U.S. Department of
ENERGY

2013 Strategic Sustainability Performance Plan

**Report to The White House
Council on Environmental Quality
and Office of Management and Budget**

June 2013

**United States Department of Energy
Washington, DC 20585**

U.S. Department of Energy

2013 Strategic Sustainability Performance Plan

June 28, 2013

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There is great urgency associated with the Department of Energy's (DOE or Department) continuous and vital mission. An increasingly complex, global environment has brought into sharp focus the relationships between energy security, climate change, and national security objectives. In this fourth annual Strategic Sustainability Performance Plan (SSPP), DOE pledges to continue to be a leader in the Federal government, working aggressively to achieve sustainability goals and requirements through teamwork and continuous improvement.

The Department commits to "**LEAD**" the Federal government through implementation of the following sustainability approaches:

- *Leverage the Science*
  DOE will continue to leverage the science conducted by our National Laboratories. Cross-functional laboratory teams will continue to identify cost-effective energy solutions at DOE facilities, especially energy intensive processes. These efforts will build on past successes, including the implementation of a DOE-developed cryogenic refrigeration innovation at DOE megawatt-scale particle accelerators, which reduces their electricity needs by one-third.

- *Empower our Employees*
  Coordinated through the Department's Sustainability Performance Office (SPO), DOE will continue to collaborate across programs and offices, embrace whole-enterprise thinking, and challenge established habits and procedures to instill culture change. DOE encourages behavior change through a variety of efforts, including an annual sustainability awards program that recognizes sustainability achievements throughout the complex.

- *Analyze our Progress, Bridge the Gaps*
  DOE will launch an enterprise-wide sustainability reporting system for the upcoming reporting cycle. This system will provide a uniform and consolidated reporting tool and process; eliminating multiple and duplicative reporting systems and streamlining sustainability reporting efforts across the Department. We will utilize this dashboard to help identify highly replicable projects that yield immediate results.

- *Drive Innovation*
  Leading by example, DOE Headquarters installed a photovoltaic solar array at its Germantown facility in July 2012. The photovoltaic array will generate approximately 450,000 kilowatt hours of electricity each year and includes a 52kW carport-mounted solar array. The Department will pursue additional innovation, including larger utility scale renewable energy projects on DOE land providing up to 155 megawatts in clean energy in FY 2014.

  As a leader in developing clean energy and energy efficiency technologies, DOE will continue to aggressively leverage its mission to ensure that it meets and exceeds sustainability goals and requirements, while leading the Federal government and the Nation to a more sustainable future.

Daniel B. Poneman
Senior Sustainability Officer
Deputy Secretary of Energy

6/24/13
Date

Department of Energy
2013 Strategic Sustainability Performance Plan
Executive Summary

The mission of the Department of Energy (DOE or Department) is to ensure America's security and prosperity by addressing energy, environmental, and nuclear challenges through transformative science and technology solutions. DOE's mission is performed at 47 geographically dispersed locations across the United States and relies on high-energy mission specific facilities in pursuit of new and advanced forms of energy, basic science and research, and creating a clean and affordable energy economy.

DOE's Strategic Sustainability Performance Plan (SSPP) embodies the Department's sustainability commitment laid out in its 2011 Strategic Plan. Consistent with the objectives of Executive Order (E.O.) 13514, the Department will continue to integrate the principles of sustainability into its decision-making processes.

As the Federal leader in clean energy research and development (R&D), DOE has a unique opportunity to lead by example and integrate sustainability into all aspects of its operations. In FY 2012, multiple on-site renewable generating projects became fully operational. DOE will continue to pursue projects that advance renewable energy and energy efficiency at its facilities. As DOE plans the replacement for its Forrestal building, DOE will ensure it serves as a showcase for energy efficiency and sustainability.

DOE leverages its foundation in scientific research to engage local communities, including businesses, local governments, and schools to test and deploy technologies developed by DOE National Laboratories, and to implement comprehensive, effective approaches to reduce energy consumption and environmental impacts. In addition, DOE sites will be utilized as test beds for R&D pilots to advance energy technology and improve performance.

