.**
  - a. **In FY 2010, GSA will begin delivering regional and local planning training to GSA employees who are directly engaged in planning for and evaluating new owned and leased Federal workplaces.** As GSA develops best practices in regional and local planning, the agency will expand training opportunities to a wider

- audience and will integrate model practices into ongoing professional development training for key groups. GSA will also conduct outreach to the development community and other Federal agencies to raise awareness of GSA policy changes.
- b. **By January 31, 2011, GSA will deploy revised protocols for site selection for new Federal buildings and, by July 31, 2011, GSA will issue a new Site Selection and Acquisition Reference Guide.** The new guidelines will add criteria for review, including technical, business, and sustainable location standards.
  - c. **By March 31, 2011, GSA will update its NEPA desk guide to ensure that energy usage impacts and opportunities for alternative energy sources are analyzed during the NEPA process. GSA's updated NEPA desk guide will also include processes for coordination and 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.**
  - d. **By July 31, 2011, GSA's Public Buildings Service (PBS) will update the PBS Leasing Desk Guide to integrate sustainable location considerations into new GSA leasing actions.** GSA will align leasing policies and practices with the regional and local planning goals of E.O. 13514 and the "Recommendations on Sustainable Locations for Federal Facilities" prepared pursuant to section 10 of E.O. 13514.
  - e. **In FY 2011, GSA will complete a draft update to the location policy elements of Federal Management Regulations (FMR), Subchapter C, Part 102-83.** GSA will align FMR site selection policies with new regional and local planning objectives and the "Recommendations on Sustainable Locations for Federal Facilities" and will coordinate with the HUD / DOT / EPA Sustainable Communities initiative. GSA will complete an updated version of the FMR and begin the regulatory review process during FY 2011.
3. **GSA will align agency policies to increase effectiveness of local energy planning.** By FY 2011, GSA will ensure that all energy suppliers to Federal facilities obtain appropriate local renewable portfolio standards certifications. GSA will maximize its use of local renewable energy incentive programs, and will increase its participation in grid- and State-based in demand load programs. Under demand load programs, GSA agrees to reduce its power consumption when total power consumption approaches critical levels.

*Challenges.—*

1. **Increasing regional and local planning coordination will require changes in business practices and culture across multiple GSA organizations and geographic regions.** New policies for sustainability and community development will impact procedures in the GSA Leasing program and the Office of Design and Construction, across 11 geographic regions. GSA does not have procedures in place to balance regional and local planning objectives against conflicting tenant requirements. For

example, certain tenants may have security requirements that prevent GSA from fully utilizing local transit options.

2. **GSA does not have metrics or reporting processes in place to track status and progress against the regional and local planning goals of E.O. 13514.** An inter-agency working group led by the Environmental Protection Agency, the Department of Transportation, and the Department of Housing and Urban Development has considered criteria for determining sustainable locations for Federal facilities and has published recommendations. Based on the recommendations of the working group, GSA will develop agency-specific sustainable location indicators that could be used to evaluate existing and potential Federal building locations. Once sustainable location indicators and associated data points are developed, GSA will work with partner Federal agencies to determine the most suitable methodology to track progress toward regional and local planning goals.
- d. *Positions.*— GSA anticipates that the actions necessary to meet regional and local planning requirements would be completed within existing staff and program resources. The majority of the work would be completed by employees who would integrate these objectives into their existing roles and responsibilities.
- e. *Agency Status.*—**In FY 2009, GSA began a large-scale review of Federal building location policies, in response to the increased emphasis on regional and local coordination in E.O. 13514.** A significant portion of the Federal Management Regulation review is already complete, and GSA is working to incorporate recent recommendations of various working groups who are developing guidelines and standards in support of government-wide implementation of the E.O.

## 2.2.6 Water Use Efficiency and Management

a. *Goal Description.*—By FY 2020, GSA will reduce its potable water consumption by 26% over the FY 2007 baseline, and reduce its industrial, landscaping, and agricultural water consumption by 20% relative to its FY 2010 baseline.

- **By FY 2020, GSA will reduce potable water use intensity by 26% from the FY 2007 agency water consumption baseline.** The Energy Policy Act of 2005 (“EPACT05”, Public Law 109-58) requires all Federal agencies to reduce potable water use intensity, measures by gallons per gross square foot (gal/GSF), by 2% per year over the FY 2007 baseline. A reduction of 2% per year from FY 2008 through FY 2020 will result in a cumulative reduction of 26% over the 13-year period.
- **By FY 2020, GSA will reduce industrial, landscaping, and agricultural (ILA) water use by at least 20% from FY 2010 baseline ILA water consumption.** Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, establishes this target for all Federal agencies. GSA has established provisional targets of an annual 2% reduction, to attain a cumulative reduction of 20% over the FY 2010 baseline.

GSA will also develop strategies to meet the following requirements of E.O. 13514:

- Consistent with State law, identify, promote, and implement water re-use strategies that reduce potable water consumption; and
- Implement and achieve the objectives of the Environmental Protection Agency’s (EPA) *Stormwater Guidance for Federal Facilities*.

*Goal Scope.*—GSA’s targets for reducing water use intensity include water consumption in GSA-owned buildings and those leases where GSA is responsible for making utility payments directly to utility providers. GSA’s targets do not include leased space where utilities are provided by the landlord and included in the lease payment. GSA’s target includes water consumption from on-site wells, which is tracked and reported by the GSA facility manager of the impacted facility.

b. *Agency Lead for Goal.*—

Mark Ewing  
Director, Energy Division  
Public Buildings Service

c. *Implementation Methods.*—**GSA will meet water consumption reduction targets in Federal buildings by reducing facility water use intensity to 12.4 gallons of potable water per gross square foot of space by FY 2020.** This amounts to a 26% reduction from the FY 2007 baseline of 15.53 gal/GSF.

GSA will use a structured management process to: (1) set annual water reduction targets; (2) implement water management best practices; (3) identify, prioritize, and implement water

saving investments; and (4) track water consumption and measure results to inform future-year goals and investment selection criteria.

