National Archives and Records Administration
Strategic Sustainability Performance Plan

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Section 1: Agency Policy and Strategy

I. Agency Policy Statement

The National Archives and Records Administration (NARA) is committed to compliance with all statutes, regulations and Executive Orders (EOs) related to environmental, energy and sustainability matters. With respect to energy in particular, and the associated reduction in greenhouse gases (GHG), NARA has gone beyond all requirements. The agency was one of four government agencies to win a FY2008 Presidential Award for Leadership in Federal Energy Management for its support, leadership, and effort in promoting and improving energy use in facilities and operation. NARA has also surpassed its goals for water conservation and established green building requirements for all new construction projects. The first new building to be constructed under these requirements (Clinton Library) achieved the highest rating—Platinum—under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system.

Building on these successes, this Strategic Sustainability Performance Plan (Sustainability Plan) outlines a new and expanded set of sustainability goals for NARA. Through the targets and actions outlined herein, NARA will renew its focus on GHG reduction, water conservation and green building. In addition, the agency will expand the scope of its sustainability goals to include regional and local planning, pollution prevention and waste elimination, sustainable acquisition, and electronic stewardship and data centers.

In order to implement this plan, NARA intends to undertake the following major projects during the 2010 financial year:

- Continue and expand efforts to conserve energy at all facilities.
- Expand energy generation via renewable and other on-site sources.
- Expand existing internal energy audit procedure to cover all sustainability goals.
- Hire environmental staff person with the skills and capacity to pursue new goal areas.

These projects will require a new level of commitment from NARA, reflected in the actions and need for staff time described within the plan. These investments are necessary to meet the intent of Executive Order 13514. In addition, they will help improve the agency's operations and, if leveraged appropriately, could help attract additional visitors and further strengthen NARA's reputation as a leader in sustainability.

This plan is an opportunity for continuing dialogue about how NARA and other federal agencies can progress toward sustainable operations. We look forward to input and feedback on NARA's Sustainability Plan and the goals that it represents.

Mark D. Sprouse
Agency Senior Sustainability Officer
Director, Facilities & Personal Property Management Division

II. Sustainability and the Agency Mission

NARA's Strategic Plan (2009 revision) includes the following mission statement for the agency:

> *The National Archives and Records Administration serves American democracy by safeguarding and preserving the records of our Government, ensuring that the people can discover, use, and learn from this documentary heritage. We ensure continuing access to the essential documentation of the rights of American citizens and the actions of their government. We support democracy, promote civic education, and facilitate historical understanding of our national experience.*

In service of this mission, NARA owns and operates sixteen separate facilities, all dedicated to the preservation, storage, display, and use of historical documents and artifacts. These sixteen facilities are listed below:

National Archives I (Washington, DC)
National Archives II at College Park (College Park, Maryland)
Herbert Hoover Presidential Library (West Branch, Iowa)
Franklin D. Roosevelt Presidential Library (Hyde Park, New York)
Harry S. Truman Presidential Library (Independence, Missouri)
Dwight D. Eisenhower Presidential Library (Abilene, Kansas)
John F. Kennedy Presidential Library (Boston, Massachusetts)
Lyndon B. Johnson Presidential Library (Austin, Texas)
Richard Nixon Presidential Library (Yorba Linda, California)
Gerald R. Ford Presidential Library (Ann Arbor, Michigan)
Gerald R. Ford Presidential Museum (Grand Rapids, Michigan)
Jimmy Carter Presidential Library (Atlanta, Georgia)
Ronald Reagan Presidential Library (Simi Valley, California)
George Bush Presidential Library (College Station, Texas)
William J. Clinton Presidential Library (Little Rock, Arkansas)
Southeast Regional Archives (Morrow, Georgia)

NARA also leases 44 additional spaces. Most, but not all, of these leased facilities are owned by the U.S. General Services Administration (GSA). This plan focuses primarily on sustainability goals and objectives for NARA-owned facilities, as those are the only facilities under the agency's direct control. Where relevant and feasible, these goals will be extended to cover NARA's leased operations as well.

As stated above, NARA's primary mission is to preserve the archives in its trust. This mission is generally compatible with NARA's sustainability goals as stated in this plan. However, archival requirements pose a challenge to energy conservation efforts and associated reductions in agency greenhouse gas (GHG) emissions.

NARA's documents and artifacts must be maintained in a controlled environment (temperature, humidity and air quality) 24 hours per day, 365 days per year. Due to the stringent requirements for storage and display (found in 36CFR, 1234), all sixteen NARA-owned facilities are excluded from the energy reduction requirements of the National Energy Conservation Policy Act (NECPA), as amended by the Energy Policy Act of 2005. Conventional performance measures are rendered meaningless by the overwhelming proportion of process-dedicated energy required for NARA's "stack" space, which represents a large percentage of the agency's gross square footage.

As stated in NARA Directive 1571, Architecture and Design Standards for Presidential Libraries (NARA design standards):

> *NARA requires that maintaining appropriate environmental conditions for its holdings takes precedence over short-term energy savings. While NARA understands the need for energy efficient buildings and compliance with energy savings requirements, energy efficiency alone must not be the guiding principle to system or building design. Preservation of holdings in perpetuity must always be the core precept for building design.*

Despite the exempt status of these facilities, NARA has continued to:

- Complete and file all necessary energy management reports annually.
- Comply with all energy efficiency requirements.
- Aggressively pursue energy and water conservation projects.

Many NARA facilities, such as Archives II, are located on university campuses, which provide important cultural support for environmental initiatives. While NARA facilities benefit from these progressive locations, the agency has shown leadership in energy conservation/generation beyond expectations. In recognition of its successes in energy and water conservation, recycling and sustainable landscaping practices at the Archives II building, the City of College Park, Maryland presented NARA with the College Park Green Award in 2008.

However, despite NARA's significant progress and recognition to date in the energy arena, there are some challenges associated with implementing the goals in this plan. Energy has been the central sustainability issue to date, emphasized in federal regulations and by NARA often to the exclusion of other sustainability objectives. It will take a shift in perspective and emphasis, and significant additional internal collaboration and planning, to widen the scope of what sustainability means for this agency. This will require new skills not currently represented on staff, and additional staff time. However, NARA's Facilities staff and Energy Team are nearly fully occupied handling current operational and energy-specific concerns. In addition, at present, there is no general environmental staff person with the skills and capacity to help expand the program and ensure that NARA achieves the goals in this plan.

