



2010

U.S. Department of Education Strategic Sustainability Performance Plan

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1. Sustainable Buildings Implementation Plan
2. Green Purchasing Plan
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Section 1 – Agency Policy and Strategy

Section 1 – Item 1: Agency Policy Statement

Agency Policy

It is the U.S. Department of Education’s (ED) policy to integrate sustainability¹ into our operations, facilities, and overall mission in such a manner to:

- *Comply fully with all relevant Federal, State, and local energy and environmental laws and regulations, including Executive Orders.*
- *Consider environmental impacts when making planning, purchasing, and operating decisions.*
- *Work continuously to improve our environmental performance.*
- *Provide training to educate our employees and others working in ED office space to be environmentally responsible on the job.*
- *Establish environmental objectives and targets for performance, and conduct regular internal evaluations to determine progress.*
- *Adhere to the waste management hierarchy (in order of preference): source reduction and reuse, recycle/composting, energy recovery, treatment, and disposal.*
- *Work cooperatively with all of our stakeholders to further common environmental objectives.*

Highlights of Significant Successes and Challenges

Over the past several years, ED has focused increased attention on its environmental impacts and has taken steps to address them through initiatives such as establishment of a green purchasing program, development and implementation of an electronic stewardship plan ensuring procurement of Electronic Product Environmental Assessment Tool (EPEAT)-certified computers and monitors, and installation of energy efficient lighting and water efficient equipment.

Because ED is a tenant in all of the buildings it occupies, and energy, water, and waste management services are all included in our leases and thus paid by the General Services Administration (GSA), we are not intimately involved in monitoring our energy, water, and waste services nor do we currently have major influence in affecting change in these areas. This relationship represents our greatest challenge in reducing energy use and associated GHG emissions, reducing water use, minimizing waste generation and increasing recycling. Our goal for the future is to work closely with GSA to monitor and affect change in these service areas.

ED has a number of projects in progress that further exemplify our commitment to incorporating sustainability in our activities, services, and mission:

¹ Executive Order 13514 (*Federal Leadership in Environmental, Energy, and Economic Performance*, October 5, 2009) defines “sustainability” and “sustainable” as follows: to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations.

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- While not required for ED, we are in the process of developing an environmental management system (EMS) that will serve to consolidate our environmental programs and procedures in one place and to help us proactively address our environmental footprint associated with our activities, products, and services. This sustainability plan will function in conjunction with and be driven by the EMS.
- ED is applying its Sustainable Buildings Implementation Plan to ensure that the use, maintenance, leasing, construction, and renovation of facilities are done in such a way as to save energy and reduce environmental impact. This is exemplified in several projects being conducted this year, including the renovation of the Mary E. Switzer Federal Building and the renovation of the cafeteria at the LBJ Federal Building.
- ED will host a Summit on Education for a Green Economy during calendar year 2010. The central question that the Summit seeks to address is what role does Education, particularly Higher Education, have to play in the transition to a Green Economy. The Summit will bring together leaders from higher education, business and industry, labor, government, and nongovernmental organizations (NGOs) to build shared visions and strategies for education's role in creating a sustainable and green economy.
- For the first time, Environmental Literacy is included in the President's Budget. Environmental Literacy is included in the "A Well-Rounded Education" component of the \$1.0 billion fund for "Effective Teaching and Learning for a Complete Education." A Well-Rounded Education is a \$265 million program, an increase of \$38.9 million, or 17 percent, to consolidate seven current authorities and expand support for the subjects important to a complete curriculum, including history, the arts, foreign languages, environmental literacy, and economic and financial literacy.

Section 1 – Item 2: Sustainability and the Agency Mission

The overall mission of ED is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access. In particular, ED seeks to:

- Strengthen the Federal commitment to assuring access to equal educational opportunity for every individual;
- Supplement and complement the efforts of states, the local school systems and other instrumentalities of the states, the private sector, public and private nonprofit educational research institutions, community-based organizations, parents, and students to improve the quality of education;
- Encourage the increased involvement of the public, parents, and students in Federal education programs;
- Promote improvements in the quality and usefulness of education through Federally supported research, evaluation, and sharing of information;
- Improve the coordination of Federal education programs;
- Improve the management of Federal education activities; and
- Increase the accountability of Federal education programs to the President, the Congress, and the public.

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ED has identified a number of potential opportunities for integrating sustainability into its mission. For example, as part of our effort to assure equal access to education for all individuals, the Federal Direct Student Loan program will primarily be administered electronically, avoiding paper use and energy needed to physically transport applications. Additionally, ED foresees the need to hire up to 500 new FTE to accomplish its programmatic goals. Rather than build-out new office spaces for all of these additional employees, ED will explore alternative work environments such as telecommuting and use of satellite offices.

In an effort to improve scores for all students, distance learning opportunities will be considered so that students in remote areas do not need to travel great distances (and thus expend energy) to get a quality education. ED also commits to exploring other potential opportunities for integrating sustainability into our mission, including incorporation of provisions for sustainable building design in grants and loans targeted for infrastructure improvements at academic institutions and prioritizing grants to vocational schools and community colleges that offer curricula in “green” education programs.

Through the use of email and other communication means (described later in this document), ED employees are advised about opportunities to improve their environmental footprint both at work and home. Recent examples include a cell phone recycling campaign where during a two-week period ED employees contributed nearly 70 pounds of cell phones and accessories for recycling/reuse; distribution of SunWise bracelet-making kits (where the bracelet beads turn purple when exposed to the sun to remind kids to apply sunscreen) to employee children during “Take Your Son/Daughter-To-Work Day; and distribution of desk-side paper recycling boxes to further encourage individual employees to recycle waste paper. ED will continue to engage employees in similar efforts designed to further integrate sustainability in carrying out our mission.

In developing our environmental management system (EMS), our initial plan will focus on four buildings in the Washington, DC metropolitan area that house the majority of ED employees – LBJ Federal Building, Union Center Plaza (UCP), Potomac Center Plaza (PCP), and Mary E. Switzer (MES) Federal Building (currently under renovation). In the future, our intent is to expand the scope of the EMS to include other Washington, DC offices, regional and field offices. Because ED leases all buildings from GSA, we are limited in our ability to define ED’s baseline and set goals for future improvements in critical areas such as water, energy, building design and construction, waste water management, and waste management. However, our strategy is to partner with GSA to gain the baseline data on ED’s environmental footprint as it relates to the buildings we occupy.

Beyond working with GSA, the only other limitation that could inhibit or challenge our ability to increase sustainability would be existing federal requirements that could limit our ability to set conditions on grants and loans to ensure sustainable approaches are taken by grant/loan recipients.

Section 1 – Item 3: Greenhouse Gas Reduction Goals

Draft V2 of the *Federal Greenhouse Gas Accounting and Reporting Guidance* (March 3, 2010) states that “[i]f an agency leases space from GSA or a private landlord and does not directly pay utilities, GSA is responsible for reporting the emissions associated with those utilities. If all agency space is leased in this manner, and the agency does not pay any energy surcharges, the agency is not required to report any related emissions.” At the time that ED submitted Scope 1 and 2 greenhouse gas reduction targets (in January 2010), we were paying utilities in two buildings and thus showed CO2 emissions for our

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baseline and our 2020 target. At present, ED no longer occupies these buildings and will no longer include them in our inventory.

In addition, while our January 2010 Scope 1 and 2 submission indicated emissions and targets for fleet vehicles, we have since concluded that we are exempt from these requirements because the majority of our fleet is considered law enforcement vehicles and the number of non-exempt vehicles is under the reporting threshold amount of twenty vehicles. Thus, our 2020 Scope 1 and 2 GHG emissions target becomes zero, which we've now already met by virtue of vacating the two aforementioned buildings and being exempt from the fleet vehicle requirements. Nevertheless, as previously discussed, ED plans to work closely with GSA to understand baseline and set goals for reducing solid waste generation, energy, and water use in buildings where we are the primary tenant. We also plan to continue tracking fleet vehicle use of alternative fuels and reduction in use of petroleum.