1. **GSA will implement water management best practices in its inventory of owned Federal buildings**, using an opportunity-based approach. GSA will assign water management responsibilities to designated facility managers.
  - a. **GSA will update routine maintenance procedures to include testing water systems and fixtures for optimal performance.** GSA will test water pressure during routine maintenance to ensure the water supply system has acceptable levels of performance. GSA will conduct leak detections of the water distribution system, and inspect fixtures, such as showers, toilets, sinks, and urinals. GSA will repair or replace aerators as necessary and will take steps to ensure tenants are aware of leak reporting procedures.
  - b. **GSA will optimize irrigation equipment, scheduling, and plant health, so that irrigation systems deliver only the amount of water that is required by the existing landscape in its respective climate.** GSA will perform routine maintenance of irrigation systems to detect leaks, and will develop effective water scheduling or landscaping irrigation and irrigation controllers. GSA will also increase use of mulching mowers and aerate as a basic practice of landscaping.
  - c. **GSA will audit facilities that have single-pass cooling systems and retrofit equipment to a closed-loop system that re-uses potable water.** Single-pass cooling systems, including air conditioners, ice machines, and condensers, remove heat by transferring it to clean water, which is then disposed down the drain. Closed-loop piping re-circulates water to a remote cooling tower, so it can be cycled back through.
2. **GSA will dedicate funding to water conservation projects in its inventory of owned Federal buildings.** Historically, GSA has allocated a single pool of resources to both energy and water conservation projects. Potential projects are evaluated and prioritized based on financial and environmental performance factors; however, because water is typically much cheaper than energy, the project selection process has heavily favored energy saving projects. GSA will dedicate funds specifically for water conservation projects, water audits, and advanced water metering and sub-metering, where appropriate.
3. **GSA will increase EISA Energy and Water Evaluations, deploy advanced water meters in all covered buildings, and integrate water metering data into agency decision-making.**
  - a. **GSA will conduct Energy and Water Evaluations**, as required by EISA section 432, **and retro-commission 25% of covered facilities every year** so that all covered facilities are evaluated every four years. GSA's "covered buildings" under EISA are the 135 buildings that represent 75% of GSA's total potable water consumption. Retro-commissioning is a systematic investigative process to ensure that building equipment and systems are operating efficiently, and to optimize how

they operate together. GSA is using Recovery Act funding to retro-commission 82 of its covered facilities by FY 2011.

- b. **GSA will install advanced water meters in all Recovery Act projects by FY 2012** and will separately meter cooling tower water usage where cost-effective. Advanced utility meters provide real-time energy consumption data to operators of building systems (including water distribution systems). Operators can use this data to adjust building conditions to reduce peak demand, or to identify and correct sub-optimal performance in building systems.
- c. **GSA will integrate energy and water evaluations and advanced meter data into agency decision-making processes.** GSA will use water consumption data to benchmark building performance and to prioritize buildings for water use evaluations and projects. Advanced meter data will allow GSA to identify opportunities to optimize building systems and prioritize investments.

*Challenges.*—GSA’s implementation plan faces several challenges. GSA has already initiated actions to address or mitigate some risks; however, others will require greater management attention to overcome these challenges.

- 1. **GSA does not have a methodology to track or report industrial, landscaping, and agricultural (ILA) water consumption.** GSA does not have baseline data for ILA consumption and is not able to measure progress against a baseline, as required by E.O. 13514.

GSA will formulate its FY 2010 baseline for ILA water by measuring total potable water consumption in the winter, when ILA usage should be minimal for most climates, and comparing that data to year-round potable water usage. Additionally, GSA will consider adding meters or sub-meters to separately track ILA usage.

- 2. **GSA has not yet identified specific actions necessary to implement and achieve the objectives of the EPA’s storm water guide.**

GSA is currently reviewing the EPA’s December 2009 guidance, and is actively developing strategies to minimize storm water run-off. GSA is currently updating its water management guide to add best practices for managing exterior run-off and to encourage landscaping practices that promote “evapotranspiration” (the natural dispersal of rain water through ground evaporation and the loss of moisture from growing plants).

- d. *Positions.*—GSA’s PBS Energy Division staff fulfill water management responsibilities for GSA-owned Federal buildings as part of their assigned duties.

e. *Agency Status.*—

- **As of FY 2009, GSA had reduced water intensity in covered buildings by 8.6% over the FY 2007 baseline**, well ahead of its statutory goal of a 4% reduction. GSA owes much of its success in reducing water consumption to its water management plan. GSA's plan tracks water consumption, ensures annual funding for water management best practices, and has been recognized by the Department of Energy as a model guide for water management best practices.
- **As of FY 2009, GSA had advanced water meter projects completed or underway at 209 facilities.**

f. *Planning Table.*—GSA will meet or exceed E.O. 13514 targets for reducing potable water intensity by 26% over the FY 2007 baseline and reducing ILA water consumption by 20% over the FY 2010 baseline.

**Water Use Efficiency and Management Targets and Resources**

WATER USE EFFICIENCY & MANAGEMENT	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	...	FY 20
Mandated Potable Water Reduction Targets (gal/GSF reduced from FY 2007 base year)	6%	8%	10%	12%	14%	16%	...	26%
GSA Planned Potable Water Reduction (gal/SF reduced from FY 2007 base year)	6%	8%	10%	12%	14%	16%	...	26%
Mandated ILA Water Reduction Targets (gal reduced from FY 2010 base year)	base	2%	4%	6%	8%	10%	...	20%
GSA Planned Industrial, Landscaping, and Agricultural Water Reduction (gal reduced from FY10 base year)	base	2%	4%	6%	8%	10%	...	20%

## 2.2.7 Pollution Prevention and Waste Elimination

a. *Goal Description.*—By FY 2015, GSA will divert 50% of non-hazardous solid waste and construction and demolition debris from landfills through recycling, re-use of materials and composting organic waste, and thermal treatment.

- **By FY 2015, GSA will divert at least 50% of its non-hazardous solid waste, excluding construction and demolition (C&D) debris.** Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, establishes this goal for all Federal agencies. GSA will meet this goal by diverting 10% of its non-hazardous, non-C&D waste in FY 2011 and increasing diversion by 10% in each subsequent year, through FY 2015.
- **By FY 2015, GSA will divert at least 50% of its C&D debris.** This goal is also established by E.O. 13514. GSA will achieve this goal by estimating current diversion rates, identifying strategies and practices to increase diversion rates, and changing current C&D waste management practices.

GSA is also developing strategies to meet the following requirements of E.O. 13514:

- Increase diversion of compostable and organic materials from the waste stream;
- Minimize the generation of waste through source reduction;
- Reduce printing paper use and acquire uncoated printing and writing paper containing at least 30% post-consumer fiber;
- Reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials;
- 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 use of chemicals to assist GSA and other agencies in achieving FY 2020 greenhouse gas (GHG) reduction targets; 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.*), as applicable.