Sustainability is prioritized at DOE through the assignment of the Deputy Secretary as the Senior Sustainability Officer (SSO). In this capacity, the SSO chairs the Senior Sustainability Steering Committee and oversees Departmental attainment of sustainability goals and requirements. The Sustainability Performance Office (SPO) serves as the principal lead for the Department on matters relating to sustainability and supports the SSO in the execution of duties including monitoring performance, developing guidance, reporting, data collection and analysis, and implementing and updating the SSPP. DOE Under Secretaries support the SSO in meeting sustainability goals and are responsible for planning, resourcing, implementing, monitoring, reporting, and managing the achievement of DOE's sustainability goals.

The annual budget process is informed by the goals of the SSPP, starting at the Under Secretary level and progressing through the Program Secretarial Offices (PSO) to DOE's National Laboratories and sites. The Department continues to align its site-level environmental, energy, and real property planning systems to elevate sustainability in site management. *DOE Order 436.1, Departmental Sustainability*, ensures that senior leaders, managers, staff, and DOE contractors are accountable for meeting sustainability requirements.

Over the next year, DOE will continue to engage its stakeholders and employees to enhance continuous improvement in the implementation of sustainability requirements. Efforts will include gathering data and operational experiences from DOE programs and sites, and disseminating internal scorecards that provide feedback on progress toward goals. To encourage participation and feedback, DOE created a virtual

comment box that is accessible to all DOE staff through email (sustainability@hq.doe.gov) that collects ideas and suggestions on DOE sustainability efforts. The monthly DOE SPOtlight newsletter highlights upcoming events, raises awareness, and shares best practices and lessons learned with DOE programs, sites, and the entire DOE sustainability community. The Department also recently began a monthly teleconference series to bring together DOE site and facility managers on a variety of sustainability topics closely aligned with the SSPP goals augmenting a robust set of workgroups and communities of practice.

Information is also accessible through DOE's sustainability public website where the SSPP, and associated milestones/performance information, are posted. DOE provides periodic updates on the status of programs, initiatives and accomplishments associated with the SSPP. This information can be found at www.sustainability.energy.gov. The Department also utilizes PowerPedia, DOE's internal wikipedia site, to share sustainability information, resources, and performance data.

DOE will take a major step toward improving sustainability data management and analysis with the launch of a new enterprise sustainability reporting tool. The new online database will merge and consolidate existing database platforms and provide instant, in-depth analytics to DOE programs and site managers.

The following table summarizes DOE's performance toward many of the key sustainability-related goals addressed by the SSPP:

Goal	Baseline	FY 2012 Results	FY 2012 Target	FY 2012 Performance (vs. Baseline)
Scope 1&2 GHG Reduction ($MtCO_2e$)[4]	4,747,874	3,117,826	-15%	-34.3%
Scope 3 GHG Reduction ($MtCO_2e$) [4]	796,680	674,734	-3%	-15.3%
Energy Intensity Reduction (Btu/GSF)[1]	227,379	170,301	-21%	-23.5%
Sustainable Buildings	2,557	68	9%	2.66%
Petroleum Reduction (GGE)[3]	7,401,460	6,788,402	-14%	-8.4%
Alternative Fuel Increase (GGE)	624,704	1,490,562	95%	138.6%
Potable Water Intensity Reduction (Gal/GSF)[2]	70.5	59.2	-10%	-16.6%
Renewable Energy (MWh)[5]	5,165,367	866,683	5%	17.5%

1. BTU – British Thermal Units
2. Gal/GSF – Gallons per Gross Square Foot
3. GGE – Gasoline Gallons Equivalent
4. $MtCO_2e$ – Metric tons Carbon Dioxide Equivalent
5. MWh – Megawatt hours

Since its first SSPP, DOE has quickly advanced on numerous sustainability goals and is exceeding targets for GHG emissions, renewable energy, energy and water intensity, and alternative fuel use. While there is more work ahead, DOE looks forward to partnering with its sites, National Laboratories, and other Federal agencies to secure a sustainable future for the Department.