ED's Scope 3 greenhouse gas emissions and targets are currently limited to employee commuting, employee business air travel, contracted wastewater treatment, and operation of our shuttle bus system in the Washington, DC metropolitan area. Because transmission and distribution losses are tied to GSA-purchased energy and solid waste management services are contracted through GSA, GSA will account for any associated Scope 3 emissions in their targets. Our estimated total Scope 3 emissions equal approximately 5,808 mtCO₂e. We are proposing a three percent reduction or 174 mtCO₂e by 2020. ED intends to achieve the Scope 3 reduction targets through a combination of increasing use of flexiplace and/or alternative work schedule (where appropriate) and encouraging the use of audio, video and web conferencing for certain meetings.

Section 1 – Item 4: Plan Implementation

The Department of Education will employ a variety of means to ensure that the Sustainability Plan is effectively implemented. First, ED will develop a Departmental Directive that will formalize the Sustainability Plan as Agency policy and will be communicated to all ED employees. The Directive will include at least the following sections as they relate to the implementation of the Sustainability Plan: applicability, definitions, responsibilities, procedures, and requirements. Second, ED is developing an environmental management system that will overlay the Sustainability Plan thereby helping to ensure that the Sustainability Plan and its associated goals are appropriately planned, conducted, checked and revised accordingly. The specifics of plan implementation are described below:

- a) Internal Coordination and Communication will be achieved through a combination of the following: Senior Officer meetings, Executive Officer meetings, periodic progress reports, staff meetings, ED newsletters, and *connectED* (Education's intranet homepage), bulletin board postings, lobby displays (where ED is the major building tenant), and messages on closed-circuit television.
- b) Coordination and Dissemination of Plan to the Field will be achieved primarily through means identified in (a) above. The majority of regional and field offices house primarily employees working for Federal Student Aid (FSA), Office for Civil Rights (OCR), and the Office of Inspector General (OIG). These employees will be reached through their senior management located in Washington, DC. The Sustainability Plan will be integrated into all existing ED Policy Directives, where appropriate, to ensure that the goals and tenants of the plan are implemented both at HQ and in the field.

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c) Leadership and Accountability will be incentivized by including appropriate measures in the performance standards for relevant Department staff, including the Senior Sustainability Officer (SSO), environmental/energy manager, fleet manager, real property manager, facility manager, contracting officers, contracting officer representatives, and procurement officers.

d) Agency Policy and Planning Integration will be assured through the Department's Office of Planning, Evaluation, and Policy Development (OPEPD). OPEPD's key responsibilities are to develop and review ED policies, perform measurement and evaluation, and develop budget processes and proposals. In so doing, OPEPD coordinates the review of Department-wide policies to ensure consistency with the Secretary's guidance and the Administration's goals.

e) Agency Budget Integration also will be performed by OPEPD and the budget office housed therein.

f) Methods for Evaluation of Progress will be developed by the Senior Sustainability Officer (SSO) in conjunction with OPEPD. Generally, metrics will be established for baseline and targets and tracked to measure progress. Measurement will be possible only where data are available and this may be complicated where GSA "owns" the data associated with ED as building tenants. Data will be reported as actual and "normalized" to account for eco-efficiencies.

Table 1: Critical Planning Coordination

The purpose of this table is to illustrate the relationship between the Sustainability Plan and other planning and reporting efforts across the agency. This table illustrates opportunities for integrating sustainability requirements into existing planning documents and vice versa. ED is using this table to illustrate how sustainability programs are supported in the appropriate agency planning processes. A response of 'yes', 'no', or 'n/a' in a box indicates whether the Executive Order (EO) goal is relevant to and has been integrated into listed report/plan. 'Yes' implies it has been integrated, 'no' for not yet integrated, and 'n/a' for not applicable.

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Originating Report / Plan	Scope 1 & 2 GHG Reduction	Scope 3 GHG Reduction	Develop and Maintain Agency Comprehensive GHG Inventory	High-Performance Sustainable Design / Green Buildings	Regional and Local Planning	Water Use Efficiency and Management	Pollution Prevention and Waste Elimination	Sustainable Acquisition	Electronic Stewardship and Data Centers	Agency Specific Innovation
GPRA Strategic Plan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Agency Capital Plan	Yes	Yes	n/a	Yes	n/a	n/a	n/a	n/a	Yes	n/a
Circular A-11 Exhibit 300's	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	n/a
Annual Energy Data Report [Annual Report on Federal Government Energy Management submitted to the Federal Energy Management Program (FEMP)]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EISA Section 432 Facility Evaluations/Project Reporting [Energy Independence and Security Act of 2007]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Budget	Yes	Yes	n/a	Yes	n/a	n/a	n/a		Yes	n/a
Asset Management Plan / 3 Year Timeline	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	n/a
Circular A-11 Exhibit 53's	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
OMB Scorecards	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DOE's Annual Federal Fleet Report to Congress and the President	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Data Center Consolidation Plan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	n/a
Environmental Management System	No	No	No	No	No	No	No	No	No	No
Other (reports, policies, plans, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Section 1 – Item 5: Evaluating Return on Investment

Projects, initiatives and efforts should be prioritized based on the lifecycle return on investment to the agency while taking into account economic, environmental, social, and mission related costs and benefits. This section describes how ED takes into account both monetary and non-monetary factors when prioritizing projects and initiatives. As directed by the Office of the Federal Environmental Executive (OFEE), this section includes, where applicable, a discussion on various cost and benefit analyses including:

- a. Economic Lifecycle Cost / Return on Investment (ROI)
- b. Social Costs & Benefits
- c. Environmental Costs & Benefits
- d. Mission-Specific Costs & Benefits
- e. Operations & Maintenance and Deferred Investments
- f. Climate Change Risk and Vulnerability
- g. Other, as defined by agency (e.g., security, societal benefit, and deferred maintenance)

Economic lifecycle cost/return on investment analysis is usually considered by GSA when improvements are made to ED-occupied buildings since GSA is the lessor responsible for building construction, renovation, and upgrades. ED discusses these investments with GSA and expresses preferences for

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projects. While ED does not conduct formal cost-benefit analyses, ED does consider factors beyond ROI. For example, ED is currently working with GSA to make American Recovery and Reinvestment Act (ARRA)-funded upgrades to the LBJ Federal Building, mostly addressing energy savings. ED is interested in certain projects that GSA had originally discarded due to a relatively high ROI (generally greater than 10 years). One project, “daylight harvesting,” will automatically adjust light fixtures when daylight is available to light a room. The estimated cost-savings is over \$50,000 per year, but the ROI is 14 years and GSA considered this too long a payback. ED is interested in pursuing this project because in addition to saving money and energy, it also provides a tangible example of energy efficiency in action (compared to upgrades to the building automation system which employees would never notice because it’s “behind the scenes”).

ED may employ use of triple bottom line (economic, social, and environmental) cost benefit analysis for other projects occurring in the near future. For example, ED is pursuing opportunities for integrating solar and wind power in the Mary E. Switzer Federal Building renovation not because of the renewable energy they can provide (which is limited in the Washington DC area), but because they offer examples for educating employees and visitors about how renewable energy can be a part of an array of energy options for use in building operations. In this analysis, consideration of social and environmental benefits will be addressed in light of the high cost of wind/solar projects.