*Goal Scope.*—GSA's goals and targets for waste diversion (non-hazardous solid waste, C&D debris, and organic and compostable materials) and pest management and landscaping practices apply to the activities of all GSA employees and all Federal tenants of GSA-owned Federal buildings.

b. *Agency Lead for Goal.*—

Raheem Cash  
Director, Environment Division  
Public Buildings Service

- c. *Implementation Methods.*—GSA’s Public Buildings Service (PBS), Environment Division manages GSA’s Environmental Management System (EMS), which addresses most of the pollution prevention and waste elimination goals of E.O. 13514. An EMS is a structured process for an organization to: (1) assess the environmental impacts of its activities; (2) identify those impacts that are significant; (3) develop procedures and practices to mitigate the impacts; (4) develop methods to measure progress towards mitigating the impacts; and (5) continuously assess the aforementioned procedures and practices.

The actions listed below all relate to one or more aspects of GSA’s EMS. Many of the tasks involve obtaining key information to determine the significance of certain environmental aspects. Other tasks involve surveys, audits, and other actions that allow GSA to measure progress. GSA’s efforts include training and guidance document development tasks to ensure broad awareness of sustainability goals and to support continuous improvement.

1. **By FY 2011, GSA will increase recycling of non-hazardous solid waste by at least 10% across its inventory and will have action plans in place to increase diversion of C&D debris and organic waste.**
  - a. **By December 31, 2010, GSA will establish a consistent methodology for estimating and reporting waste generation levels and diversion rates for non-hazardous solid waste, C&D debris, and organic and compostable waste.** GSA currently uses waste audits to measure recycling rates and diversion effectiveness for non-hazardous solid waste. A waste audit is a formal, structured process of sorting through actual waste to identify the volume and percentage of materials that could have been diverted but were not. Waste audits measure the effectiveness of existing waste management systems, identify opportunities for improvement, and may inform changes in acquisition practices.

GSA began estimating solid waste generation levels and diversion rates in January 2010. By December 31, 2010, GSA will begin estimating waste generation levels and diversion rates for C&D debris and compostable and organic waste.

- b. **By May 31, 2011, GSA will complete its assessment of current waste management practices to identify viable opportunities for increased diversion of solid waste, C&D debris, and compostable and organic waste.** GSA completed an assessment of non-hazardous waste disposal in January 2010. GSA will complete a similar analysis of C&D debris by December 2010, and will propose changes to current C&D waste management practices that will increase diversion rates and reduce costs. GSA will assess organic waste management practices in cafeterias by March 2011 and will identify new practices to increase diversion and reduce costs by May 31, 2011.
    - c. **By June 30, 2011, GSA will complete two pilot projects to promote and increase recycling rates in GSA-owned Federal buildings.** Each pilot project is expected to cover approximately 15 Federal buildings and will be conducted in close coordination with regional property managers, contracting officers, recycling coordinators, and tenant account managers. Pilot projects will identify effective practices and strategies for increasing waste diversion through recycling; best practices will be identified and transferred to other GSA facilities continuously through the life of each project.

2. GSA will minimize its generation of pollutants through source reduction of hazardous chemicals and materials, increasing its use of alternative chemicals and processes, and decreasing agency use of GHG-emitting chemicals.
  - a. **By October 31, 2010, GSA will identify the most common of toxic and hazardous chemicals and materials acquired, used or disposed of in GSA operations.** GSA will prioritize toxic and hazardous chemicals based on mission needs and environmental and health impacts, and will develop specific reduction goals in accordance with the prioritization.
  - b. **By December 31, 2010, GSA will review all of its existing contracts for building maintenance, janitorial services, and construction to ensure contract language requires the use of environmentally preferable products,** including acceptable alternative chemicals and processes. GSA will develop contract language that will ensure the enforceability of environmental preference terms and conditions. GSA will promote the availability of environmentally preferable products on GSA acquisition vehicles, including Multiple Award Schedules.
  - c. **By December 31, 2010, GSA will update its Integrated Pest Management (IPM) policy and will complete a review of current IPM and landscape management policies.**
  - d. **By March 31, 2011, GSA will transfer all unwanted refrigerants to the Defense Logistics Agency or to other Federal agencies with a continued need.**
3. **GSA will minimize waste generation through source reduction, and will initially focus on reducing printing paper use and increasing use of uncoated paper containing at least 30% post-consumer fiber.** By December 31, 2010, GSA will develop a strategy to set all printer default settings to “double-sided”. By December 31, 2010, GSA will identify strategies to promote the use of office paper products with greater than 30% post-consumer content.
4. GSA is currently assessing the extent to which the EPCRA applies to GSA activities and programs. GSA will report on activities against this objective if it identifies strategies and actions that will increase its compliance with this legislation.

**Challenges.—GSA’s pollution prevention and waste elimination goals depend on behavioral changes in the tenants of its Federal buildings and require substantial coordination within the agency.** The majority of the waste and pollution impacts associated with GSA-owned Federal buildings are generated by other Federal agency tenants. The most impactful strategies for reducing waste and pollution are source reduction and waste diversion; both strategies require voluntary actions by tenants. Within GSA, most of the waste and pollution generated are a direct result of the products purchased and used by the agency: Successful pollution prevention and waste elimination strategies must be coordinated across multiple acquisition and contracting activities and organizations, and will also require the cooperation of GSA vendors.

GSA has established a cross-functional task force to address and overcome long-standing challenges related to product procurement, procurement tracking, contract enforcement, vendor accountability, and vendor education. It is anticipated that a variety of recommended changes to policy and practices will be generated by this task force that may have impacts on GSA tenants and the Federal community as a whole.