III. Greenhouse Gas Reduction Goals

NARA has set the following targets with respect to reducing GHG:

- **Scope 1&2**: By FY2015, NARA plans to achieve a 7% reduction in Scope 1&2 greenhouse (GHG) emissions, with a 10% reduction by FY2020 (compared to FY2008 baseline). NARA plans to meet these goals by continuing to reduce building energy usage, increase on-site energy production, and manage fleet vehicle usage within mission-related constraints.
- **Scope 3**: By FY2020, NARA plans to reduce its Scope 3 GHG emissions by 10% (compared to FY2008 baseline). This will be achieved by a 10% reduction in each of the following three emission categories: transmission and distribution losses from purchased energy; contracted waste disposal (solid waste and wastewater); and employee travel (business air travel, business ground travel and employee commuting).

IV. Plan Implementation

a. Internal Coordination and Communication

Sustainability initiatives at NARA are generally led by the Agency Energy Team (members listed below under "Leadership and Accountability"), with direction from Adrienne Thomas, Deputy Archivist of the United States. Due to the small size of the agency and relatively centralized operations, sustainability (energy)-related projects have historically been executed effectively by this small leadership team, without the involvement of large numbers of additional staff. However, employee participation in sustainability (energy) initiatives has slowly grown over the past few years as a result of the successes of the program, aided by macroeconomic trends such as rising energy prices.

NARA sees Executive Order 13514 and this Strategic Sustainability Plan as an opportunity to expand its current scope of sustainability activities and processes for internal coordination. As part of this expansion, the agency hopes to foster more internal communication, collaboration and goal-setting. At a minimum, this increased internal collaboration will need to focus on the agency planning activities listed below in Table 1. NARA intends to develop this process further during 2010, and include it as part of the first annual update to this plan.

b. Coordination and Dissemination of the Plan to the Field

NARA typically communicates with its field locations (Presidential Library facilities) via NARA Notices which are transmitted by email and posted on boards at facility locations. In order to implement the expanded sustainability program described in this plan, NARA will incorporate discussion of this Sustainability Plan in NARA's annual Presidential Library Director's conference, the annual Administrative Officer's conference, the Record Center's Regional Administrator's conference and the bi-annual Facility Manager's conferences.

c. Leadership & Accountability

Leadership for the programs described within this plan will be provided by the NARA Energy Team, the members of which are listed below. NARA also hopes to add an additional environmental staff person, as described in detail under "Goal 7." This person would share leadership and accountability for achieving the targets established in this plan.

<u>Senior Agency Official</u>
Ms. Adrienne Thomas, Deputy Archivist of the United States. In concert with the Agency's Strategic Plan, Ms. Thomas provides senior management level direction and guidance for the agency's strategic energy goals and incentives.

<u>Agency Energy Team</u>
Washington DC area:

Mark Sprouse – Director, Facilities and Personal Property Management Division
Donald Overfelt – Chief, Facilities Management Branch
Tim Edwards – Assistant Chief, Facilities Management Branch (Archives I)
Ngan Pham – General Engineer/Agency Energy Manager
Gary Simmons – General Engineer
Steve Wilson – General Engineer
James Garvin – General Engineer
Linda Tapscott – Budget Analyst

Allen Edgar – Director, Acquisition Services Division

Outside the Washington, DC area:

Richard Judson – Director, Space & Security Management Division
Ronald Noll, Chief, Real Property Management Branch
John Bartell – General Engineer
David Sponn – General Engineer
Frank Quigley – General Engineer
Marty McGann – Director, Physical Infrastructure and Collections Support, Office of Presidential Libraries

Accountability: Management Tools

NARA employs the following management tools to ensure implementation and accountability of its sustainability objectives:

Performance Evaluation: To help ensure accountability, all agency personnel directly connected with the implementation of NARA's energy program have had their position descriptions and performance evaluations altered to reflect and measure their involvement in activities related to reducing energy use. Going forward, NARA will widen the scope of this performance evaluation to incorporate all personnel associated with the implementation of this Sustainability Plan.

Awards: In concert with the overall agency awards plan, employees may be granted awards (monetary and non-monetary) for exceptional performance in any category, including implementing initiatives associated with E.O. 13423. In coming years, outstanding achievements associated with the implementation of this plan will also be eligible for recognition during the annual Archivist's Awards Ceremony.

Training and Education: To date, sustainability training and education at NARA has focused on energy. NARA conducts an Energy Awareness Month every October. In 2009, NARA issued an associated NARA Notice to all staff explaining the agency's progress to date and providing tips about energy conservation practices both at work and at home. Several members of the Agency Energy Team have also attended the annual GovEnergy conference. In addition, members of the energy team attended a Certified Energy Manager class, and have applied for certification. NARA plans to expand its use of training and education to help implement the goals in this plan.

d. Agency Policy and Planning Integration

Integration of sustainability objectives with NARA policy and planning is generally handled by the senior leadership of the Energy Team, particularly Mark Sprouse, Director of Facilities and Personal Property Management, who works closely with the Deputy Archivist. As noted above, NARA expects that this Sustainability Plan will provide a vehicle for additional internal conversations within division leadership, to help integrate sustainability objectives more thoroughly into the agency's various planning mechanisms (as detailed in Table 1).

e. Agency Budget Integration

Ms. Thomas, Deputy Archivist of the United States, is primarily responsible for ensuring that sustainability goals are incorporated into the budget process, and that adequate funds are available for implementation.

There are two areas of NARA's budget that are relevant to sustainability projects:

1. Repair and Restoration funds in the five-year plan. These are occasionally used to fund energy savings projects at the Presidential Libraries.
2. Operational budget money associated with each fiscal year. Ms. Thomas works closely with Mark Sprouse to determine appropriate and feasible amounts of spending for energy-related projects out of the O&M line items.

To date, NARA has funded energy and water projects with available/leftover funds, with priority funding for energy conservation projects. Over the next few years, NARA expects to continue funding sustainability projects within the existing agency budget. To facilitate internal priority-setting and budgetary tracking relevant to sustainability, NARA will develop appropriate line items and tracking mechanisms for related expenditures.

f. Methods for Evaluation of Progress

NARA has historically employed three primary mechanisms for evaluating progress on sustainability projects, with an emphasis on energy-related matters:

1. Measurement and verification procedures embedded within Energy Saving Performance Contracts (ESPCs), conducted jointly by NARA staff and the ESPC contractor.
2. Percent savings tracked on energy bills for all sixteen facilities.
3. Internal energy audit. The purpose of these audits is to identify low cost/no cost O&M problems that could easily be corrected on-site, and to look for cost-effective infrastructure improvements that could be incorporated into future renovation or capital improvement projects. Two NARA engineers travel to all facilities within a four-year cycle, visiting four of NARA's sixteen facilities every year. All 16 facilities have both standard and advanced meters to track electricity usage, and all of this data is available online (with the exception of the Nixon Library). This allows staff to measure consumption and diagnose problems related to both energy savings and the extension of equipment life.