Section 1 – Item 6: Transparency

The Department of Education will communicate Sustainability Plan progress and results both within the Agency and to the general public. Internally, ED will rely primarily on our intranet website, connectED. Additionally, we will post information in the weekly ED Notebook (for all of ED), the weekly ED Update (for HQ only), and the monthly Inside ED newsletter. We will also use closed-circuit monitors at strategic locations in our buildings (e.g., the cafeteria at LBJ Headquarters Building) to display information. ED will also use e-mails to alert employees of specific events or achievements related to the Sustainability Plan. With respect to the general public, ED will rely on our internet website (www.ed.gov) for communicating progress on the Sustainability Plan. To the extent possible, metrics will be displayed graphically for ease in reading and interpreting.

Section 2 – Performance Review and Annual Update

Section 2 – Item 1: Summary of Accomplishments

This item is intended to summarize accomplishments from the previous fiscal year; next year’s Sustainability Plan will summarize accomplishments from FY ’10. For this current version of the Sustainability Plan, ED summarizes below accomplishments over the past year as well as on-going efforts:

- ED obtained for the first time a green rating for both Current Status and Progress on the January 2010 Environmental Scorecard.
- ED began developing an Environmental Management System (EMS), even though we are not required to have one.
- ED developed its first Electronic Stewardship Plan. In FY2009, ED purchased 100% EPEAT monitors and EPEAT PCs/laptops. Power management has been enabled on 100% of eligible

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computers and monitors. In November 2009, ED became an Agency Partner and Facility Partner of the Federal Electronics Challenge (FEC).

- In April 2010, OFEE and the U.S. Environmental Protection Agency (EPA) announced the recipients of the 2010 Federal Electronics Challenge (FEC) Awards and ED will receive the 2010 Bronze Level FEC Award for its FY2009 activities.
- ED developed a Sustainable Buildings Implementation Plan in June 2009. Green/Sustainable approaches are being employed in upgrades to the cafeteria at the LBJ Federal Building as well as in the renovation of the Mary E. Switzer Federal Building, where GSA is seeking a Platinum rating under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program.
- ED has helped plan and will host the first "Education for a Green Economy" Summit in September 2010.
- ED signed a Memorandum of Understanding with the Departments of Energy and Labor on clean energy jobs.
- Environmental literacy was included in the President's proposal for the FY11 budget for the first time.
- ED worked with GSA to reduce negative environmental impact from LBJ's cafeteria (Edible's Café) by replacing all foam and plastic items with biodegradable products as well as replacing some of the cafeteria's current equipment with Energy-Star rated equipment.

Section 2 – Item II: Goal Performance Review

GOAL 1: Scope 1 and 2 Greenhouse Gas Reduction

- a. **Goal Description.** ED established a goal of reducing Scope 1 and 2 GHG emissions by 29% from a 2003 baseline of 3,535 mtCO₂e to 2,505 mtCO₂e in 2020. For goal-subject buildings alone, GHG emissions were projected to be reduced by 30%, from 3,317 to 2,322 mtCO₂e. For covered federal fleet consumption, GHG emissions were expected to be reduced by 16% from 218 to 183 mtCO₂e.
- b. **Agency Lead for Goal.** ED's Office of Management will be responsible for target development, implementation, and oversight.
- c. **Implementation Methods.** When ED submitted its Scope 1 and 2 GHG emissions baseline, utilities were included in rent payments to GSA for all but two buildings – one datacenter and one warehouse. ED has achieved the reduction in goal-subject buildings by eliminating both of these buildings from its inventory in early 2010. Because GSA is responsible for payment of utilities in all remaining buildings in ED's inventory, the OFEE has determined that further reductions in Scope 1 and 2 GHG emissions will be executed and measured by GSA. Where possible, Education will continue to cooperate with GSA to find additional opportunities to lower energy use in ED-occupied buildings.

With respect to fleet vehicles, as of the end of calendar year 2009, ED leases a total of 53 vehicles from GSA, 45 of which are used by the Office of Inspector General (OIG). Because OIG vehicles are considered law enforcement vehicles, they are exempt from the GHG reduction target. That leaves a total of eight non-waivered fleet vehicles, which is below the 20 vehicle threshold for reporting. Nevertheless, the Department's non-OIG components will adhere to

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the Energy Independence and Security Act (EISA 2007) requirement that any new fleet vehicles purchased will be low-GHG-emitting. Additionally, we will continue to work with the OIG to reduce petroleum use in their vehicles by opting for alternative fuels where and when available.

- d. **Positions.** Given the fact that this goal is not applicable at this point, ED has adequate FTE coverage for this goal.

- e. **Planning Table [ED entries in BOLD].**

Table 2. Scope 1 & 2 GHG Targets

	SCOPE 1&2 GHG TARGET	Unit	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	...	FY 20
Buildings	Energy Intensity Reduction Goals (BTU/SF reduced from FY03 base year)	%	15%	18%	21%	24%	27%	30%	hold	...	hold
	Planned Energy Intensity Reduction (BTU/SF reduced from FY03 base year)	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Renewable Electricity Goals (Percent of electricity from renewable sources)	%	5%	5%	5%	7.5%	hold	hold	hold	hold	hold
	Planned Renewable Electricity Use (Percent of electricity from renewable sources)	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fleet	Petroleum Use Reduction Targets (Percent reduction from FY05 base year) ¹	%	10%	12%	14%	16%	18%	20%	22%	...	30%
	Planned Petroleum Use Reduction (Percent reduction from FY05 base year)	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Alternative Fuel Use in Fleet AFV Target (Percent increase from FY05 base year) ¹	%	61%	77%	95%	114%	136%	159%	hold	...	Hold
	Planned Alternative Fuel Use in Fleet AFV (Percent increase from FY05 base year)	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Other, as defined by agency All acquired fleet vehicles must be low-GHG-emitting.	%	100%	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold
	Scope 1 & 2 - Reduction Target (reduced from FY08 base year)	%	100%	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold

- f. **Agency Status.** Through removal of the two facilities for which ED was paying utilities, and due to the fact that ED's vehicle fleet is exempt from the fleet requirements, ED has effectively met its Scope 1 and 2 GHG emission reduction goal. ED will work with GSA and OIG, respectively, to address GHG emission reductions from ED-occupied buildings and ED fleet vehicles.

GOAL 2: Scope 3 Greenhouse Gas Reduction

- a. **Goal Description.** ED has established a goal of reducing Scope 3 GHG emissions by 3% from a 2010 baseline of 5,808 mtCO₂e to 5,635 mtCO₂e in 2020 for a total reduction of 174 mtCO₂e.
- b. **Agency Lead for Goal.** ED's Office of Management will be responsible for target development, implementation, and oversight.

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- c. **Implementation Methods.** For the purposes of ED's first Scope 3 GHG emissions and reduction calculations, only those from federal employee commuting (including the ED shuttle bus service in the Washington, DC metropolitan area), business air travel, and contracted wastewater treatment are considered. At present, emissions associated with employee business ground travel (e.g., rental cars and privately owned vehicles) will be excluded due to difficulty in attaining the data. Emissions related to contracted solid waste disposal as well as transmission and distribution losses from purchased energy are not applicable to ED because both waste disposal and energy are paid for by GSA in all ED locations. ED used data from parking permits and transit subsidies to determine Scope 3 emissions from employee commuting in the Washington, DC metropolitan area. Transit subsidy data was used to calculate non-vehicular emissions from ED employees outside of the Washington, DC commuting area. Vehicle use outside of the DC metro area is difficult to determine (we do not have parking permit data), so in the future, ED may use a survey to collect commuting information for all staff, particularly to capture employees in the regional offices. Contracted wastewater treatment is based on a current ED employee count of 4,300.