Goal 1 – Greenhouse Gas (GHG) Reduction

The Department of Energy is currently exceeding interim reduction targets for greenhouse gas (GHG) emissions. Consistent with section 2(b) of E.O. 13514, DOE committed to reducing scope 1 & 2 GHG emissions (direct emissions) by 28 percent and scope 3 GHG emissions (indirect emissions) by 13 percent by FY 2020. Through FY 2012, the Department achieved reductions of 34 percent for scope 1 & 2 GHG emissions and 15 percent for scope 3 GHG emissions, each relative to a FY 2008 baseline.

ORNL's New Biomass Steam Plant

DOE's success in reducing scope 1 & 2 emissions is directly related to the improved performance and overall efficiency of its facilities. Over the past few years, DOE completed installation and began operations of several large scale renewable energy projects at DOE sites. Collectively, these projects reduce the Department's dependence on grid electricity and overall GHG emissions. At the Oak Ridge National Laboratory (ORNL), a new biomass fueled steam plant became fully operational in July 2012. This energy savings performance contract (ESPC) funded project is expected to save $4 million and avoid 20,000 tons of GHG emissions annually.

SF_6 emissions constitute 9 percent of DOE's 2012 scope 1&2 emissions. SF_6 has many beneficial properties that are not found in other materials, and its use is required in many specialized equipment operated at DOE, including particle accelerators and pulsed power experiments. Since 2010, DOE sites have utilized SF_6 capture programs to reduce these potent emissions, which resulted in a cumulative reduction of 54 percent since 2008, avoiding one million metric tons of CO2e since that time.

While recent progress is encouraging, continued GHG reduction success is not a certainty. At many DOE sites, mission-related activities are expected to increase, expanding demand for energy and electricity. As a result, DOE will be challenged to sustain reductions. To counter these increases, DOE will continue to perform site-level energy assessments and implement cost-effective energy conservation measures to maximize efficiency.

Employee commuting is the largest contributor of DOE's scope 3 GHG emissions, accounting for 57 percent of the Department's total. To reduce scope 3 emissions, DOE will encourage the use of mass transit, alternative transportation, and promote teleworking and alternative work environments, such as hoteling. In the past year, DOE's Pacific Northwest National Laboratory (PNNL) piloted a telework option for its staff and achieved an 11 percent participation rate for staff teleworking once per month on average. By FY 2020, PNNL hopes to increase participation to 40 percent of staff teleworking one day a week. The Department will leverage this and other recent successes, through replicating results at other DOE sites.

DOE's scope 3 GHG emissions are also attributable to transmission and distribution (T&D) losses. As the Department expands on-site renewable generation at DOE sites, T&D loss emissions should decrease.

Goal 2 – Sustainable Buildings

DOE performs its mission at 47 geographically dispersed sites across the U.S. to advance basic science and research, expand the use of clean, affordable, and safe energy, and safeguard the nation's nuclear stockpile. DOE facilities consist of unique scientific laboratories, accelerators, light sources, supercomputers and data centers, industrial facilities, and traditional office space environments. As a result, the Department is challenged with integrating sustainability into mission-critical, energy intensive, and aging infrastructure.

NREL's Research Support Facility

By FY 2015, DOE commits to having 15 percent of its building stock meet the federal guiding principles of high performance sustainable buildings (HPSB). As of FY 2012, 2.7 percent of the Department's building stock met the guiding principles. Despite being behind the interim sustainable buildings target, DOE is exceeding interim targets for energy intensity reduction. As of FY 2012, DOE reduced energy intensity by 23.5 percent relative to the FY 2003 baseline, and is on track to meet the FY 2015 goal of 30 percent.