Going forward, NARA staff will expand the internal energy audit procedure to cover the other goals set forth in this plan. To the extent feasible, NARA will also work with GSA to expand the audit procedure to cover leased facilities in addition to the 16 facilities under NARA's direct control. This work may include initiatives such as installing electricity submeters at leased facilities in order to get an energy baseline and begin tracking and improving progress.

In keeping with the requirements of EO 13514, NARA will report annually on its progress toward the goals stated in this plan. This will provide an annual mechanism for evaluating and reporting on progress, which will supplement NARA's expanded sustainability audit program (as described above), as well as the existing OMB Scorecard procedure.

Table 1: Critical Planning Coordination

'Yes' indicates that NARA has already integrated this sustainability goal into the listed report/plan. 'No' indicates that this goal has not yet been integrated, and 'n/a' indicates that the goal is not applicable to that particular report/plan.

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	Yes	n/a	n/a	n/a	n/a	No	n/a
Agency Capital Plan	Yes (Energy)	n/a	n/a	No	n/a	No	n/a	n/a	n/a	n/a
Budget	No	No	No	No	No	No	No	No	No	No
Circular A-11 Exhibit 300s and 53s	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No	n/a
Annual Energy Data Report	Yes (Energy)	No	No	Yes (Energy)	n/a	Yes	n/a	n/a	No	No
EISA Section 432 Facility Evaluations/Project Reporting	Yes (Energy)	n/a	n/a	n/a	n/a	Yes	n/a	n/a	n/a	n/a
Asset Management Plan3 Year Timeline	No plan currently in place									
OMB Scorecards	Yes (Energy)	n/a	n/a	Yes (Energy)	n/a	Yes	n/a	n/a	n/a	n/a
DOE's Annual Federal Fleet Report to Congress and the President	No plan currently in place									
Data Center Consolidation Plan	No plan currently in place									
Environmental Management System	No plan currently in place									
Energy Plan	Yes (Energy)	No	No	No	n/a	No	n/a	n/a	No	No
Green Purchasing/Electronic Stewardship DRAFT Plan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Yes	n/a

V. Evaluating Return on Investment

NARA's consideration of costs and benefits for sustainability-related programs has been focused nearly exclusively on economic factors, within the constraints of mission-specific requirements. The agency's first priority must always be their archival mission. Under no circumstances can NARA undertake a program or initiative that would compromise the longevity of records (temperature and humidity conditions).

Working within this overarching limit, NARA has used a basic financial planning lens to prioritize energy conservation projects over energy infrastructure projects, due to their faster return on investment. NARA generally applies a ten-year payback window to proposed projects. For ESPCs, the threshold is even lower, with payback between seven and eight years. To date, the

agency has not explicitly considered lifecycle cost as a criterion for justifying investments. This criterion will become increasingly important, especially when considering on-site renewable energy projects which typically have a longer payback period.

A secondary motivation for NARA in conducting its award-winning energy program to date has been the social benefits of its actions. With millions of annual visitors, NARA has a large public presence and therefore an opportunity to enhance its reputation and educate the public about best practices in facilities management and sustainability.

Other environmental costs and benefits, including statutory requirements, are most relevant for NARA's large capital projects. When constructing new libraries, NARA adheres to all environmental regulations, many of which are referenced in the agency's "Architectural and Design Standards for Presidential Libraries" (NARA design standards). These design standards further specify that all new NARA construction projects must be certified through the Leadership in Energy and Environmental Design (LEED) Green Building Rating System of the U.S. Green Building Council (USGBC), achieving the LEED "Silver" Level at a minimum. This goal has both environmental and social value. If executed properly, achieving the LEED standard poses no threat to NARA's mission or its economic (budgetary) criteria.

In addition to NARA's comprehensive energy audit procedure (which is on a four-year cycle), the agency employs a contractor to conduct a comprehensive building condition report on all facilities every five years. This report identifies projects for deferred maintenance, and also focuses on energy considerations as part of the O&M survey. NARA then makes decisions about O&M funding on a return-on-investment basis. Going forward, the agency intends to expand this decision framework by finding additional points of intersection between the energy audit, building condition report, and the goals stated in this sustainability plan.

To date, NARA has not explicitly focused on potential risk to its operations associated with climate change. Agency facilities appear to be at minimal risk of damage from potential sea level rise, with the possible exception of the Kennedy Library, which is located on a harbor and is protected by a seawall. Other facilities may be vulnerable to increases in disaster-related events; for example, NARA is concerned about flood vulnerability associated with the Hoover Library, and is thus planning to provide an additional physical barrier to protect the library in the event of a 100-year storm. Going forward, NARA will consider incorporating climate and disaster considerations more aggressively when locating and designing future Presidential Libraries.

Going forward, in keeping with the requirements of EO 13423, NARA will develop a more nuanced cost-benefit analysis that prioritizes their archival mission along with sustainability objectives such as energy conservation, initial cost, payback period, lifecycle cost, and other benefits (both monetary and non-monetary). This type of analysis will become more important as NARA expands the scope of its sustainability projects. It will also be critical to helping the agency balance its evolving priorities. For example, NARA's mission for the future involves increasing electronic data storage and access to data. In order for the agency to continue meeting its energy conservation targets, it will be increasingly important for NARA to develop systems to accommodate this in an efficient way, balancing financial, energy and mission priorities.

VI. **Transparency**

The agency will distribute an internal NARA Notice about this plan via email and posting on office boards to notify all staff of its provisions. Following this distribution, the NARA Energy Team (led by Mark Sprouse) will conduct a series of focused meetings with key groups and individuals responsible for implementation. The agency will update all staff regarding progress and performance at regular intervals, including during October Energy Awareness Month and after submitting annual updates to this plan.