With respect to business air travel, ED is choosing not to use the GSA TRAX system to provide emissions data because of concerns associated with releasing personally identifiable information (PII) data (this decision was made in consultation with OFEE). Instead, we will use the methodology referenced in *Climate Leaders GHG Inventory Protocol Core Module Guidance: Optional Emissions from Commuting, Business Travel and Product Transport* (EPA430-R-08-006, May, 2008), by using actual FY 2008 airline mileage to complete the equation:

$$E = \text{PMT} * (\text{EF}_{\text{CO}_2} + \text{EF}_{\text{CH}_4} * 0.021 + \text{EF}_{\text{N}_2\text{O}} * 0.310)$$

where:

E = Total CO₂-equivalent Emissions

PMT = Passenger Miles Traveled

EF_{CO₂} = CO₂ Emission Factor

EF_{CH₄} = CH₄ Emission Factor

EF_{N₂O} = N₂O Emission Factor

0.021 = Conversion Factor

0.310 = Conversion Factor

To achieve a stated reduction target of three percent, ED proposes to investigate the following options for commuting: increasing use of telework and/or use of alternative work schedules; encouraging and facilitating ridesharing/carpooling; and/or reducing parking fees for carpools. As referenced earlier in the discussion under Section 1-Item 1, ED intends to evaluate enhanced use of teleworking for the additional 500 new FTE that are anticipated to be hired. Finally, with respect to the ED shuttle bus service, we will investigate opportunities for partnering with other federal agencies in order to optimize shuttle bus operations (e.g., have multiple agencies share shuttle buses where routes are similar or overlap).

With regard to business air travel, ED will investigate the use of video/teleconferencing for a yet-to-be-established set of regularly (physically) convened meetings and/or training classes. Nearly all regional offices currently have video/teleconferencing capability, so the infrastructure is largely in place. We will likely need to purchase some additional equipment to

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upgrade/augment existing equipment in several of our buildings to enable the successful use of video/teleconferencing technology. To encourage increased use of this technology, ED will determine if the regional offices have any barriers to using the equipment (e.g., discomfort with conducting distance meetings or unfamiliar with how to operate the equipment) and will work to address the root cause of these barriers (e.g., develop an on-line training course on how to use the equipment). Finally, ED will consider developing a Department-wide “green meetings” policy/directive that will consider opportunities for reducing attendee GHG emissions, including those related to travel.

Lastly, with respect to GHG emissions from contracted wastewater treatment, ED does not plan to take actions to reduce emissions in this category since the options available to reduce emissions in this area would mean either reductions in FTE or minimizing employee use of bathroom facilities, neither of which is a practical solution. In fact, as mentioned above, ED intends to add an additional 500 new FTE that will likely result in an increase in emissions in this category.

- d. Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

- e. Planning Table [ED entries in BOLD].**

Table 3. Scope 3 GHG Targets

SCOPE 3 GHG TARGET	Units	FY 10	FY 11	FY 12	FY 13	FY 14	....	FY 20
Overall Agency Scope 3 Reduction Target (reduced from FY08 base year)	%	0	0	0	0.5	0.5	2.0	3
Sub-Target for Federal Employee Travel	%	0	0	0	0.5	0.5	2.0	3
Sub-Target for Contracted Waste Disposal	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sub-Target for Transmission and Distribution Losses from Purchased Energy	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- f. Agency Status.** ED has established its Scope 3 GHG emission reduction targets using the methodology discussed above. ED is in the process of determining next steps for meeting targets.

GOAL 3: Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory

- a. Goal Description.** The Department of Education is committed to the goal of conducting a comprehensive greenhouse gas inventory by January 31, 2011.
- b. Agency Lead for Goal.** ED’s Office of Management will be responsible for conducting the greenhouse gas inventory.
- c. Implementation Methods.** ED will first establish organizational and operational boundaries for determining what will be included in the inventory. Because ED currently leases all facilities

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from GSA, ED-related Scope 1 and 2 emissions will be zero unless we can coordinate with GSA in terms of monitoring/measuring our energy use. If we do coordinate with GSA, OFEE will need to ensure that from the standpoint of a national roll-up of GHG emissions, they are not double-counting (i.e., GSA and ED are counting the same emissions). Implementation methods for determining Scope 1 and 2 emissions and Scope 3 emissions are discussed under Goals 1 and 2, respectively.

- f. Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.
- d. Planning Table.** Not applicable for this goal. Again, we are committed to submitting our inventory by January 31, 2011.
- e. Agency Status.** ED has determined that Scope 1 and 2 GHG emissions will go to zero now that ED leases all buildings from GSA. Scope 3 emissions have been calculated and reduction targets set; however, this will be refined in future years to account for regional employee vehicular commuting and business ground travel.

GOAL 4: High-Performance Sustainable Design/Green Buildings

- a. Goal Description.** All ED buildings are currently leased from GSA, where GSA is either the lessor or sublessor. A list of current ED-occupied buildings is provided in Table 4. Table 5 is a list of ED-vacated buildings since 2003. ED commits to work with GSA to achieve compliance with the “Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings (Guiding Principles)” for 100% of major renovation, repair, or alteration of federal buildings in which ED is the main tenant. ED also commits to meet, by 2015, the guiding principles in 15% of building leases where ED occupies at least 5,000 GSF². With the cooperation of GSA, ED will demonstrate use of cost-effective, innovative building strategies to minimize energy, water and materials consumption so as to achieve a net reduction in agency deferred maintenance costs. As changes to its building inventory warrant, ED, in cooperation with GSA, will seek to optimize its real property portfolio by examining opportunities to decrease environmental impact through consolidation, reuse, and disposal of existing assets before deciding to add new assets. Finally, ED will work with GSA to ensure use of best practices and technology in rehabilitation of historic Federal properties.

² Gross square feet (GSF) is not normally tracked by ED for the purposes of its leased property. Our nomenclature is typically rentable square feet (RSF), which we will use as a surrogate for determining whether ED exceeds the 15% threshold for meeting the Guiding Principles.

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Table 4. List of ED-Occupied Buildings in the U.S.

Building Name	Building Location	Building Number	Notes³
Lyndon Baines Johnson Department of Education FB	400 Maryland Ave SW, Washington DC 20024	DC0010ZZ	
Mary E. Switzer Memorial FB⁴	330 C Street SW, Washington DC 20024	DC0033ZZ	Seeking LEED NC 2.1 Platinum
Capitol Place	555 New Jersey Ave NW, Washington, DC 20208	DC0326ZZ LDC01289	
1990 K Street	1990 K Street NW, Washington, DC 20006	DC0345ZZ	LEED CS 2.0 Certified
L'Enfant Plaza	L'Enfant Plaza, 2100 Corridor, Washington, DC 20024	DC0376ZZ	
Union Center Plaza	830 First Street NE, Washington, DC 20002	DC0564ZZ	
Potomac Center	550 12th Street SW, Washington, DC 20024	DC0569ZZ	
800 North Capitol Street	800 North Capitol Street NW, Washington, DC 20002		
1775 Eye Street	1775 I Street NW, Washington, DC 20006	LDC80611	
John W. McCormack FB	5 Post Office Square, Boston, MA 02109	MA0013	Seeking LEED NC Silver/Gold
Financial Square Building	32 Old Slip, New York, NY 10005	NY7363	LEED EB O&M Certified
Parque Las Americas	235 Federico Costa St, San Juan, PR 00918	APR02241	< 5,000 RSF
American University of PR	K.14.4 Carr #2 Hato Tejas, Bayamon, San Juan, PR 00960	PR0059689	< 5,000 RSF
The Wanamaker Building	100 Penn Square East, Philadelphia, PA 19107	PA0549	
William S. Moorhead	1000 Liberty Ave, Pittsburgh, PA 15219	PA0233	Seeking LEED NC <5,000 RSF
Sam Nunn Atlanta Fed. Center	61 Forsyth Street SW, Atlanta, GA 30303	GA1007	
Pembroke Pines Center	9050 Pines Blvd, Pembroke Pines, FL 33024	FL3035	< 5,000 RSF
Fifth Third Center	600 Superior Ave, Cleveland, OH 44114	OH2091	
CitiCorp Center	500 West Madison Ave, Chicago, IL 60661	IL2233	LEED CI Gold
Federal Bldg	8930 Ward Pkwy, Kansas City, MO 64114	MO0134	
Harwood Center	1999 Bryant Street, Dallas, TX 75201	TX 2233	
Cesar E. Chavez Memorial Building	1244 Speer Blvd, Denver, CO 80204		Seeking LEED Silver
One World Trade Center	1 World Trade Center, Long Beach, CA 90831	CA6415	
50 Beale Street	50 Beale Street, San Francisco, CA 94105	CA7738ZZ	LEED EB O&M Certified
Robert T. Matsui Courthouse	501 I St, Sacramento, CA 95814	CA0306	
Park Place Building	1200 Sixth Ave, Seattle, WA 98101	WA7321	LEED EB 2.0 Platinum <5,000 RSF

³ ED space in all listed buildings exceeds 5,000 rentable square feet (RSF) except where indicated.