DOE made significant progress over the past year to improve sustainable building performance. In FY 2012, DOE added 30 buildings to its green building portfolio, nearly doubling its overall HPSB count from FY 2011. DOE will leverage findings from these successes, as well as from site-level energy audits and assessments to evaluate potential energy conservation measures at additional facilities. For all potential projects, DOE will calculate return on investment and life cycle costs when establishing funding priorities. DOE will also continue to expand metering and benchmarking efforts across DOE facilities, with the goal of metering all energy intensive buildings.

Several DOE sites were recently recognized for excellence in sustainable buildings. The Argonne National Laboratory received an Intent to Matter Award from the U.S. Green Building Council for its efforts in reducing their environmental footprint and improving the environment in a substantial way.

Two recent successes of DOE's ability to integrate sustainability cost-effectively at mission-specific facilities are the National Renewable Energy Laboratory's (NREL) Research Support Facility (RSF) and Hanford's 200 West Groundwater Treatment Facility. NREL's LEED-platinum 360,000 square foot facility was constructed at a cost of $254 per square foot, significantly lower than the industry average of $355 square foot for a LEED-platinum designed building. Sustainable green buildings present challenges at DOE's environmental cleanup sites; however, DOE demonstrated that sustainable design can be incorporated into these mission critical buildings. In FY 2012, DOE's Hanford Site met the Guiding Principles at a facility that treats groundwater contaminated by the country's cold-war legacy. The 200 West Groundwater Treatment Facility was constructed using recycled steel and concrete and over 75 percent of construction waste was diverted from landfills.

Performance-based contracting is a key strategy for meeting sustainable building and other sustainability goals. DOE committed $100 million over two years to the President's agency-wide $2 billion Performance Contracting Challenge. In FY 2013, the Department awarded an ESPC to construct five 2.3 MW wind turbines on 1,500 acres of government land east of Amarillo, Texas' Pantex Plant. The Department will utilize programs such as ESPC ENABLE to target smaller scale projects at DOE sites. DOE will continue to utilize these funding tools to maximize investment opportunities.

Goal 3 – Fleet Management

The Department continues to implement fleet management practices that increase the acquisition and use of alternative fuel vehicles and reduce petroleum use. Collectively, these measures improve the Department's ability to optimize the size and composition of its vehicle fleet to fulfill mission requirements.

Solar-Assisted EV Charging at PNNL

The Department is currently exceeding interim goal targets for alternative fuel use and alternative fuel vehicle acquisition. As of FY 2012, the Department increased alternative fuel consumption by 138 percent relative to an FY 2005 baseline. This progress well exceeds the interim target of 95 percent and places the Department on track to meet the FY 2015 E.O. 13423 goal of a 159 percent increase.

Despite progress over the past year, the Department did not meet the FY 2012 E.O. 13514 and E.O 13423 interim target for reducing petroleum use. The Department achieved an 8 percent reduction in FY 2012 relative to the FY 2005 baseline, an improvement of 3 percent from FY 2011, but fell short of the 14 percent interim target under both E.O.s.

DOE faces challenges in reducing fleet petroleum use due to its mission-specific activities. Acceleration of cleanup activities of cold-war legacy sites funded by the American Recovery and Reinvestment Act (Recovery Act) increased overall petroleum use. These activities require heavy-duty, petroleum intensive vehicles which are not readily available in alternative fuel platforms. As these activities are completed over the next few years, the Department should see a marked reduction in petroleum use. Many DOE sites are also located in remote locations inaccessible to alternative fueling stations. To address this issue, the Department will utilize available alternative fueling locator tools and, where applicable, evaluate the installation of on-site alternative fueling infrastructure to serve these locations.

Over the next year, DOE intends to improve petroleum and alternative fuel performance by investigating areas for improvement and implementing a corporate system to better manage fleet assets. DOE will perform data deep dives to identify areas for improvement. DOE sites will also draft site-level fleet management plans as a complement to DOE's Fleet Management Plan and Vehicle Allocation Methodology. DOE also intends to pilot a fleet management system to improve accounting for the entirety of its fleet inventory. Presently, DOE's owned assets are maintained in separate data systems with oversight provided at the headquarters level. Implementation of the FedFMS is being coordinated with the General Services Administration and the pilot is expected to launch in the Fall of 2013.