- d. *Positions.*—GSA's PBS Environment Division dedicates two full time equivalents to environmental management. Their work includes: environmental impact analysis, pollution prevention, solid and hazardous waste minimization, pre-construction/pre-site selection environmental analyses, operations-related environmental compliance, and green purchasing. They also provide extensive support to regional environmental managers by developing guidance and training materials, delivering on-site training, assessing compliance audits and Environmental Risk Index (ERI) surveys. They also assist property managers with the development of projects and budgets to address environmental deficiencies and with the development of scopes of work. Finally, they provide assistance with addressing customer and tenant questions, complaints or concerns related to the environment.
- e. *Agency Status.*—
- GSA completed solid waste audits in selected Federal buildings in FY 2010, providing an initial measure of current recycling rates and waste diversion effectiveness. GSA has made increasing recycling rates one of its Agency High-Priority Performance Goals that are published in the FY 2011 President's Budget.
  - GSA has taken initial steps to obtain chlorofluorocarbon (CFC) usage information from all GSA-owned locations. This required an inventory of all equipment using CFCs and an assessment of the feasibility of replacing the equipment or phasing out CFC use.
  - In FY 2010, GSA informally reviewed a random sample of building operations, maintenance, and janitorial services contracts to assess their incorporation of green purchasing language. GSA found that the majority of surveyed contracts contained the correct, current language.
- f. *Planning Table.*— The following table reflects GSA's commitment to meeting Pollution Prevention and Waste Elimination targets.

**Pollution Prevention and Waste Elimination Targets and Resources**

POLLUTION PREVENTION & WASTE ELIMINATION	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
GSA Non-Hazardous Solid Waste Diversion Targets (non C&D)	base	10%	20%	40%	50%	50%
GSA C&D Material & Debris Diversion Targets	base	hold	...	...	...	50%
GSA Contracts with Environmentally Preferable Contract Language (O&M, janitorial)		base	75%	100%	100%	100%
GSA Paper products purchased containing >30% post consumer recycled content		base	30%	50%	75%	90%
GSA Appropriate facilities with active composting programs		base	10%	15%	30%	50%
GSA Unwanted/unneeded CFC transfer and properly disposed	base	30%	75%	100%	100%	100%
GSA Appropriate facilities in compliance with EPCRA	base	100%	100%	100%	100%	100%
GSA Reduction of toxic/hazardous chemical acquisition and use*		base	10%	20%	30%	50%

\* *Note: The reduction targets shown here are rough estimates; GSA will submit new reduction targets determined once inventories are complete and priorities are established.*

## 2.2.8 Sustainable Acquisition

### a. Goal Description.—

- **By FY 2011, GSA will 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 environmentally preferable**, including those that are energy efficient, water efficient, bio-based, environmentally preferable, non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives.
- **By October 31, 2010, GSA will issue an updated Affirmative Procurement Plan to ensure that all Federally-mandated designated products and services are included in all relevant acquisitions.** GSA will then begin phased implementation of the updated Plan by category of environmentally preferable product or service and based on the availability of government-wide definitions.

*Goal Scope.*—GSA's target for 95% sustainable acquisition includes all new contract actions in support of GSA operations and using GSA funds. This includes acquisition of products and services for internal use, administrative services, and building construction, repairs and alterations, and operations and maintenance.

Work performed on behalf of other Federal agencies through reimbursable agreements or other funding arrangements will be covered in GSA's affirmative procurement plan; however, GSA will not include reimbursable work in its 95% contracting goal until more reliable data is available for tracking performance against this goal.

### b. Agency Lead for Goal.—

Kathleen Turco  
Associate Administrator  
Office of Government-wide Policy

### c. Implementation Methods.—

1. **By October 31, 2010, GSA will update its Affirmative Procurement Plan to include new sustainable acquisition goals and requirements.** GSA's Plan will clearly define what constitutes a "sustainable acquisition" based on existing regulations and standards and will provide guidance on incorporating sustainability considerations into all procurement decisions. GSA's Plan will require GSA Contracting Officers to acquire environmentally-preferable products when available and to include green purchasing language in new contracts for services. GSA will integrate sustainable acquisition targets and practices into its enterprise-wide and program-specific Environmental Management Systems (EMS). GSA will continuously update its Affirmative Procurement Plan, and the GSA Senior Sustainability Officer will issue formal updates at least annually.

2. **By March 31, 2011, GSA will update the green product icons on GSA Advantage!® to clearly identify products that will help customer Federal agencies to meet their 95% sustainable procurement goals.** GSA Advantage!® is an on-line ordering system that provides Federal government employees with access to over 12 million approved products and services from GSA contracts. GSA is currently evaluating GSA Advantage!® eco-labels to ensure that environmentally-preferable standards are clear to users and are consistently applied.

GSA is also taking steps to ensure the accuracy of eco-labeled products on GSA Advantage!®. GSA has established partnerships with the Environmental Protection Agency and the Department of Energy to ensure the accuracy of products identified as Energy Star on GSA Advantage!®. GSA has added information alerts to GSA Advantage!®, to notify shoppers who have selected a non-Energy Star product when an Energy Star alternative is available. GSA is also modifying its post-award administrative compliance procedures to require evidence to substantiate items identified as environmentally-preferable on GSA Advantage!®.

3. **By September 30, 2011, GSA will update the Product and Services Codes (PSC) Manual, which assigns unique codes to categories of products and services, to identify acquisitions with sustainable characteristics.** Updated PSC codes will allow contracting officers across the government to capture, monitor and report sustainable acquisitions in agency contract-writing systems and in the *Federal Procurement Data System – Next Generation* (FPDS-NG). GSA will collaborate with the interagency FPDS Change Control Board and other stakeholders to achieve the following milestones:
  - a. **By December 31, 2010, GSA will work collaboratively with and partner Federal agencies to develop government-wide definitions for sustainable and environmentally-preferable products and services categories.** GSA will coordinate with partner agencies who already have sustainable product designations, including the Department of Agriculture's "BioPreferred" designation.
  - b. **By June 30, 2011, GSA will deliver an updated PSC Manual with new codes for tracking and reporting acquisitions of sustainable products and services.** GSA will maximize collaboration with partner Federal agencies, industry, and the public through working groups, public-facing wiki's, and formal comment solicitation through the Federal Register.
  - c. **By September 30, 2011, GSA will update FPDS-NG to allow the system to track sustainable contract actions based on PSC codes entered for each transaction.** GSA, in coordination with the FPDS Change Control Board and other Federal partners, will update FPDS-NG to include new PSC Codes, will develop special FPDS Sustainability Reports, and will provide training to the government-wide acquisition workforce.
4. **Beginning in the first half of FY 2011, GSA will train its acquisition workforce on sustainable acquisition requirements, objectives, resources, and best practices.** GSA has already identified several opportunities for formal education and training:
  - a. GSA, in cooperation with OMB's Office of Federal Procurement Policy, is developing basic and advanced Multiple Award Schedule (MAS) training courses that will