⁴ Projected occupancy in 2012; ED will consolidate staff at 1990 K St, Capitol Place, and 800 No. Capitol St.

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Henry M. Jackson FB	915 Second Ave, Seattle, WA 98104	WA0101	
Columbia Center	701 Fifth Ave, Seattle, WA 98104	WA7594	LEED EB O&M
1000 Second Avenue	1000 Second Ave, Seattle, WA 98104	WA7584	

Table 5. List of ED-Vacated Buildings in the U.S (since 2003).

Building Name	Building Location	Building Number	Notes
400 Virginia Avenue	400 Virginia Ave SW, Washington, DC 20024		ED left in 2003 ⁵
525 School Street	525 School Street SW, Washington, DC 20024		ED left in 2003 ⁶
GSA Regional Office Bldg 3	301 Seventh Street SW, Washington, DC 20024		ED left in 2004 ⁷
Chicago Regional Office	111 N. Canal Street, Chicago, IL 60606		ED left in 2007 ⁸
San Francisco Regional Office	50 United Nations Plaza, San Francisco, CA 94102		ED left in 2007 ⁹
Warehouse	7100 Old Landover Rd, Landover, MD 20785	MD0803	ED left in 2010 ¹⁰
Potomac Crossing	6710 Oxon Hill Rd, Oxon Hill, MD 20745	MD0276	ED left in 2010 ¹¹
Chastain Center	200 Chastain Blvd, Kennesaw, GA 30144	GA2240	ED left in 2009 ¹²
Arch Street Tower	33 Arch St, Boston, MA 02110	MA5888	ED left in 2009 ¹³
Old Post Office	1100 Pennsylvania Ave NW, Washington, DC 20004	DC0029ZZ	ED left in 2009 ¹⁴
1391 Speer Boulevard	1391 Speer Blvd, Denver, CO 80204		ED left in 2009 ¹⁵

- b. Agency Lead for Goal.** ED's Office of Management will be responsible for sustainable building target development, implementation, and oversight.
- c. Implementation Methods.** ED's Sustainable Buildings Implementation Plan (SBIP), signed June 15, 2009, is incorporated here by reference (see Attachment 1) and will be updated to include the requirements of E.O. 13514 and the objectives of the Sustainability Plan. ED has included in the SBIP its commitment to ensure that, on its behalf, GSA performs new construction and renovation projects that incorporate sustainable practices in the Guiding Principles. ED will ensure that either employees are trained in sustainable building principles or contractors (e.g., LEED AP certified) are available to provide guidance. ED plans to schedule meetings with regional GSA representatives and perform internal reviews of facilities and operations to ensure sustainable practices are being employed. ED also intends to create a "change management" procedure whereby ED facility project leads must complete a form

⁵ ED consolidated staff to Potomac Center (550 12th Street SW).

⁶ ED consolidated staff to Potomac Center (550 12th Street SW).

⁷ Former location of primary data center; moved to Potomac Crossing (Oxon Hill, MD) in 2004.

⁸ ED staff moved to current LEED Gold location at 500 Madison Ave, Chicago, IL.

⁹ ED staff moved to current LEED Platinum location at 50 Beale Street, San Francisco, CA.

¹⁰ Space was no longer necessary to store GFE upon migration to contractor-owned IT infrastructure.

¹¹ Former location of primary data center; moved to contractor-owned facility (Plano, TX) in 2009.

¹² Former location of backup data center; moved to contractor-owned facility (Florence, KY).

¹³ ED returned to John W. McCormack Federal Bldg (Boston, MA).

¹⁴ ED consolidated staff at other existing Washington, DC locations (Potomac Center and LBJ).

¹⁵ ED consolidated facilities at Cesar E. Chavez Memorial Federal Building (1244 Speer Blvd, Denver, CO).

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before proceeding with changes to current buildings or relocation to new buildings. The form will include a series of questions regarding potential environmental impacts of any building change requests (e.g., new furniture purchase must be a “green” purchase, new light fixtures must be Energy Star-rated) and how impacts will be mitigated. This will help assure that all project leads are addressing sustainable practices in ED-occupied buildings. Finally, where an existing ED-occupied building lease is up for renewal, we will work with GSA to require, as a key criterion for selecting a new building, that the building meet the Guiding Principles and/or be LEED-certified.

Two of ED’s major HQ buildings in Washington, DC are undergoing renovation and include the following sustainable building measures: LBJ Federal Building – (1) renovations to the cafeteria will include installation of Energy Star-rated fixtures and equipment plus a composter that will divert all food/organic waste from garbage destined for landfilling; (2) ARRA projects to include a number of measures to enhance building sustainability, including installation of cooling tower variable frequency drives, installation of demand control ventilation and dampers on each air handling unit, upgrade of the existing building automation system to direct digital system, replacement of existing constant volume exhaust and supply fans serving the parking garage with variable speed drives connected to CO sensors, installation of an air-to-air energy recovery system, installation of occupancy sensors, and possibly a daylight harvesting system (ED has requested that GSA consider this despite a longer ROI); and (3) investigating installation of a green or reflective roof on all or part of LBJ. Mary E. Switzer Federal Building – major renovation/modernization of this building with the intent of acquiring LEED platinum certification.

d. Positions. ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

e. Planning Table [ED entries in BOLD].

Table 6. Sustainable High Performance Building Targets

SUSTAINABLE HIGH PERFORMANCE BUILDINGS (Buildings Meeting Guiding Principles)	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Owned Facilities Targets	%	N/A	N/A	N/A	N/A	N/A	N/A
Leased Facilities Targets ¹⁶	%	0	0	15%	Hold	Hold	Hold
Total Facility Targets	%	0	0	15%	Hold	Hold	Hold
Other, as defined by agency	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹⁶ Based on data presented in Table 2, ED appears to currently meet the target of 15% leased buildings meeting the Guiding Principles, assuming that LEED certified buildings also meet the Guiding Principles. ED indicates zero percentage in both FY 10 and 11 to allow time for completion of on-going LEED building projects and also to allow time for understanding whether LEED certification qualifies a building as meeting the Guiding Principles.