This plan, along with future annual updates, will be considered public information and will be posted accordingly. NARA will publish this Sustainability Plan in electronic form on its website, most likely on this page, which is associated with the transparency initiative: http://www.archives.gov/open/transparency.html

Section 2: Performance Review & Annual Update

I. Summary of Accomplishments

Reduction in Energy Consumption (Facilities): Since 2006, NARA has implemented several major energy conservation initiatives at its facilities. The results of these initiatives can be seen in the FY2006 through FY2009 Energy Reports (and the summary table below) which show significant reductions in energy usage. NARA has an agency-wide goal to operate its buildings as efficiently as possible, with the intent to exceed the energy reduction goals established in E.O. 13123 and E.O. 13423/EPACT 2005, while still maintaining the stringent environmental conditions required for the preservation and safe storage of the nation's archival documents and historical artifacts.

NARA has aggressively pursued energy audits of all its facilities and has carried out all practical energy and water conservation projects with payback periods of less than 10 years. Between fiscal years 2006 and 2009, NARA invested several million dollars through a combination of direct appropriations and Energy Savings Performance Contracts (ESPCs) for energy efficiency projects. As a result, the agency has realized a significant reduction in energy consumption in comparison to the 2003 baseline. Below is the reduction summary:

FY	Btu/GSF	Btu/GSF Reduction vs FY2003	Site Delivery Billion Btu	Est GHG Emission (Ton)	GHG Reduction vs Previous FY
2003	181,189				
2006	156,988	13.4%	637.7	82,033	
2007	150,896	16.7%	612.9	80,347	2.06%
2008	135,603	25.2%	**575.2**	**75,235**	6.36%
2009	132,323	27.0%	561.3	74,690	0.72%

NARA's successes in this arena have been recognized. The agency was one of four Government agencies to win a FY2008 Presidential Award for Leadership in Federal Energy Management for its support, leadership, and effort in promoting and improving energy use in facilities and operation.

Advanced Metering: In addition to reducing its energy consumption, NARA has exceeded targets for installing advanced meters in its facilities to track electricity usage. Currently all sixteen (100%) of NARA facilities have standard meters installed. Fifteen of those facilities also have advanced electrical metering. One remaining facility (Nixon Library) will have its advanced meter installed under the addition and renovation project in FY2010. A future project to install advanced metering for other utilities (gas, chilled water, and water) at sixteen facilities is scheduled to be awarded in FY2010. This program will provide extensive real-time data that will allow NARA to further reduce its energy use and extend equipment life.

Renewable Energy: NARA is presently utilizing and increasing the amount of renewable energy generated at its facilities, as detailed below:

- The existing 5,247 square feet of photovoltaic solar panels at the Clinton Library produced 188.8 megawatt hours in FY2008 and 154.8 megawatt hours in FY2009.
- The existing 4,200 square feet of solar-thermal panels at the Eisenhower Library generates an average of 15,000 Btu/day for the facility hot water system.
- All electricity and chilled water at the Reagan Library is generated by an on-site natural gas cogeneration system, with the waste heat operating absorption chillers for the air handling system.

- The new 103 kilowatt photovoltaic panels at Archives II produced 55.7 megawatt hours in FY2009.

In addition to generating renewable energy on-site, NARA currently purchases approximately 5% renewable energy credits through the GSA area-wide contract. Each year, dependant on funding availability, NARA will increase on-site generated renewable energy projects and reduce the amount of purchased renewable energy credits.

High-Performance Design: NARA Directive 1571, Architecture and Design Standards for Presidential Libraries (NARA design standards), outlines all building requirements for the storage and safekeeping of archival material. All new facilities are built to this standard (currently LEED-NC Silver, Version 3). This guideline is edited to comply with the requirements of EPACT 2005, E.O. 13423 and E.O. 13514. The documents and artifacts at NARA facilities must be maintained in a controlled environment 24 hours per day, 365 days per year (temperature, humidity and air quality). For new buildings, NARA strives to design systems to be 30% more efficient than ASHRAE/IES Standard 90.1-2004 (American Society of Heating, Refrigerating and Air Conditioning Engineers/Illuminating Engineering Society). This intent is codified in NARA's design standards. However, it is not typically effective on a lifecycle-cost basis for NARA to meet this criterion, given the sensitive nature of the agency's holdings and requisite energy usage in the mechanical systems.

Water Conservation: Aggressive water conservation measures continue at NARA. In FY2008, water consumption (25.4 gallons per gross square foot (GSF)) was down 4.6% compared to the FY2007 baseline (26.6 gallons per GSF). This percentage reduction was more than double the 2% annual reduction target. In FY2009, NARA's overall water consumption was again down significantly—14.8%—in comparison to the FY2007 baseline.

In FY 2009, water conservation efforts focused in particular on NARA's largest building, Archives II. As part of the Archives II Super ESPC, all plumbing fixtures in the building were replaced with low-flow devices. A new reverse osmosis de-ionized water system was installed that consumes less water and energy. In addition, a six thousand gallon tank for rain water and air handler condensate storage was installed for irrigation use. As a result, the total water consumption for FY2009 at Archives II building in particular (21.53 million gallons) was reduced by 18.1% from FY2008 (26.30 million gallons), and by 30.3% from FY2007 (30.91 million gallons).

Section II: Goal Performance Review

1 . GOAL: Scope 1 & 2 Greenhouse Gas Reduction

Agency goal: By FY2015, achieve a 7% reduction in Scope 1&2 greenhouse (GHG) emissions, with a 10% reduction by FY2020 (compared to FY2008 baseline).

Other relevant NARA documents: 1) National Archives Energy Plan; 2) NARA Energy Report FY2009; 3) Scope 1&2 report: "Executive Order 13514 Greenhouse Gas Reduction Targeting Report" and "NARA GHG Target Tool"; 4) NARA Directive 704-1: NARA Fleet Management Program

Agency lead: Mark Sprouse

Implementation methods and agency status: As described above under "Summary of Accomplishments," NARA has already achieved significant reductions in its Scope 1&2 GHG emissions. The agency details its progress to date and specific projects planned for FY2010 in the documents referenced above. The following is a summary of steps that NARA plans to take to help meet its Scope 1&2 goals.

Buildings: energy conservation/optimize O&M.

- Continue implementing low/no cost conservation measures and projects with less than 10 years return-on-investment.
- Continue awarding ESPCs.
- Continue replacing end-of-life equipment with more efficient models.
- Continue altering O&M contracts and procedures to standardize and improve preventative maintenance at all facilities.
- Continue with current energy audit of all facilities (four-year cycle); expand this audit procedure to gather data needed to track/meet the other goals in this plan.
- Utilize recently-completed inventory (database) of NARA equipment at all facilities to verify maintenance schedules/completion and assist field locations in working with their O&M contractors.
- Continue with current Energy Awareness Program (anchored on October Energy Awareness Month); expand program to educate staff regarding the other aspects of sustainability in this plan.