- include sustainable acquisition practices. GSA anticipates the deployment of additional courses specific to sustainability by the end of FY 2011.
- b. GSA will develop a comprehensive sustainable acquisition education program for its acquisition workforce, with training modules tailored to specific acquisition roles, including contracting officers, purchase card holders, contracting officer representatives, and program managers. GSA will deliver web-based training and an on-line sustainability-related resource portal.
  - c. GSA will develop and require green purchasing training for all employees. GSA will supplement these formal efforts with other opportunities to educate the acquisition workforce and industry on sustainability purchasing requirements and best practices.
5. **GSA will use its annual acquisition training conferences to educate agencies and suppliers about green purchasing and will make these events much greener.**
- a. **GSA will significantly increase the sustainable acquisition training provided at its government-wide procurement training events**, including GSA Expo, FedFleet, and SmartPay® conferences.
    - At the 2010 GSA Acquisition Training Conference and Expo, GSA provided 22 sessions relating to sustainability, delivering over 2,900 hours of green training. In 2011, GSA Expo will expand the number of sustainability training sessions, to provide a broader range of green training opportunities to a larger number of attendees.
    - At FedFleet 2010, GSA's annual conference for fleet management and vehicle acquisition, GSA provided four training courses on sustainable practices. For FedFleet 2011, GSA will partner with the Department of Energy to expand its energy training sessions.
    - GSA's 2010 SmartPay® conference, which provides training for purchase cardholders and program managers across the government, GSA offered four training courses on sustainable acquisition, including a course on selecting bio-based products. The 2011 SmartPay® conference will offer eight courses targeted at sustainable acquisitions using Government purchase cards.
  - b. **GSA will reduce the environmental impact of its conferences and training events by adopting sustainable conference practices in its training conferences.** In FY 2011, GSA will make its conferences greener by adopting best practices such as the use of LEED-certified facilities and lodging, shuttles for local transportation, paperless conference material, and recycled or recyclable signage, badging, and exhibition materials. GSA is exploring combining conferences in one location to reduce travel and will also explore alternatives to travel, including video conferencing, webinars, and social networking, to reduce GHG emissions from conferences.
  - c. **GSA will assist other Federal agencies in reducing the environmental impact of conference attendance.** GSA, in partnership with the Department of Defense, the Environmental Protection Agency, and the Department of Energy, is currently

developing guidelines for environmentally-preferable lodging, travel, and conference planning. In FY 2011, GSA will incorporate these guidelines into government-wide policies to improve travel cost management and reduce GHG emissions.

**Challenges.—GSA does not have metrics or reporting processes in place to track agency status and progress against the 95% sustainable acquisition goal.** GSA is currently studying the feasibility of developing widely-accepted Federal standards for environmentally-preferable products and services. GSA is exploring options to track sustainable acquisitions, including developing new Product and Services Codes to allow for consistent, government-wide reporting.

Once GSA is able to consistently and reliably track sustainable acquisitions, more work will be required to establish a baseline of non-compliant acquisitions for calculating performance against the 95% goal. This will be especially challenging where multiple items in different sustainability categories can satisfy the same need: for example, where a bio-based product and a recycled content item are used for the same purpose and both meet the same mission requirement.

d. *Positions.*—GSA currently dedicates nine full-time equivalents (FTE) to sustainable acquisition policy, training, and outreach.

e. *Agency Status.*—

- GSA offers a free, web-based tool to help Federal agencies track their GHG emissions (<https://www.carbonfootprint.gsa.gov/>). The tool is pre-populated with energy consumption data collected by GSA programs and allows agencies to baseline their GHG emissions, track emissions reductions, and meet government-wide reporting requirements. The tool links to GSA sustainable products and services, so that agencies can calculate trade-offs and use the tool to formulate GHG emissions reduction plans.
- GSA requires the use of environmentally-preferable products in all of its new contracts for building maintenance and janitorial services.

f. *Planning Table*—The following table reflects GSA’s commitment to sustainable acquisition goals.

**Sustainable Acquisition Targets and Resources**

SUSTAINABLE ACQUISITION	FY 10	FY 11	FY 12	....	FY 20
<b>Mandatory Target for New Contract Actions Meeting Sustainable Acquisition Requirements</b>	<b>95%</b>	<b>95%</b>	<b>hold</b>	<b>...</b>	<b>hold</b>
Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	base	95%	95%	....	95%
Water Efficient Products	base	95%	95%	....	95%
Bio-based Products	base	95%	95%	....	95%
Recycled Content Products	base	95%	95%	....	95%
Environmentally Preferable Products/Services (excluding EPEAT)	base	95%	95%	....	95%
SNAP/non-ozone depleting substances	base	95%	95%	....	95%

## 2.2.9 Electronic Stewardship and Data Centers

GSA's strategies and actions for improving data center performance are very different from its approach to electronic stewardship. For clarity, GSA has split this goal performance report in order to address electronic stewardship separately from data center environmental performance.

### 2.2.9.1 Electronic Stewardship

- a. *Goal Description.*—**GSA laptops, desktops, and monitors are 100% compliant with Energy Star specifications and power management settings, 100% of GSA's electronic product acquisitions are EPEAT-registered, and 100% of GSA's electronic assets are covered by sound disposition practices.** Energy Star is a joint program of the Environmental Protection Agency (EPA) and Department of Energy which establishes minimum standards for energy efficient consumer products. The Green Electronics Council's Electronic Product Environmental Assessment Tool (EPEAT) is an international registry of environmentally preferable IT products.

GSA has policies in place that support electronic stewardship:

- GSA mandates power management settings on every desktop and laptop computer: All monitors and computers are set to time out or "sleep" after periods of inactivity.
- GSA requires environmentally sound disposition of excess or surplus electronic products, and tracks disposals to ensure that 100% of electronics are disposed of properly.

*Goal Scope.*—GSA's targets for electronic stewardship include all electronic devices, products, and assets in the GSA inventory, for GSA business use. GSA's targets do not include electronics acquired for the use of other Federal agencies.

- b. *Agency Lead for Goal.*—

Casey Coleman  
Chief Information Officer  
General Services Administration

- c. *Implementation Methods.*—GSA practices sustainable management of its information technology infrastructure:

1. **GSA is consolidating printers.** GSA has policies in place that encourage employees to use shared high-speed printers instead of personal printers on the desktop. In the past year, GSA's number of printers has dropped 7%. GSA is also increasing its use of digital document management, which will ultimately reduce the need for printers, while reducing paper consumption, waste, and electricity consumption.