GOAL 5: Regional and Local Planning

- a. **Goal Description.** ED does not have an internal directive governing regional and local planning; however, planning policies will be included in the EMS that ED is currently developing. The policies shall commit ED (where appropriate given the number of ED employees in a given area) to participation in regional transportation planning (recognition and use of existing community transportation infrastructure), ensure effectiveness of local energy planning, and incorporate sustainable building location into policy and planning for new leases. In addition, ED will work with GSA (with GSA in the lead as lessor) to ensure that all Environmental Impact Statements and Environmental Assessments required under the National Environmental Policy Act (NEPA) for proposed new or expanded Federal facilities identify and analyze impacts associated with energy usage and alternative energy sources. ED will work with GSA to ensure coordination and (as appropriate) consultation with Federal, State, Tribal and local management authorities regarding impacts to local ecosystems, watersheds and environmental management associated with proposed new or expanded Federal facilities. ED will incorporate by reference guidance issued in relation to Section 10 of E.O. 13514 (recommendations for sustainable locations for federal facilities) and Section 11 of E.O. 13514 (recommendations for federal local transportation logistics).
- b. **Agency Lead for Goal.** ED's Office of Management will be responsible for the regional and local planning target development, implementation, and oversight.
- c. **Implementation Methods.** In addition to inclusion in the EMS of policies and guidance associated with regional and local planning, ED will consider the following opportunities for addressing local ecosystems: organizing employee volunteers to conduct watershed monitoring and/or cleanups, planting of trees, and creation of a "peoples' garden." In addition, ED is currently performing site analysis for leasing new property in Phoenix, AZ and is including access to public transportation as a major criterion for building selection. ED intends to map each facility it occupies across the country to determine relationship to regional and local planning concerns. ED is also working with GSA on the Mary E. Switzer Federal Building modernization to ensure compliance with the regional and local planning requirements of the Executive Order. This includes agreeing to a reduction in surface parking to allow for an improvement in pedestrian safety, circulation, and aesthetics. Finally, ED will explore the possibility of adding requirements for ED grant recipients that any new construction or major renovations consider regional and local planning aspects.
- d. **Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

GOAL 6: Water Use Efficiency and Management

- a. **Goal Description.** Because ED leases all building space, ED does not have purview over water use efficiency and management; rather, GSA is lead as the lessor. ED does not have an existing Water Conservation Directive or Plan; however, policies and procedures will be added to the EMS that ED is currently developing. These policies and procedures will commit ED to

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work with GSA to: reduce potable water use intensity by at least 26% by FY 2020, reduce landscaping water use by at least 20% by FY 2020, identify and implement water reuse strategies, and achieve objectives established by EPA in *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*.¹⁷

b. Agency Lead for Goal. ED's Office of Management will be responsible for the water use efficiency and management target development, implementation, and oversight.

c. Implementation Methods. In addition to inclusion of policies and procedures in the EMS, ED is working with GSA on the Mary E. Switzer Federal Building renovation/modernization to ensure that stormwater is managed in manner such that runoff will be largely controlled through collection and reuse. GSA also intends to outfit the building with low flow/dual flush toilets and automatic shut-offs for sinks.

d. Positions. ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

e. Planning Table [ED entries in BOLD].

Table 8. Water Use Efficiency and Management Targets

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

GOAL 7: Pollution Prevention and Waste Elimination

- a. Goal Description.** ED does not have a Chemical Reduction/Pollution Prevention Plan or Directive in place, but will include related policies and procedures in the EMS currently under development.

In the EMS, ED will commit to work with GSA as appropriate to achieve the following goals:

¹⁷ Section 438 applies to the "sponsor of any development or redevelopment project involving a Federal facility..."The "sponsor" should generally be regarded as the federal department or agency that owns, operates, occupies or is the primary user of the facility and has initiated the development or redevelopment project." For most if not all ED-occupied buildings, the sponsor would likely be GSA as the lessor.

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increase source reduction of pollutants and waste; divert at least 50% non-hazardous solid waste by FY 2015, excluding (construction and demolition (C&D) debris); divert at least 50% C&D materials and debris by FY 2015; reduce printing paper use; increase use of uncoated printing and writing paper containing at least 30% postconsumer fiber; reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials; increase diversion of compostable and organic materials from the waste stream; implement integrated pest management (IPM) 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; and, to the extent it applies, decrease use of chemicals to assist in achieving FY 2020 GHG reduction targets [See Section II - 1 and 2 above] and report (as applicable) in accordance with Sections (301-313) of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986.

- b. Agency Lead for Goal.** ED's Office of Management will be responsible for the pollution prevention and waste elimination target development, implementation, and oversight.
- c. Implementation Methods.** In addition to including policies and procedures in the EMS, ED plans to work with GSA to research waste management and recycling methods and metrics for each building where it is a major tenant to determine baseline waste generation and then implement appropriate steps to reduce/eliminate waste generation where possible (note that if ED is a minor tenant in an office building, it may not be possible to develop metrics to understand the success of pollution prevention and elimination actions). ED will begin to manage paper use by tracking purchasing and inventory in all locations. ED currently uses 30% post-consumer recycled paper in all locations, but will explore the possibility (depending on cost and availability) of increasing the percentage of recycled content in office paper. ED intends to institute defaults for duplex printing and double-sided copying. ED will work with GSA to implement integrated pest management (IPM) where/when appropriate, divert C & D debris generated during building renovations (currently being done in conjunction with the Mary E. Switzer Federal Building renovation), and ensure custodial services use "green" cleaning supplies. For the LBJ cafeteria renovation, ED is working with GSA to procure a composter (included as a leveraged investment in Table 6) to increase diversion of compostable and organic materials from the waste stream. In addition to EMS general awareness training, ED will provide training for employees to better understand waste management and recycling programs at each location and how they can help increase recycling rates/diversion from landfills.
- d. Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

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e. Planning Table [ED entries in BOLD].

Table 9. Pollution Prevention and Waste Elimination Table

POLLUTION PREVENTION & WASTE ELIMINATION	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Non-Hazardous Solid Waste Diversion Targets (non C&D) [applies only where data are available and enable us to determine only the waste diverted by ED]	%	Establish baseline	TBD*	TBD	TBD	TBD	50%
C&D Material & Debris Diversion Targets [will only apply in rare situations where ED is the lead in renovation; otherwise, GSA will be responsible]	%	Establish baseline	TBD	TBD	TBD	TBD	50%
Other, as defined by agency	?	N/A	N/A	N/A	N/A	N/A	N/A

*TBD – to be determined after establishment of baseline.

GOAL 8: Sustainable Acquisition

- a. Goal Description.** ED's Departmental Directive "Green Purchasing Plan," revised July 23, 2008, is incorporated here by reference (see Attachment 2) and will be updated to include the requirements of E.O. 13514 and the objectives of the Sustainability Plan, specifically: (1) ensuring 95% of new contract actions, including task and delivery orders under new contracts and existing contracts, require the supply or use of products and services that are energy efficient (Energy Star or Federal Energy Management Program (FEMP)-designated), water efficient, biobased, environmentally preferable (excluding EPEAT-registered products), non-ozone depleting, composed of recycled content, or are non-toxic or less toxic alternatives and (2) to ensure that all Federally-mandated designated products and services are included in all relevant acquisitions.
- b. Agency Lead for Goal.** ED's Office of Management will be responsible for the sustainable acquisition target development, implementation, and oversight.
- c. Implementation Methods.** In addition to revising ED's Green Purchasing Plan to include the requirements of E.O. 13514, ED is in the process of revising its training course "What is Green Purchasing Anyway?" to reflect the new E.O. ED also intends to seek funding for upgrades to its training tracking system to better determine who needs training. ED also plans to review and revise its procedure for conducting green purchasing audits. ED intends to prepare a template to ensure appropriate sustainability acquisition contract language is included in all solicitations and purchase agreements. Finally, as stated earlier, ED will prepare a "change management" procedure to help ensure that all purchases are made in accordance with ED's Green Purchasing Plan.
- d. Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.

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e. Planning Table [ED entries in BOLD].

Table 10. Sustainable Acquisition Targets

SUSTAINABLE ACQUISITION	Units	FY 10	FY 11	FY 12	....	FY 20
New Contract Actions Meeting Sustainable Acquisition Requirements	%	75%	95%	Hold	Hold	Hold
Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	%	Establish baseline	TBD*	TBD	TBD	TBD
Water Efficient Products	%	Establish baseline	TBD	TBD	TBD	TBD
Biobased Products	%	Establish baseline	TBD	TBD	TBD	TBD
Recycled Content Products	%	Establish baseline	TBD	TBD	TBD	TBD
Environmentally Preferable Products/Services (excluding EPEAT)	%	Establish baseline	TBD	TBD	TBD	TBD
SNAP/non-ozone depleting substances	%	Establish baseline	TBD	TBD	TBD	TBD
Other, as defined by agency		N/A	N/A	N/A	N/A	N/A

*TBD – to be determined after establishment of baseline.