Buildings: on-site energy.
In order to meet the requirements of E.O. 13514, the agency needs to generate more energy on-site. This will be especially critical over time if Renewable Energy Credits (RECs) become less available and/or are deemed insufficient to meet renewable requirements. Only 30% of NARA facilities can feasibly implement any renewable technology other than solar, due to constraints associated with urban locations and historical sites. Within that 30%, technologies such as cogeneration, wind, water-flow and geothermal may be feasible.

NARA plans to:

- Complete targeted wind and water-flow feasibility studies.
- Augment existing facilities to put solar arrays on every roof of 16 facilities, using the latest solar technologies as they evolve.

- Expand cogeneration to other facilities. While cogeneration still utilizes natural gas, it has two primary benefits over purchasing off-site energy: 1) no loss of energy in transmission, and 2) cogeneration byproduct (heat) is then used to heat or chill water.
- In the long term: undertake a broader feasibility study to consider other mechanisms for generating on-site power at all NARA facilities, such as geothermal.

Fleet:
NARA currently has a small fleet of vehicles leased from GSA. These vehicles are mainly used for pick-up and delivery of documents and artifacts between NARA facilities and other Federal Agencies such as the White House, U.S. Capitol, and U.S. Supreme Court. As the holder of the Nation's archival documents and historical artifacts, this mission increases yearly, particularly with the end of a two-term presidency as recently experienced. The agency is continually handling more data requests and processing items more efficiently, which leads to more frequent requests to transport items between facilities. NARA will strive to meet the intent of reducing the use of fossil fuel requirements, but given the sensitive nature of our holdings and the increasing scope of its mission, this may not always be possible.

Nonetheless, NARA is taking steps to reduce fuel usage by "right-sizing" its fleet and tracking vehicle performance and fuel efficiency. A recently issued NARA directive (704-1) to all facilities established the NARA Fleet Management Program, identifying responsibilities for its implementation and administration, and introducing some of the components of the program.

Most of NARA's leased vehicles are equipped as flex-fuel; however, it is often infeasible to travel to the few fuel stations that can provide alternative fuels. Going forward, NARA will continue to follow GSA guidelines regarding fleet fuels, with the hope that alternative fuels will become easier to access over time. NARA fleet managers are also attempting to get electric and/or hybrid vehicles added to the fleet.

Positions: The primary staff person responsible for implementing this program is Ngan Pham, NARA Energy Manager. Approximately 70% of his time goes to the energy program, which has expanded to cover GHG tracking and reduction. Other staff engineers (listed above under "Agency Energy Team" under "Plan Implementation") contribute up to 30% of their time per person to energy- and GHG-related initiatives. This amount of collective staff capacity is deemed sufficient to manage the additional demands of Goal 1 going forward.

	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)	%	28%	29%	30%	hold	hold	hold	hold	hold	hold
	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)	%	5%	5%	5%	7.5%	hold	hold	hold	hold	hold
Fleet	Petroleum Use Reduction Targets (Percent reduction from FY05 base year)	%	10%	12%	14%	16%	18%	20%	22%	....	30%
	Planned Petroleum Use Reduction (Percent reduction from FY05 base year)	%	…	…	…	…	…	15%	hold	hold	hold
	Alternative Fuel Use in Fleet AFV Target (Percent increase from FY05 base year)	%	61%	77%	95%	114%	136%	159%	hold	.....	hold
	Planned Alternative Fuel Use in Fleet AFV (Percent increase from FY05 base year)	%	Not under NARA direct control (see above)								
	Scope 1 & 2 - Reduction Target (reduced from FY08 base year)	%	…	…	…	…	…	7%	hold	hold	10%

2 . GOAL: Scope 3 Greenhouse Gas Reduction

Agency goal: By FY2020, reduce NARA Scope 3 GHG emissions by 10% (compared to FY2008 baseline).

Agency lead: Mark Sprouse

Other relevant NARA documents: Scope 3 report: "Executive Order 13514 Greenhouse Gas Reduction Targeting Report, Scope 3 Narrative Section" and "NARA Scope 3 Target Tool"

Implementation methods and agency status: As described in the Scope 3 narrative report referenced above, NARA will work toward reducing its Scope 3 emissions in each of the categories listed in the planning table below. Specific strategies will include:

- Employee travel:
  - Business: increase the utilization of conference calls, videoconferences, webinars, and web conferences.
  - Commuting: continue to promote the use of public transit, teleworking, alternative work schedules and carpooling.
- Contracted waste disposal
  - Recycling: continue improving existing (successful) program; work with contractors to encourage additional material recycling during new construction.
  - Wastewater: incorporate water conservation measures into current and future ESPCs.
- Transmission and distribution losses from purchased energy: continue implementing energy conservation measures and promoting onsite energy generation.

As indicated in the Scope 3 narrative, NARA's largest Scope 3 emission is related to employee commuting. The agency faces a particular challenge here. The greatest concentration of NARA employees is at the College Park facility. While this location is served by a Metro bus line, there are few public transportation options from the outlying suburbs. Employees connecting to an existing commuter system would more than double their commute time, which is not a productive alternative.

Positions: NARA's current staff capacity as represented by the Energy Team, along with a new environmental staff person (see Goal 7), will be sufficient to handle this goal.

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)	%	--	--	--	--	--		10
Sub-Target for Federal Employee Travel	%	--	--	--	--	--		10
Sub-Target for Contracted Waste Disposal	%	--	--	--	--	--		10
Sub-Target for Transmission and Distribution Losses from Purchased Energy	%	--	--	--	--	--		10

3 . GOAL: Develop and Maintain Agency Comprehensive Greenhouse Gas Inventory

Agency goal: NARA has already completed a baseline GHG inventory covering Scopes 1, 2 and 3. Going forward, the agency will refine and expand their analyses to include more specific methodologies and other categories as appropriate.

Agency lead: Mark Sprouse

Other relevant NARA documents:
1) Scope 1&2 report: "Executive Order 13514 Greenhouse Gas Reduction Targeting Report" and "NARA GHG Target Tool"
2) Scope 3 report: "Executive Order 13514 Greenhouse Gas Reduction Targeting Report, Scope 3 Narrative Section" and "NARA Scope 3 Target Tool"

Implementation methods and agency status:
Over time, NARA plans to improve its Scopes 1, 2 and 3 GHG analyses by refining with area-specific factors (vs. national factors) to reflect regional and local variations. NARA will also add other categories of emissions over time, such as those related to new facility construction. Agency staff will then use this information to alter design guidelines and construction practices for new facilities.