The Department also plans to continue to expand electric vehicle (EV) and alternative fueling infrastructure at DOE sites. Several DOE sites, including NREL, have installed EV charging to study employee charging habits and further research of charging technology.

Goal 4 – Water Use Efficiency & Management

Water is essential to the DOE mission, as industrial processes account for the majority of DOE's potable and non-potable water use. Many DOE sites use water for evaporative cooling towers, air conditioning, process heat removal, research, and cooling accelerators, light sources, supercomputers and data centers. The reliance on water-intensive mission-critical activities may create a challenge to DOE in meeting future water reduction goals.

Wastewater Treatment at the Lawrence Berkeley National Laboratory

The Department is currently on-track to meet the FY 2020 goal of a 26 percent reduction in potable water use intensity. As of FY 2012, DOE reduced potable water intensity by 16.6 percent relative to the FY 2007 baseline, exceeding the interim target of 10 percent. DOE's performance can be attributed to the efforts of several large water consuming sites that upgraded large processes in FY 2012. For example, the Portsmouth Site decreased water consumption dramatically by 906 million gallons (a 12 percent decrease from FY 2011) by replacing the once-through cooling system at the Dry Air Plant (DAP) with a recirculating cooling water system and by replacing an old coal-fired steam plant with a new gas-fired boiler plant.

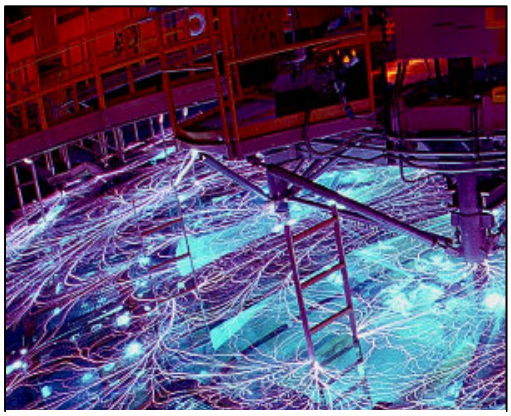
DOE will be challenged to maintain success over the next few years as water-intensive mission-related activities increase and the square footage of DOE's building footprint continues to fluctuate. For example, at the Strategic Petroleum Reserve (SPR) water is used to pump oil from its caverns and to maintain cavern operability. This is a national security mission critical activity that demands high water consumption. In addition to these activities, cooling demand of supercomputers and scientific processes makes future success difficult to predict. To overcome these obstacles, the Department will continue to employ proactive water management strategies. In the past year DOE completed five detailed site-level water assessments at high-use locations. The findings from these assessments and audits are utilized by site and program office personnel to guide decisions for evaluating low-cost/high-reward water improvements and upgrades.

DOE will also pursue water recycling and reuse options to reduce water consumption at remote sites, where water is scarce and at sites where excess use may have adverse impacts on surrounding and downstream areas. To support this approach, the Department intends to investigate the potential for converting once-through cooling systems to closed-loop and reuse of process water or use gray water and/or storm water runoff to displace potable water use. Within five years, the Department will strive to replace 10 percent of potable water used for industrial processes with alternative water sources.

Infrastructure projects also have significant potential for water savings and opportunities can be realized through careful planning. DOE will continue to replace old fixtures, water conveyance systems, and/or HVAC components with water efficient technologies during standard maintenance or upgrades where cost effective. For new construction, water-efficient technologies can be incorporated into the building design and construction for meeting the DOE high performance sustainable building design goals. The continued installation of water meters across DOE sites will aid in the collection of water data and inform decision-making for achieving water management goals.