GOAL 9: Electronic Stewardship and Data Centers

a. Goal Description.

- a. Establish and implement policy and guidance to ensure use of power management, duplex printing, and other energy efficient or environmentally preferred options and features on all eligible agency electronic products.
- b. Update agency policy to reflect environmentally sound practices for disposition of all agency excess or surplus electronic products.
- c. Update agency policy to ensure implementation of best management practices for energy efficient management of servers and Federal data centers.
- d. Goals should identify how the agency intends to meet technology energy consumption reduction goals in its data centers.
- e. Discuss how the agency is planning on meeting the technology energy reduction goals in data centers. Include details on the investment plan, covered versus non-covered facilities, and how the agency identified the covered facilities.
- f. Discuss how the agency will increase the quantity of electronic assets disposed through sound disposition practices. Include in the discussion how your agency is using or plans to use programs such as disposal through GSA Xcess, recycling through Unicor, donation through GSA's Computer for Learning (CFL) or other non-profit organizations, and/or recycling through a private recycler certified under the Responsible Recyclers (R2) guidance or equivalent.

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- b. **Agency Lead for Goal.** ED's Office of the Chief Information (OCIO) is the lead Program Office for this goal.
- c. **Implementation Methods.**
 - a. Sub-goals 9a, 9b, 9c and 9f. The U.S. Department of Education Electronic Stewardship Plan (dated 8 Jan 2010) is incorporated here by reference (see Attachment 3) and has been updated to reflect E.O. 13514 and sub-goals 9a, 9b, 9c, and 9f. (For FY2009, the Department was awarded the 2010 Federal Electronics Challenge Bronze Level Award for its Operations & Maintenance activities.)
 - b. Sub-goals 9d and 9e. The Government-Owned-Contractor-Operated (GOCO)-based computer room for the Institute of Education Sciences (IES) is housed within the GSA-supported Mary E. Switzer (MES) Building. GSA holds the responsibility for GHG emissions and associated metering. The Department does intend to increase the IES Computer Room's activity implemented via virtualization technology, which in turn, should improve average CPU utilization of the remaining physical servers. Each of ED's three primary data centers is located in non-covered contractor-owned, contractor-operated (COCO) facilities. ED does intend to maximize the use of virtualization technology at its contractor facilities to improve operations while supporting the environment; however, ED does not intend to establish separate electrical metering for its outsourced managed services contracts, which are very closely aligned with cloud computing goals and efficiencies.
- d. **Positions.** The Department is adequately manned for supporting the goals of electronic stewardship and data centers.

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- e. Planning Table [ED entries in BOLD].** The Department plans on meeting or exceeding the following:

Table 11. Electronic Stewardship and Data Centers Targets

ELECTRONIC STEWARDSHIP and DATA CENTERS	Units	FY 10	FY 11	FY 12	FY13
% of device types covered by current Energy Star specifications that must be Energy-Star qualified ¹⁸	%	90%	90%	95%	hold
% of electronic assets covered by sound disposition practices ¹⁹	%	95%	hold	hold	hold
% of cloud activity hosted in a data center	%	0%	hold	hold	hold
% of agency data centers independently metered or advanced metered and monitored on a weekly basis	%	0%	hold	hold	hold
Reduction in the number of agency data centers	%	0%	hold	hold	hold
% of agency, eligible electronic products with power management and other energy-environmentally preferable features (duplexing) actively implemented and in use	%	50%	67%	95%	hold
% of agency data centers operating with an average CPU utilization of 60%-70%	%	0%	40%	60%	75%
% of agency data centers operating at a PUE range of 1.3 – 1.6	%	0%	hold	hold	hold
% of covered electronic production acquisitions that are EPEAT-registered	%	99%	hold	hold	hold
% of agency data center activity implemented via virtualization	%	20%	40%	60%	65%
Other, as defined by agency	N/A	N/A	N/A	N/A	N/A
Agency Defined	N/A	N/A	N/A	N/A	N/A

GOAL 10: Agency Innovation

- a. Goal Description.** ED will explore several opportunities to innovate outside the requirements of the Sustainability Plan. Examples are listed below.

(1) Leverage ED resources to influence environmental improvements by our customers by including, sustainability requirements (where permissible) in ED-issued loans/grants. For example, where ED issues grants/loans for construction of new facilities or renovation of existing facilities, ED could include as a grant requirement that decisions about retaining existing schools and where to locate new schools consider the needs of the surrounding communities to take advantage of existing resources/infrastructure (e.g., roads and sewers) and to allow students and families to walk or bike to school to reduce GHG emissions.

(2) Investigate the possibility of including sustainability requirements (beyond what is currently required in terms of environmental due diligence and clean-up) in deeds where federal real property is transferred to another entity.

¹⁸ This count should include the percentage of products that met energy star standards at the time of purchasing.

¹⁹ Some examples of sound disposition practices include, but are not limited to, GSA Xcess, recycling through Unicom, donation through GSA's Computer for Learning (CFL) or other non-profit organizations, and/or recycling through a private recycler certified under the Responsible Recyclers (R2) guidance or equivalent.

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(3) Continue to work with our computer contractor to collect, refurbish, and distribute computers, printer, and monitors to school districts in need.

(4) Collaborate with EPA to develop/promote green education curriculum (one example would be the SunWise Program that teaches children about the dangers of ultraviolet radiation and how to protect themselves).

(5) Partner with OFEE and other federal agencies to help “green” the supply chain.

- b. Agency Lead for Goal.** ED’s Office of Management will be responsible for target development, implementation and oversight.
- c. Implementation Methods.** ED’s Office of Management will lead these efforts out of HQ’s central office and will work with other ED offices and federal agencies as necessary to achieve the goals. ED may establish an intra-office sustainability challenge whereby each Executive Office in ED sets a sustainability goal of their choice and tries to achieve it over a three-year period. Those offices that achieve established goals would receive an award/incentive for their achievements. This effort may help to achieve buy-in across ED rather than focusing most of the efforts within ED’s Office of Management.
- d. Positions.** ED currently has a full-time FTE on detail from U.S. EPA to assist in the development of the Sustainability Plan. In addition to the EPA detail, ED has one employee who is working on the plan as collateral duty as well as fractions of other employees who are contributing to the plan development. ED will ensure that it has the resources to implement the Sustainability Plan once approved by OMB.
- e. Planning Table [ED entries in BOLD].**

Table 12. Agency Innovation Targets

AGENCY INNOVATION	Units	FY 10	FY 11	FY 13	....	FY 20
Other, as defined by agency -By end of first quarter FY 11, complete research to determine the potential for implementing (a) 1 – 5 above	N/A	-	Research complete	TBD*	TBD	TBD

*TBD – to be determined after completion of research.