Positions: As detailed more fully under Goal 7, NARA plans to add an environmental staff person who would be tasked with implementing several of the goals in this plan. Their responsibility would include the improvement and maintenance of NARA's comprehensive GHG inventory, and the management of associated initiatives that extend beyond the capacity of NARA's Energy Team.

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

Agency goal: Aggressively pursue high-performance building for new facilities, and continue applying these principles as feasible to existing buildings.

Agency lead: Ronald Noll and Mark Sprouse

Other relevant NARA documents: Architectural and Design Standards for Presidential Libraries (NARA design standard)

Implementation methods and agency status:

New Construction (Presidential Libraries): As specified in NARA's design standard, all future Presidential Libraries must achieve at least the Silver level in the LEED for New Construction standard. This widely used rating system covers a variety of high-performance design objectives including site considerations, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality. The LEED rating system encourages a rigorous, integrated design process and is generally congruent with the "Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings" (Guiding Principles). This requirement is supplemented by NARA's design guidelines, which include detailed instructions for how to design efficient building systems and create indoor conditions that meet both environmental and archival criteria.

In addition, NARA's design standards require a specialized energy analysis to be completed early in the design process of each new construction project. This energy analysis helps determine the energy budget for a new facility, which reports the cost of energy uses in dollar value per square foot and BTU per square foot, and by major building use (e.g., lighting, power, heating and ventilation equipment, etc.). NARA's seeks to design Presidential libraries to operate efficiently on an energy budget of less than 100,000 BTU/square foot.

To ensure proper implementation of NARA's green building design criteria, specification documents for new Presidential Libraries (such as the George W. Bush Library, scheduled for completion in 2012) include a section on sustainable design. This section enumerates the specific plans, spreadsheets and materials documentation that NARA requires to ensure compliance with LEED and the agency's design guidelines.

As stated above, NARA seeks to meet and exceed all relevant regulations and targets for energy consumption. However, given its archival mission and associated building design requirements, new NARA archival facilities will not be able to achieve zero-net energy by FY2030. Similarly, as noted above, the target to design to 30% better than ASHRAE standard 90.1-2004 is not generally lifecycle-cost feasible for Presidential Libraries.

To date, NARA has constructed one new facility to high-performance building standards: the Clinton Library, which surpassed the agency's goal of LEED Silver to achieve a Platinum rating from USGBC.

Existing facilities: NARA's existing facility square footage under direct control can be broadly divided into two types, with differing progress to date and future potential for high-performance design:

- Archival space including Presidential Libraries (60% of NARA-owned square footage): As described above under "Summary of Accomplishments," the NARA energy team has

made significant progress toward updating NARA's existing major facilities (Archives I and II) to be as energy-efficient as possible, while incorporating innovative strategies to minimize energy, water and materials consumption. NARA will continue working to incorporate energy efficiency and other green building goals into existing archival facilities, as feasible.

- Office space (40% of NARA-owned square footage): NARA will work toward 100% conformance with the Guiding Principles for its owned and leased office space square footage, as feasible.

Over the coming year, the NARA Energy Team plans to pursue additional energy conservation measures to include more of NARA's existing square footage (both archival and office). This will require them to work with facilities staff in library locations to obtain additional information about current building performance and formulate plans to "green" them progressively over time.

In a future report, NARA will outline specific strategies for progressively managing all of its existing square footage in a high-performance manner.

Positions: NARA's Energy Team, led by Ngan Pham, Energy Manager, has sufficient capacity to manage the expansion of NARA's energy conservation program, as described above. However, in order to begin incorporating other green building principles into the management of existing facilities, NARA will need additional staff capacity. As detailed more fully under Goal 7, NARA is requesting an additional environmental staff person who would be tasked with implementing several of the goals in this plan. Their responsibility would include developing more detailed plans for moving toward the Guiding Principles for NARA-owned office space, archival facilities, and leased facilities.

SUSTAINABLE HIGH PERFORMANCE BUILDINGS (Buildings Meeting Guiding Principles)	Units	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Owned Facilities Targets (Presidential Libraries)	%	6%	12%	Hold	Hold	Hold	Hold
Leased Facilities Targets	%	Controlled by other entities. Strategies and targets to be developed in a future report.					

5 . GOAL: Regional and Local Planning

Agency goal:

1. *New facilities:* To the extent possible, incorporate regional and local planning objectives in the siting of future facilities.
2. *Existing facilities:* Improve access to existing facilities by investigating additional options for linkages with regional and local transportation networks.

Agency lead: Mark Sprouse

Implementation methods and agency status:

New facilities: NARA does not control location selection for new Presidential Libraries; the location is chosen by the former President or, in some cases, by the foundation managing the

project. In most cases, urban areas or college campuses are chosen as Presidential Library locations. These locations are often suitable for a large institutional land use, and typically integrate well with local and regional transportation planning.

Once the general location has been selected, NARA's design guidelines influence site-specific sustainability considerations through reference to the LEED for New Construction standard. These considerations include development density and community connectivity; alternative transportation; on-site habitat and open space; and stormwater design—all of which help ensure congruence with local planning objectives. NARA will further augment its design standards with a requirement to review and consider local land use, transportation, energy and ecosystem plans (in addition to all relevant environmental regulations).

Existing facilities: NARA staff will conduct a review of all 16 existing (owned) facilities to determine compatibility with local and regional transportation networks, improve/provide linkages where possible, and update policies and procedures as necessary. In a future report, NARA may request a modest investment associated with providing additional bus/shuttle service to help meet this criteria.

Positions: As detailed more fully under Goal 7, NARA is requesting an additional environmental staff person who would be tasked with implementing several of the goals in this plan, including this one.

(Note: As NARA does not have quantifiable goals or requests for investment in this category at this time, the planning table has been omitted from this section).

6 . GOAL: Water Use Efficiency and Management

Agency goal: Build on strong water conservation efforts and progress to date to achieve a 20% reduction by FY2015 (vs. FY2007 base year) and 26% by FY2020.

Agency lead: Mark Sprouse

Implementation methods and agency status: To date, NARA has exceeded its targets for water conservation through a combination of initiatives in Archives II, its largest facility, including installation of new low-flow fixtures and a new reverse osmosis water system. In addition, irrigation at Archives II is now accomplished using rainwater stored in a six thousand gallon tank, which is also fed by air handler condensate. This is essentially a closed loop; Archives II is irrigated without adding fresh water to the system. As a result of these efforts, the total water consumption for FY2009 at Archives II (21.53 million gallons) was reduced by 18.1% from FY2008 (26.30 million gallons), and was down 30.3% from FY2007 (30.91 million gallons).