- 2. GSA is modernizing and consolidating servers.** GSA is purchasing new, more powerful servers, virtualizing them, and centralizing operations. “Virtualization” is a technique that allows a single server to be used for multiple software applications, users, or functions. Virtualization allows a single, multi-purpose server to replace several single-purpose servers; this reduces energy consumption to power the servers and to cool server rooms. GSA has eliminated over 700 servers since 2007, reducing electricity consumption, space requirements, and operating costs.
- 3. GSA practices environmentally sound disposition of excess and surplus IT devices.** GSA disposes of IT assets through GSA Xcess, which promotes re-use by marketing surplus or excess government property to other Federal agencies and schools and other non-profits, through the Computers for Learning program. If any electronic devices are not wanted by any of these programs, GSA will auction them to the public, to promote re-use. IT products that cannot be sold are recycled; in the National Capital Region, GSA IT devices are processed through GSA’s electronics recycling center in Franconia, VA, while GSA’s regions use Unicor services.

GSA is also working with EPA and other partners and stakeholders to improve Federal electronics acquisition and disposal processes, with the ultimate goal of ensuring that all electronics purchased by the government are disposed of in an environmentally-responsible manner, regardless of whether the final user is another Federal or State agency, a school or non-profit, or member of the public.

- 4. GSA uses sustainable practices to manage IT consumables.** GSA mandates recycling of used printer toner cartridges. GSA’s contract for printer services requires the contractor to provide prepaid return services and to ensure that toner cartridges are recycled and remaining toner is recycled or disposed of in a manner that complies with all environmental and human health and safety laws.

GSA is also looking at toner management and is actively working with industry to include soy and other bio-based toner products on its mandatory toner BPA. These products are still being tested; however, GSA is optimistic that it will soon lead the Government in reducing petroleum-based printer toner.

*Challenges.*—GSA faces challenges in maximizing the environmental performance of its IT assets, products, and devices.

- 1. Currently, most of GSA’s servers do not support power management.** GSA’s IT Infrastructure Roadmap addresses this by providing a 5-year strategy to reduce the use of single purpose servers through retirement and virtualization and drive more GSA applications and data to cloud computing. GSA will replace old servers with Energy Star servers, and will ensure that power management features are enabled.
- 2. GSA has not enforced printer utilization policies, and has not uniformly applied power management policies to printers and print servers.** GSA is exploring options to increase sustainable practices in printers and print servers. GSA will enable aggressive power management settings on all network printers, set “duplex” as a default on all network printers, and encourage the implementation of PIN-based workgroup copier/printer devices, which will significantly reduce the need for personal printers.

- d. *Positions.*—GSA anticipates that the actions necessary to improve agency electronic stewardship can be completed within existing staff and program resources.
- e. *Agency Status.*—**GSA saves an estimated 8,383 million BTUs per year by implementing mandatory power management settings on all desktops, laptops, and monitors.**
- f. *Planning Table.*—The following table reflects GSA's status regarding electronic stewardship and minimum agency expectations for implementing sustainable management of printers and print servers.

**Electronic Stewardship Targets**

ELECTRONIC STEWARDSHIP	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	...	FY 20
% of device types covered by current Energy Star specifications that must be Energy Star qualified	100%	100%	100%	100%	100%	100%	100%	...	100%
% of agency electronic assets covered by sound disposition practices	100%	100%	100%	100%	100%	100%	100%	...	100%
% of agency, eligible electronic products with power management and other energy-environmentally preferable features (duplexing) actively implemented and in use:									
1) Laptops / Desktop	100%	100%	100%	100%	100%	100%	100%	...	100%
2) Printing or Other Devices	15%	30%	45%	60%	hold	...	...	...	hold
% of covered electronic product acquisitions that are EPEAT – registered	100%	100%	100%	100%	100%	100%	100%	...	100%

### 2.2.9.2 Data Centers

a. *Goal Description.*—GSA will reduce power usage through intelligent management of data centers.

- **GSA will install advanced energy meters in all of agency-operated data centers by December 31, 2010 and, in FY 2011, will begin monitoring on an interval (minute-by-minute) basis for operational control and weekly basis for management review all data centers.** Advanced meters provide real-time energy consumption data to data centers operators, which allows for adjustments to reduce peak energy demand, and helps to identify and correct sub-optimal energy performance.
- **By 2013, GSA all agency-operated data centers will be at least 40% virtualized.** GSA will maintain its current 97% virtualization rate in its Chantilly, VA data center, and will increase virtualization to 40% in its Fort Worth, TX data center and 80% in its Kansas City, MO data center. Virtualization allows a single, multi-purpose server to replace several single-purpose servers: This reduces energy consumption to power the servers and to cool server rooms.
- **By FY 2013, GSA will achieve a Power Utilization Efficiency (PUE) ratio of 1.8 at all its agency-operated data centers.** PUE is a best practice efficiency measure comparing a data center's total energy utilization to the power delivered to its computing equipment.

GSA is currently collecting data on all of its data center operations and developing a Data Center Consolidation plan under the direction and in coordination with OMB's Electronic Government Program Management Office. **By December 2010, GSA will have a final data center inventory and a Data Center Consolidation plan** that includes the following:

- Targets and standards for cloud activity hosting in data centers;
- Targets for reducing the number of agency data centers;
- Targets and standards for maximizing data center efficiency, including increasing average CPU utilization rates; and
- Goals and actions for reducing technology energy consumption.

*Goal Scope.*—GSA's targets for this goal include the agency's the three stand-alone facilities that house network operations and are government-operated; these facilities are located in Kansas City, MO, Fort Worth, TX, and Chantilly, VA. GSA has seven other data centers that are commercially managed; environmental performance data is not available for these centers at this time. GSA is investigating its contractual arrangements for data center services to improve reporting on these metrics.

b. *Agency Lead for Goal.*—

Casey Coleman  
Chief Information Officer  
General Services Administration

- c. *Implementation Methods.*—GSA’s primary strategy for implementing sustainable practices in and improving the environmental performance of its data centers is the completion of a detailed data center inventory and Data Center Consolidation Plan. GSA has not made many specific commitments related to the environmental performance of its data centers because the Consolidation Plan will not be complete until December 2010.