Goal 5 – Pollution Prevention and Waste Reduction

The Department seeks to prevent or reduce pollution at the source whenever feasible. Pollutants and waste that cannot be prevented through source reduction will be diverted from entering the waste stream through environmentally safe and cost-effective reuse or recycling to the greatest extent practicable.



Sandia National Laboratory's ZPulsed Power Facility

As prescribed by EO 13514, the Department seeks to divert at least 50 percent of non-hazardous solid waste and construction and demolition (C&D) debris by FY 2015. In FY 2012, DOE reported a 46 percent diversion rate for non-hazardous waste and an 83 percent diversion rate for C&D waste.

Many DOE sites utilize commercial as well as municipal waste collection and recycling services. While recycling and disposition requirements are often incorporated into these contracts, opportunities exist to strengthen these contracts to increase the number of waste streams available for recycling. Many DOE sites have already expanded the range and quantity of materials than can be diverted from the waste stream, and are looking to enhance diversion and recycling services as existing contracts are renegotiated or recompeted.

In FY 2012, DOE partnered with federal agencies and completed two notable recycling and waste reduction initiatives at its Headquarters facilities. DOE partnered with the General Services Administration (GSA) to revamp its recycling program to include additional types of paper waste, including mixed paper and paperboard. In addition, the Department recently signed on to the United States Postal Service's (USPS) electronic recycling program, which offers a free-of-charge service for recycling outdated and unused electronics. DOE will continue to emphasize recycling awareness throughout the Department and look for ways to introduce composting into site operations.

As the Department continues to consolidate and decommission aging infrastructure, C&D waste streams will continue to be significant. Particularly, DOE is conducting significant demolition and remediation work through its Environmental Management program to clean up former nuclear weapons production sites used during the Cold War. In some cases, C&D waste contains levels of contamination which necessitate specialized disposition and rule out conventional diversion opportunities. Innovative programs such as donating scrap lumber from a Savannah River Site construction project to local high schools for use in carpentry classes will continue. This transfer of materials diverted 136,000 cubic feet of landfill waste and saved $50,000 in disposal costs.

Goal 6 – Sustainable Acquisition

The Department of Energy has a foundation of policies, procedures, guidance and programs that support sustainable acquisition requirements and goals. The Federal Acquisition Regulation (FAR) establishes uniform acquisition policies at the Federal level, while the Department of Energy Acquisition Regulation (DEAR) establishes uniform acquisition policies that implement and supplement the FAR. The Department of Energy Acquisition Guide provides guidance and procedural material for procurement and acquisition personnel.

Through the end of FY 2012, the Department exceeded goal targets set for sustainable acquisition. DOE maintained a level of 95 percent or greater for applicable new contract actions that included sustainable clauses and provisions, as determined by quarterly sustainable acquisition contract reviews. In addition, the Department determined that 35 percent of applicable new contract actions contained biobased provisions and preferences. This will serve as a baseline to help assess current performance and focus future priorities. By the end of FY 2014, the Department will strive to meet a level of 50 percent for applicable new contract actions that include a preference for biobased products.

Notable sustainable acquisition contracts programs have also been successfully implemented at the site level. In FY 2011, NREL issued its first janitorial contract with green requirements that are based on the LEED-EB O&M rating system. At the Strategic Petroleum Reserve (SPR), the Buy-it-Green program was developed to tie together toxics reduction, environmentally-preferable purchasing, recycling, and waste reduction. Through the program, SPR is maintaining close to 100 percent affirmative procurement compliance. The Thomas Jefferson National Accelerator Facility's "bundling" of computer systems brought a system-based approach for integrating Electronic Product Environmental Assessment Tool (EPEAT) acquisition in the purchase and upgrade of computers. The bundling enhanced efficiency for the Laboratory's Computer Center. In FY 2012, the Lab reported the purchase of 131 monitors of which 128 were EPEAT gold, equating to a 98 percent compliance rate.