Not all NARA facilities are as well-positioned as Archives II to conserve water. Certain Presidential Libraries (e.g., the Reagan Library) are located in the desert and are lushly landscaped—an aesthetic requirement not under NARA control.

Going forward, NARA intends to upgrade additional irrigation systems with timers, stormwater capture and greywater reuse where feasible. This could include installation of stormwater tanks similar to the one currently in place at Archives II.

Positions: To date, water conservation has been managed by the NARA Energy Team., NARA now hopes to expand its water conservation program, supported by additional staff capacity (environmental staff person, see Goal 7).

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)	%	15%	Hold	Hold	Hold	Hold	20%	....	26%
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)	%	-	2%	4%	6%	8%	10%	....	20%

7 . GOAL: Pollution Prevention and Waste Elimination

Agency goal: NARA does not yet have all baseline data needed to formulate a goal for this area of the plan.

Agency lead: Mark Sprouse

Implementation methods and agency status: NARA has taken the following actions to reduce waste associated with its operations:

- Gathered waste information for NARA's largest facilities, Archives I and II. Using this data, extrapolated on a square foot basis to develop a rough waste baseline for all NARA facilities (used in Scope 3 analysis).
- Reduced printing paper usage by educating staff of double-sided printing options (via Energy Awareness Month and a related NARA Notice).
- Established a recycling program that handles all paper types, aluminum cans, glass and plastic; altered maintenance contracts to ensure implementation.
- Required construction contractors to recycle metal and all other recyclable materials.

Going forward, NARA intends to:

- Gather additional data from other NARA facilities to develop a more detailed and accurate baseline of waste/recycling data.
- Develop a plan and targets for reducing waste at all facilities.
- Develop a Compliance Management Plan to reduce NARA impact associated with hazardous chemicals, as required by E.O. 13423.

Positions: NARA requires additional staff capacity to meet this goal. The agency plans to hire an additional environmental staff person (using funds in the existing budget). This new position's duties would include:

- Work with Energy Team to expand existing energy audit procedure to cover other goals in this plan (Goal 1)
- Work with Energy Team to expand current energy-related training and education program to include other sustainability issues (Goal 1)

- Support Energy Team in reducing Scope 3 GHG emissions through existing and new reduction initiatives (e.g., reducing construction-related emissions) (Goal 2)
- Maintain and improve NARA's comprehensive GHG inventory (Goal 3)
- Develop and implement detailed plans for moving toward the federal green building Guiding Principles for all NARA office space, archival facilities, and leased facilities (Goal 4)
- Update existing policies and procedures to incorporate local land use, transportation, energy and ecosystem plans (Goal 5)
- Review NARA procedures and practices regarding hazardous waste handling and disposal; develop and manage implementation of a Compliance Management Plan to reduce any associated environmental impact (Goal 7)
- Gather additional waste data; develop and implement a plan to reduce waste disposal at all facilities (Goal 7)
- Implement the Facility Division's responsibilities under the (DRAFT) NARA Directive 503: Environmental Stewardship Program (Goal 8)
- Identify additional pilot projects to help foster innovation in sustainability (Goal 10)

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)	%	Targets to be included in future report					50%
C&D Material & Debris Diversion Targets	%	Targets to be included in future report					50%

8 . GOAL: Sustainable Acquisition

Agency goal: Implement new procedures for sustainable acquisition according to a new NARA policy directive.

Other relevant NARA documents: NARA Policy Directive 503: Environmental Stewardship Program (currently under development).

Agency lead: Mark Sprouse

Implementation methods and agency status:, NARA has made some changes in its procurement practices in keeping with sustainability; for example, all office paper purchased by the agency contains 30% recycled content. At present, however, NARA is developing an internal directive (NARA 503) communicating a new policy on this topic: the NARA Environmental Stewardship Program. This directive establishes the NARA program for green procurement and electronics stewardship and provides guidance on (1) Purchasing bio-based, environmentally preferable, energy-efficient, water-efficient, and recycled-content products; and (2) Managing obsolete electronics in an environmentally safe manner. This directive applies to all NARA employees and contractors, especially those involved in the procurement process. The new program that it describes makes sustainable acquisition the requirement (default); any exceptions for not procuring a green product must be approved by Mr. Richard Judson, the Acting Assistant Archivist for Administration.

NARA's objectives under the new Environmental Stewardship Program are to:

1. Purchase green products and services to the maximum extent practicable.
2. Enhance and sustain mission readiness through cost effective acquisitions that achieve regulatory compliance while reducing resource consumption and solid and hazardous waste generation.
3. Demonstrate environmental and energy consciousness in the selection and use of products and services.
4. Contribute to the sound management of NARA's valuable financial and natural resources and energy.
5. Reduce the environmental and energy impacts of electronic products through a continuous improvement of the three lifecycle phrases—acquisition, operations and maintenance, and disposition.

NARA Directive 503 outlines the purpose, objectives, and authority for this program, along with specific implementation responsibilities for each division within NARA. NARA's Facilities Division (led by Mark Sprouse) will be responsible for the majority of program implementation. This division's responsibilities include:

- Setting specific targets
- Educating staff about the program
- Transmitting necessary NARA guidance/directives
- Advising management personnel across all offices on implementation
- Evaluating performance
- Sharing best practices
- Applying for relevant awards

Positions: The new environmental staff person being requested as part of this plan (see Goal 7) will also work with NARA's Facilities Director to implement the division's responsibilities for sustainable acquisition. This person will develop the baseline information necessary to quantitatively determine NARA's current progress toward sustainable acquisition, and set targets for coming years.

SUSTAINABLE ACQUISITION	Units	FY 10	FY 11	FY 12	....	FY 20
New Contract Actions Meeting Sustainable Acquisition Requirements	%	?	95%	hold	hold	hold
Energy Efficient Products (Energy Star, FEMP-designated, and low standby power devices)	%	Targets to be included in future report				
Water Efficient Products	%	Targets to be included in future report				
Biobased Products	%	Targets to be included in future report				
Recycled Content Products	%	Targets to be included in future report				
Environmentally Preferable Products/Services (excluding EPEAT)	%	Targets to be included in future report				
SNAP/non-ozone depleting substances	%	Targets to be included in future report				

9 . GOAL: Electronic Stewardship and Data Centers

Agency goal: 1) To comply with the electronics management/disposal aspects of NARA Policy Directive 503: Environmental Stewardship Program (currently under development). 2) To meet the performance targets in the planning table below.