In addition to actions resulting from the inventory and plan, GSA will take the following steps to improve the energy efficiency of its data centers:

- GSA will use the advanced energy meter data to identify and implement improvements in its power and cooling practices to improve energy efficiency;
- GSA will replace servers and other IT assets with newer, more energy-efficient models through the normal refresh cycle;
- GSA will update agency policy to ensure implementation of best management practices for energy efficient management of servers and Federal data centers.

*Challenges.*—More than half of GSA’s data centers are commercially operated and not under GSA’s direct environmental control. GSA is currently reviewing its data center contracts to identify opportunities to improve reporting of energy consumption and other environmental performance data. GSA is exploring a number of options for improving operational and energy efficiency of its agency-operated and contracted data centers, including consolidation, virtualization, and cloud computing. GSA’s strategies and actions will depend on heavily on the alternatives selected.

- d. *Positions.*—GSA anticipates that the actions necessary to improve agency electronic stewardship can be completed within existing staff and program resources.
- e. *Agency Status.*—Current status of GSA-operated data centers is reflected in the “FY 10” column of the Planning Table, below.
- f. *Planning Table.*—The following table reflects GSA’s commitment to reduce power consumption through intelligent management of data centers.

**Data Center Targets and Resources**

DATA CENTERS	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	...	FY 20
% of cloud activity hosted in a outsourced data center	hold	...	...	...	...	...	...	...	hold
%of agency data centers independently metered or advanced metered and monitored on a weekly basis	0%	100%	100%	100%	100%	100%	100%	...	100%
Reduction in the number of agency data centers	hold	...	...	...	...	...	...	..	hold
% of agency data centers operating with an average CPU utilization of 60-70%	base	hold	...	...	...	...	...	...	hold
% of agency data centers operating at a PUE range of 1.3 - 1.6									
1) Chantilly, VA	base	2.8	2.0	1.8	...	...	...	...	hold
2) Forth Worth, TX	base	2.8	2.0	1.8	...	...	...	...	hold
3) Kansas City, MO	base	2.8	2.0	1.8	...	...	...	...	hold
% of agency data center activity implemented via virtualization:									
1) Chantilly, VA	97%	97%	97%	97%	...	...	...	...	hold
2) Forth Worth, TX	1%	10%	20%	40%	...	...	...	...	hold
3) Kansas City, MO	5%	30%	60%	80%	...	...	...	...	hold
Data center CPU utilization									
1) Chantilly, VA	9%	9%	9%	9%	...	...	...	...	hold
2) Forth Worth, TX	40%	40%	40%	40%	...	...	...	...	hold
3) Kansas City, MO	40%	40%	40%	40%	...	...	...	...	hold

### 2.2.10 Vendor and Contractor Greenhouse Gas Emissions

- a. *Goal Description.*—Section 13 of Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, directed GSA, with the Department of Defense and the Environmental Protection Agency, to assess the feasibility of requiring Federal suppliers to provide GHG emissions data to the Government. The E.O. also required GSA to make recommendations on using that data in the Federal procurement process. Suppliers who disclose their GHG emissions will assist Federal agencies in collecting the data necessary to track and reduce the GHG emissions relating to the supply of products and services to the Federal government.

The Section 13 working group made the following key findings:

- It is feasible to have suppliers make their GHG emissions inventories available to the Government and voluntarily disclose emissions data upon request;
- It is feasible to use GHG emissions data in the procurement process. The group recommended using procurement preferences to encourage suppliers to complete GHG emissions inventories and, eventually, using GHG emissions data as a technical evaluation factor to assist agencies to drive procurement of lower GHG emissions products and services;
- It is feasible – but not necessary – to have suppliers report to a voluntary registry; and
- The Federal government has several feasible and available options for encouraging additional sustainable practices from suppliers (other than GHG emissions disclosures).

In FY 2011, GSA will identify benefits and challenges for Federal vendors and contractors who choose to complete a Greenhouse Gas (GHG) emissions inventory and mechanisms to incorporate vendor GHG emissions disclosures into the procurement process.

*Goal Scope.*—The Section 13 working group’s findings recognize that third-party GHG emissions registries can play an important role in assisting with supplier inventories. Therefore, identifying the benefits and challenges facing Federal contractors as they disclose their GHG information through registries directly relates to GSA’s goals and objectives to reduce Federal supply chain GHG emissions.

The findings also caution that small businesses may not necessarily have the resources to develop complete, third party-verified GHG emission inventories, and may need targeted assistance for full disclosures. GSA’s near-term goals for vendor and contractor GHG emissions inventories focus on assisting small businesses with completing their scope 1 and 2 GHG emissions inventories.

- b. *Agency Lead for Goal.*—

Steve Kempf  
Commissioner  
Federal Acquisition Service

c. *Implementation Methods.*—

1. **By May 31, 2011, GSA will identify GHG emissions reporting and management practices of the top 200 Federal contractors that voluntarily participated in the Carbon Disclosure Project's (CDP) 2010 annual survey of GHG emissions measurement practices.** CDP identifies itself as an “independent, not-for-profit organization holding the largest database of primary corporate climate change information in the world.” Approximately 2,500 organizations in 60 countries around the world voluntarily measure and disclose their greenhouse gas emissions and climate change strategies through CDP.
  - a. GSA will work with CDP to cross-reference the list of the top 200 Federal contractors for FY 2009 with CDP's 2010 survey responses. GSA will analyze the GHG emissions reporting and management practices collected from the Federal contractors that voluntarily participated in the CDP 2010 survey and will produce a trend analysis report to direct further research.
  - b. In the Winter of 2011, GSA will conduct a survey and host focus groups with a subset of the 200 contractors that participated in the CDP process to identify the benefits and challenges associated with the inventory process. The survey and focus groups will assist GSA in identifying the type of outreach, training, direct assistance, and incentives that can effectively encourage Federal contractors to inventory and disclose their GHG emissions data.
  - c. By May 2011, GSA will analyze the GHG emissions reporting and management practices to produce a trend analysis report to direct further research.
  - d. By September 2011, GSA will develop a strategy to incentivize Federal contractors to inventory and disclose their GHG emissions data, based on the results of the CDP analysis and the focus groups.
2. **By September 30, 2011, GSA will facilitate the completion of GHG emissions inventories by 60 small businesses.** GSA has partnered with the Environmental Protection Agency's (EPA) Climate Leaders Program to assist 60 small businesses in completing GHG emissions inventories. GSA will identify a minimum of 30 small businesses interested in completing a GHG emissions inventory. GSA will also work with other partner agencies, including the Department of Defense, Department of Energy, Department of Health and Human Services' National Institutes of Health, Department of the Interior, EPA, and the National Aeronautics and Space Administration, to collectively identify at least 30 additional small businesses to participate in this program.