DOE faces challenges with accurately assessing goal progress through the Federal Procurement Data System (FPDS). Currently, there is no uniform approach at the Department level for coding contracts with sustainable attributes within FPDS. DOE will address this problem by issuing coding guidance and holding training sessions to inform contracting specialists of sustainable purchasing options and reporting requirements.

In addition, DOE will issue an update to its internal Acquisition Guide to educate headquarters and field office procurement officials on current purchasing priorities, including the preference for biobased products. The Guide will include the requirements and drivers behind these efforts, provide best practices for obtaining sustainable and biobased products, and instructions for reporting within FPDS. DOE will also promote tools made available by FEMP and other federal agencies. For example, GSA’s Green Procurement Compilation tool will help inform DOE purchasing specialists of sustainable options when completing procurements.

Goal 7 – Electronics Stewardship & Data Centers

The Department of Energy's mission is carried out by several of the fastest supercomputers in the world. As of November 2012, DOE had the two fastest supercomputers in the world, and three in the top five. The TITAN supercomputer, hosted at the Oak Ridge National Laboratory, is one of the world's fastest supercomputers and performs more calculations in one hour than a personal computer can process in 20 years.

ORNL's TITAN Supercomputer

In addition to maintaining super computers, the Department also operates one of the world's most efficient super computers. The National Energy Technology Laboratory's (NETL) High-Performance Computer for Energy and the Environment (HPCEE) ranks as the 55th fastest computer in the world and recently registered one of the lowest power utilization efficiencies (PUE) ever recorded. HPCEE uses as little as one percent of its total electricity consumption for cooling, translating to $450,000 in avoided electricity costs each year. According to the Green500 list, DOE facilities operate five of the top 30 most efficient supercomputers in the world, more than any organization in the top 30.

In addition to maintaining powerful and efficient data centers, DOE is also working to implement numerous electronics stewardship strategies to reduce costs and associated energy use. In the past year, the Department made significant strides to improve the efficiency of its data centers and electronics stewardship. In FY 2012, DOE sites were recognized with 11 Federal Electronic Challenge awards (a third of the overall total) for achievement in the purchasing, managing and disposing of electronics assets. DOE also developed an Integrated Project Team (IPT) for data centers and IT sustainability. Composed of representatives from DOE field, program and corporate offices, the IPT aims to define and lead the strategic direction of data center energy efficiency, electronics stewardship, and related IT sustainability activities across the agency.

Over the next year, DOE intends to examine Department-wide data on duplex printing, with the goal of better understanding implementation and challenges to reducing paper use. To assist this effort, DOE will issue a Print Management Guide to identify print management best practices and provide recommendations. Through these and other waste reduction efforts, DOE hopes to reduce paper consumption by 75 percent by FY 2020.

Led by the Department's Chief Information Officer (CIO), DOE will continue to conduct energy assessments on high energy use, traditional data centers to identify energy savings opportunities and promote the purchase and use of energy efficient components. DOE will strive to reduce data center energy use by 20 percent by FY 2025.

Goal 8 – Renewable Energy

The Department is currently exceeding the target for renewable energy, with 17.5 percent of DOE's overall electricity consumption derived from renewable sources in FY 2012. DOE was also recognized for green power purchasing by EPA's Green Power Partnership, which ranks private and public entities for their purchase of green power. DOE ranked as the highest purchaser of green power in the federal government and ranked second overall in purchases, ahead of several private companies, as well as second overall for on-site green power usage.

DOE's renewable energy success can be largely attributed to major on-site renewable energy projects, with many financed through performance-based contracts, including ESPCs.