Agency lead: Mario Barroga and Mark Sprouse

Implementation methods and agency status: All of NARA's electronic equipment is supplied by GSA, and NARA currently utilizes one small data center, which is located in Archives II. The agency has taken some steps to date to reduce its environmental impacts associated with computing; for example, staff education via NARA Notices and Energy Awareness Month encourages employees to turn off their computers at the end of the workday. When it is time to replace electronic devices, NARA currently donates still-working devices to local schools.

Going forward, the E-Government Electronic Records Management Initiative, for which NARA is the managing partner, will be increasing NARA's electronic storage needs. To help minimize the environmental impacts associated with this increasing demand, NARA will comply with the electronics management/disposal aspects of NARA policy directive 503: Environmental Stewardship Program (currently under development).

In addition, NARA commits to the following regarding its data centers:

a. Establish and implement policy and guidance to ensure effective use of power management, and other energy efficient or environmentally preferred options and features on all eligible agency NARA IT devices.
b. Provide Information Technology Security Guidelines and policies to reflect environmentally sound and secure practices for disposition of all excess or surplus electronic storage devices.
c. Update agency policy to strive for implementation of best management practices for energy efficient management of servers and Federal data centers.
d. Seek the optimal temperature settings of its data center to find the balance between hardware reliability and reduced HVAC output.
e. Explore the use of emerging technologies, such as virtual servers and blade servers, to reduce power and cooling requirements of IT devices at all NARA facilities.
f. Increase the quantity of electronic assets disposed through sound disposition practices. NARA will use a destruction company for data sensitive items and recycle by products. NARA will also look for opportunities to contribute 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.

Positions: Current staff capacity is sufficient to meet these goals.

ELECTRONIC STEWARDSHIP & DATA CENTERS	Units	FY 10	FY 11	FY 12	FY 13
% of staff assets purchased with Energy Star specifications and that are energy-star qualified	%	80%	85%	90%	95%
% of IT storage devices covered by sound disposition practices	%	60%	70%	80%	90%
% application activity hosted in NARA data center	%	30%	50%	70%	75%
% of agency data center equipment independently metered or advanced metered and monitored	%	60%	75%	80%	85%
% of agency, end user IT products with power management and other energy-environmentally preferable features actively implemented and in use	%	60%	70%	80%	90%
% of agency data center servers using hardware-consolidating technologies such as blade servers or virtual server software.	%	10%	25%	40%	55%
% of desktops, monitors covered electronic product acquisitions that are EPEAT- registered	%	65%	75%	85%	95%
% of new business cases addressing Energy Star and green initiatives in the planning phase*	%	10%	50%	70%	90%

*In order to achieve this goal, the IT policy and planning section will update NARA 801 and associated business case forms to specifically address energy efficient and environmental approaches.

10. GOAL: Agency Innovation

Agency goal: Maintain and enhance NARA's status as a leader in sustainability by piloting new systems and technologies.

Agency lead: Mark Sprouse

Implementation methods and agency status: NARA is currently implementing (or planning to implement) the following pilot projects as part of this goal:

1. Technologies to generate energy on-site, including:
    a. Pilot project on Building 5 (located in College Park, Maryland) to test building-integrated photovoltaic panels.
    b. New solar technologies: pilot cutting-edge technologies as part of future solar installations on NARA-owned facilities (also see Goal 1).
    c. Cogeneration: 100% of the electricity and chilled water consumed at the Reagan library is generated by an on-site natural gas cogeneration system and absorption chillers (waste heat from the system is used for the absorption chillers). Archives I and II have cogeneration plants in the design stage using the same principle (waste heat is used to generate hot water).
2. Technologies to save energy in buildings, such as:
    a. Kathabar system: pilot project at Archives II to capture conditioned air as it leaves the building, and use this preheated/pre-cooled air to help condition incoming fresh air. If successful, NARA will incorporate this system into its design standard for future Presidential Libraries.
3. Systems to reuse greywater and capture stormwater and condensate for irrigation, expanding on the success of the stormwater/condensate tank at Archives II.

4. Technologies for environmentally efficient information management, such as:
    a. Storage and server consolidation
    b. Energy-efficient Storage Area Network (SAN) switches and directors
    c. Tiered storage infrastructures
    d. Consolidation of several agency-wide storage and backup assets
    e. Cloud computing

Positions: Current staff capacity (Energy Team and IT staff) plus additional support from the new environmental staff person (see Goal 7) will be sufficient to undertake this goal.

Note: NARA is currently piloting these innovative projects using funds within the existing budget. If successful, appropriate investments will be requested to scale up these projects in the future.

Section 3: Agency Self Evaluation

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

NARA's planned actions for the next two OMB scorecard cycles are as follows:

- Continue construction and implementation of ECM's at Archives I with ESPC contract
- Install cogeneration system at Archives II
- Install Kathabar waste energy capture system at Archives II
- Complete Archives II chiller plant conversion
- Complete design of Archives II integrated solar roof
- Complete design and install new white roof on Ford Museum
- Replace HVAC equipment at Eisenhower Library with high efficiency and VFD's
- Replace Chillers and HVAC at Nixon with high efficiency and VFD's
- Replace chillers and HVAC at Reagan with high efficiency and VFD's
- Complete construction/renovation of Roosevelt Library; replace HVAC and install VFD's
- Complete renovation/addition of Kennedy Library; replace HVAC and install VFD's
- Complete renovation of Carter Library; replace chillers and HVAC and install VFD's

Appendix 1: Acronyms and Abbreviations

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
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
FEMP	Federal Energy Management Program
FTE	Full Time Employee
FY	Fiscal Year
gal	gallon
GHG	Greenhouse Gas
GPRA	Government Performance and Results Act
GSA	General Services Administration
GSF	Gross Square Feet
IT	Information Technology
MILCON	Military Construction
mtCO2e	Metric tons of Carbon Dioxide Equivalent
NEPA	National Environmental Policy Act
O&M	Operations and Maintenance
OMB	Office of Management and Budget
PPA	Power Purchase Agreement
PUE	Power Usage Efficiency
R2	Responsible Recyclers
RIA	Regulatory Impact Analysis
ROI	Return on Investment
SF	Square Feet or Square Footage
SNAP	Significant New Alternatives Policy
SRPO	Senior Real Property Officer
SSO	Senior Sustainability Officer
TRI	Toxics Release Inventory
USC	United States Code
UESC	Utility Energy Services Contract