Section 3 – Agency Self-Evaluation

- I. Please answer ‘yes’ or ‘no’ to the following questions. If the answer is ‘no’, provide an explanation below [ED responses in BOLD].**

Does your plan provide/consider overarching strategies and approaches for achieving long-term sustainability goals?	Y
We believe this, the first ED Sustainability Plan, does consider overarching strategies for	

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<p>achieving long-term sustainability with both the physical and programmatic aspects of the Department. Nevertheless, we anticipate that fine-tuning of the plan in future versions will help solidify our approach. Also, we believe that completion and implementation of an EMS will provide an important tool for achieving the approaches envisioned in the plan.</p>	
<p>Does your plan identify milestones and resources needed for implementation?</p> <p>Generally, yes, the plan does identify milestones and resources; however, in some areas we have research and baseline data collection to conduct before we can be more specific.</p>	Y
<p>Does your plan align with your agency's 2011 budget submission?</p> <p>Yes, ED is seeking to leverage funding in FY '11 to finance some of the efforts identified in the plan.</p>	Y
<p>Is your plan consistent with your agency's FY 2011 budget and appropriately aligned to reflect your agency's planned FY 2012 budget submission?</p> <p>Yes, ED intends to leverage FY '11 and '12 budgets to achieve some of the plan activities.</p>	Y
<p>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?</p> <p>Yes. The sustainability plan template was useful in that it consolidated many of the E.O. requirements into a single framework. ED's EMS will help to further identify and align all applicable E.O.'s, statutes, regulations, and internal directives.</p>	Y
<p>Does your plan provide methods for obtaining data needed to measure progress, evaluate results, and improve performance?</p> <p>In general, yes; however, we will need more time to understand the details for data collection and analysis, particularly where we will need to work with GSA and other third parties (e.g., contractors) to obtain data.</p>	Y

II. What is your agency's planned actions for the following year (in 6-month increments, July-Dec 2010 & Jan-June 2011) to achieve the sustainability and energy standards for success on the OMB Scorecard? Please use short, descriptive, and action-oriented bullets for key milestones and associated target dates. Agencies may highlight text within its Sustainability Plan to emphasize these key actions and milestones.

Please see Table 13.

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Table 13. Department of Education Key Actions to Achieve Scorecard Standards for Success

Scorecard Standard Number	Scorecard Standard for Success	Corresponding Goal in Sustainability Plan	Applicable to ED? (Y/N)	ED Key Actions July-Dec 2010	ED Key Actions Jan-June 2011
1	On track to achieve Scope 1 & 2 GHG reduction target for 2020	1	N	Continue to work with GSA to support ARRA energy efficiency upgrades in LBJ and energy efficiency efforts associated with the MES renovation/ modernization.	Continue to work with GSA in support of energy efficiency efforts in the MES renovation/ modernization.
2	On track to achieve Scope 3 GHG reduction target for 2020	2	Y	<p>Begin evaluation of opportunities to increase use of teleworking, alternative work schedules, carpooling, and transit subsidies.</p> <p>Begin evaluation of Department travel to determine opportunities for replacing some travel with video/teleconferencing.</p>	<p>Complete evaluations and begin to implement findings.</p> <p>Leverage funds for purchase of additional video/ teleconferencing equipment.</p> <p>Determine feasibility of developing “green meetings” directive for ED.</p> <p>Investigate opportunities to coordinate with other federal agencies on shuttle bus use.</p> <p>Collect data on vehicular commuting in the Regions.</p> <p>Evaluate practicality of calculating Scope 3 emissions from employee ground business travel.</p>
3	Reduction in energy intensity in goal-subject facilities compared with 2003	1	N	See actions for standard #1.	See actions for standard #1.

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Scorecard Standard Number	Scorecard Standard for Success	Corresponding Goal in Sustainability Plan	Applicable to ED? (Y/N)	ED Key Actions July-Dec 2010	ED Key Actions Jan-June 2011
4	Use of renewable energy as a percent of facility electricity use	1	N	Continue to work with GSA on integrating renewable energy opportunities in the MES renovation/ modernization.	Continue to work with GSA on integrating renewable energy opportunities in the MES renovation/ modernization.
5	Reduction in potable water intensity compared with 2007	6	N	Continue to work with GSA to ensure inclusion of water use reduction/ management features in the MES renovation/ modernization.	Continue to work with GSA to ensure inclusion of water use reduction/ management features in the MES renovation/ modernization.
6	Annual reduction in fleet petroleum use compared to 2005	1	N	Continue to ensure 100% of ED leased vehicles are low-GHG-emitting. Work with OIG to reduce petroleum use/increase use of alternative fuels. Replace current leased AFVs for Secretary and Deputy Secretary with hybrid vehicles.	Continue to ensure 100% of ED leased vehicles are low-GHG-emitting. Work with OIG to reduce petroleum use/increase use of alternative fuels. Replace two expiring vehicles with hybrid/electric vehicles.

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Scorecard Standard Number	Scorecard Standard for Success	Corresponding Goal in Sustainability Plan	Applicable to ED? (Y/N)	ED Key Actions July-Dec 2010	ED Key Actions Jan-June 2011
7	Sustainable Green Buildings	4	Y	<p>Update ED's Sustainable Building Implementation Plan.</p> <p>Continue to work with GSA to ensure ARRA upgrades are made to LBJ.</p> <p>Continue to work with GSA to "green" the LBJ cafeteria.</p> <p>Continue to work with GSA to ensure LEED certification of MES Building.</p>	<p>Continue to ensure ARRA upgrades are made to LBJ.</p> <p>Purchase and install composter for LBJ cafeteria.</p> <p>Continue to work with GSA to ensure LEED certification of MES Building.</p> <p>Develop change management procedure to assure all project leads are considering sustainable approaches in building moves and renovations.</p> <p>Work with GSA to determine which ED-occupied buildings meet the "Guiding Principles." Determine schedule of expiring building leases to ensure new leases are for buildings that meet "Guiding Principles" where practicable.</p> <p>Develop/procure and provide training in high performance sustainable design/green building.</p>
8	Cross-Cutting (addresses all above standards)	All of the above.	N	Complete development of EMS and begin implementation.	Fully implement EMS.

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Appendix 1: Acronyms and Abbreviations

ACS	Administrative Communication System
AFV	Alternative Fuel Vehicle
ARRA	American Recovery and Reinvestment Act of 2009
BTU or Btu	British Thermal Unit
C&D	Construction and Demolition
CEQ	Council on Environmental Quality
CFL	Computer for Learning
CIO	Chief Information Officer
CPU	Central Processing Unit
DOE	U.S. Department of Energy
ED	U.S. Department of Education
EISA	Energy Independence and Security Act
EMS	Environmental Management System
EO	Executive Order
EPA	Environmental Protection Agency
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right-to-Know Act
EPEAT	Electronic Product Environmental Assessment Tool
EPP	Environmentally Preferable Purchasing
ESPC	Energy Services Performance Contract
EUL	Enhanced Use Lease
FEC	Federal Electronics Challenge
FEMP	Federal Energy Management Program
FSA	Federal Student Aid
FTC	Florence (KY) Technology Center
FTE	Full Time Employee
FY	Fiscal Year
gal	gallon
GHG	Greenhouse Gas
GPRA	Government Performance and Results Act
GSA	General Services Administration
GSF	Gross Square Feet
IES	Institute of Education Sciences
IT	Information Technology
LBJ	Lyndon Baines Johnson Department of Education Federal Building
MES	Mary E. Switzer Memorial Federal Building
mtCO ₂ e	Metric tons of Carbon Dioxide Equivalent
NEPA	National Environmental Policy Act
O&M	Operations and Maintenance
OCIO	ED Office of the Chief Information Officer
OCR	ED Office for Civil Rights

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OFEE	Office of the Federal Environmental Executive
OIG	ED Office of Inspector General
OM	ED Office of Management
OMB	Office of Management and Budget
OPEPD	ED Office of Planning, Evaluation & Policy Development
PCP	Potomac Center Plaza
PO	ED Principal Office
PPA	Power Purchase Agreement
PTC	Plano (TX) Technology Center
PUE	Power Usage Efficiency
R2	Responsible Recyclers
RIA	Regulatory Impact Analysis
ROI	Return on Investment
SBIP	Sustainable Buildings Implementation Plan
SF	Square Feet or Square Footage
SNAP	Significant New Alternatives Policy
SRPO	Senior Real Property Officer
SSO	Senior Sustainability Officer
TRI	Toxics Release Inventory
UCP	Union Center Plaza
USC	United States Code
UESC	Utility Energy Services Contract