GSA currently plans to invite small businesses to join the Climate Leaders Program by December 31, 2010. GSA will help participating small businesses to complete their inventories by September 30, 2011 and will collect their insights to inform future strategies to increase voluntary GHG emissions among small businesses.

3. **GSA will continue the work of the Section 13 working group and is developing a framework to address future actions recommended in the team's report.** GSA has established a project team dedicated to continuing research on contractor GHG emissions and has established six sub-working groups, each of which will address a specific challenge identified by the Section 13 working group:
- *Communications.*—This sub-working group will identify relevant channels to communicate with industry and across agencies about the use of GHG emissions inventory status and GHG emissions data in government contracting.
  - *Data Systems.*—This sub-working group will focus on identifying viable mechanisms suppliers can use to report their GHG emissions inventories status and data to the government.
  - *Federal Training and Supplier Education.*—This working group will develop a plan for disseminating appropriate training to the Federal acquisition workforce on how to use GHG emissions factors as part of the procurement process. It will also identify mechanisms to educate the supplier base on how and when GHG emissions inventory status and GHG emission data will be used in the procurement process.
  - *Harmonization of Standards.*—This sub-working group will review existing requirements for reporting GHG emissions to various governments and will develop suggested criteria for how industry reports their GHG emissions to the government.
  - *Product Labeling.*—This sub-working group will develop a list of recommended criteria that can be used by GSA to review and decide on the appropriate treatment of various eco-labels to use within the procurement process.
  - *Return on Investment.*—This sub-working group will identify case studies in industry and government that demonstrate the value of completing GHG emissions inventories.

GSA is establishing a Roundtable of experts in sustainability from industry and academia. The Roundtable will meet quarterly to address issues arising in greening the Federal supply chain and to provide insights to the Section 13 sub-working groups.

4. **GSA will incorporate the findings of the Section 13 working group into the GSA Affirmative Procurement Plan and internal policies, such as the GSA Acquisition Regulation (GSAR).** GSA will collaborate with its partner agencies and stakeholders to develop new acquisition policies and regulations, such as using Federal government purchasing preferences or other incentives, to encourage Federal contractors to complete GHG emissions inventories. GSA will develop internal policies that can be adopted by other agencies and may inform future revisions of the Federal Acquisition Regulation (FAR) to incentivize vendor disclosures on a government-wide basis.

d. *Positions*—GSA currently dedicates three full-time equivalents (FTE) to greening the Federal supply chain, including researching incentives to encourage voluntary contractor GHG emissions disclosures.

e. *Agency Status*—

- In April 2010, GSA completed and publicly released the recommendations of the interagency working group on Federal contractor GHG emissions; the report is available at link: [http://www.fedcenter.gov/Documents/index.cfm?id=15392&page\\_id=1854](http://www.fedcenter.gov/Documents/index.cfm?id=15392&page_id=1854).
- In August 2010, GSA submitted Paperwork Reduction Act documentation to receive regulatory clearance to hold focus groups with Federal contractors that participated in the CDP 2010 survey. Clearance is expected in the first quarter of FY 2011.

U.S. General Services Administration

FY 2010-2015 Strategic Sustainability Performance Plan

Section 3: Agency Self Evaluation

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

<b>Does your plan provide/consider overarching strategies and approaches for achieving long-term sustainability goals?</b>	Yes
<b>Does your plan identify milestones and resources needed for implementation?</b>	Yes
<b>Does your plan align with your agency's 2011 budget submission?</b>	No
GSA's FY 2011 budget submission was prepared before Executive Order 13514 was signed or the current Administrator was confirmed. It does not reflect GSA's new focus on achieving a Zero Net Environmental Footprint. GSA will need to reallocate some resources to achieve the goals in the Sustainability Plan.	
<b>Is your plan consistent with your agency's FY 2011 budget and appropriately aligned to reflect your agency's planned FY 2012 budget submission?</b>	No
GSA's plan is consistent – although not aligned – with its FY 2011 budget. GSA's FY 2012 budget submission will fully align with the Sustainability Plan.	
<b>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?</b>	Yes
<b>Does your plan provide methods for obtaining data needed to measure progress, evaluate results, and improve performance?</b>	Yes

3.2 Planned Actions for Achieving Sustainability and Energy Standards for Success on the OMB Scorecard

**September 1 – December 31, 2010**

- **By September 2010**, GSA will develop a methodology for incorporating GHG emissions reduction goals into the budget formulation process and a template for reporting GHG emissions data and projections in annual budget requests.

- **By September 2010**, GSA will begin delivering regional and local planning training to GSA employees who are directly engaged in planning for and evaluating new owned and leased Federal workplaces.
- **By November 2010**, GSA will develop a plan to transition the current fleet to an optimized vehicle allocation and increase fleet fuel efficiency.
- **By December 2010**, GSA will assess at least 5% of its owned buildings greater than 5,000 GSF (a minimum of 52 buildings) and at least 5% of its leases greater than 5,000 GSF (a minimum of 250 leases) for compliance with the Guiding Principles.
- **By December 2010**, GSA will develop a long-term strategy for reducing petroleum consumption and increasing alternative fuel usage in the GSA internal fleet.
- **By December 31, 2010**, GSA will review all of its existing contracts for building maintenance, janitorial services, and construction to ensure contract language requires the use of environmentally preferable products.

#### **January 1 – June 30, 2011**

- **By January 2011**, GSA will establish a comprehensive inventory of Scope 1, 2, & 3 GHG emissions.
- **By January 31, 2011**, GSA will deploy revised protocols for site selection for new Federal buildings that include sustainable location standards.
- **On February 7, 2011**, GSA will publish its FY 2010 GHG emissions inventory and FY 2011-2012 emissions projections for in its FY 2012 Congressional Justification.
- **By March 31, 2011**, GSA will update its policy and procedures for preparing NEPA Environmental Impact Statements and Environmental Assessments for proposed new or expanded Federal facilities
- **By March 31, 2011**, GSA will update its NEPA desk guide to ensure that energy usage impacts and opportunities for alternative energy sources are analyzed during the NEPA process.
- **By June 30, 2011**, GSA will complete two pilot projects to promote and increase recycling rates in GSA-owned Federal buildings.