Savannah River Site's Biomass Cogeneration Facility

- In FY 2012, the Savannah River Site replaced 1950's era coal-fired boilers with a new steam plant using an ESPC. The new plant will produce up to 20 megawatts of clean energy, avoid 100,000 tons of GHG emissions each year, and save $35 million in energy and operations and maintenance costs annually.
- In FY 2012, the Oak Ridge National Laboratory completed installation of a 21-megawatt biomass steam plant using an ESPC. In addition to other ECMs, the project replaced a natural gas steam plant and led to the shutdown of four fossil fuel burning boilers. The replacement results in savings of nearly $4 million and 20,000 tons of GHGs each year.
- In the spring of 2013, DOE awarded an ESPC to construct the Federal government's largest wind farm at the Pantex Plant. As DOE's first award in support of the President's Performance Contracting Challenge, the project is expected to save on average $2.6 million annually over 18 years and supply 60 percent of the site's electricity annually.

DOE is also proactive in developing policy for encouraging the expansion of renewable energy by third parties, including leasing of excess land for viable renewable energy projects. This resulted in the commissioning of the 32 MW Long Island Solar Farm, the largest in the eastern United States, at the Brookhaven National Laboratory in November 2011. The array completed its first full year of operation in 2012, generating enough electricity to power roughly 4,500 homes serviced by the Long Island Power Authority. Additionally, DOE issued a policy on preference for purchasing renewable energy from Indian Tribes pursuant to the Department's authorities under EPAct 2005.

The economic feasibility of large renewable energy systems continues challenge DOE sites, as many receive low cost electricity which makes payback periods that are too long to pursue. However, DOE will encourage the inclusion of on-site renewable generation into all new construction projects. Through these collective strategies, DOE intends to double the amount of energy from on-site renewable energy systems by FY 2018.

Goal 9 – Climate Change Resilience

DOE is making progress in meeting the objectives outlined in the Adaptation Plan by accounting for the national context of the DOE mission, the local context of DOE facilities and nearby stakeholders, and planning for potential climate-related events.

DOE Facilities and Climate Regions

DOE utilizes an internal Climate Adaptation Working Group to provide guidance and best practices of climate adaptation activities across the Department. The group includes DOE program managers, site operators, and technical experts. DOE and its employees actively participate in numerous partnerships and working groups, from the local and regional to the interagency level. DOE's scientific experts and advanced computing capabilities offer significant benefits to the international climate science research effort, as well as information necessary for proper climate-related planning. DOE will continue to coordinate climate change resiliency efforts across programs and missions.

Leveraging the information gathered through the DOE High Level Vulnerability Assessment, numerous DOE sites, including the Lawrence Livermore National Laboratory, conducted high level assessments at a site-level to quantify and assess climate change risks. This process will serve as a replicable model for future site level analyses at additional DOE sites. DOE is also working to integrate climate adaptation concerns into all applicable DOE orders, policies, and planning documents, and target a detailed site-level analysis at a pilot site in FY 2014. Climate change vulnerability knowledge and data will continue to be provided to the DOE Emergency Management Issues Special Interest Group (EMI SIG) to inform emergency response programs and policies.

DOE received two comments during the public comment period for its 2012 Climate Change Adaptation Plan. Both comments complimented the Department's climate change efforts, while one suggested consideration of DOE's water footprint in future reviews. DOE will consider these comments in future drafts of the Adaptation Plan.

One of DOE's top challenges is transforming adaptation strategies into actionable items that are measurable and cost effective for site implementation. As data and climate models include more localized information, specific plans and associated actions will continue to evolve. DOE will continue to leverage internal and external knowledge and partnerships to achieve resiliency. Continuing to integrate climate change considerations across all DOE programs, informed by best available data, is seen as an integral new part of the rigorous planning, risk assessment, and careful investment that already define the DOE mission. To ensure DOE's facilities are prepared for a changing climate, the Department will encourage all major sites to conduct a climate change vulnerability assessment by 2015 and every four years thereafter.

SIZE & SCOPE OF AGENCY OPERATIONS

Table 1: Agency Size & Scope

Agency Size and Scope	FY 2011	FY 2012
Total Number of Employees as Reported in the President's Budget	116,108	108,090
Total Acres of Land Managed	2,285,789	2,297,997
Total Number of Buildings Owned	10,713	10,559
Total Number of Buildings Leased (GSA and Non-GSA Lease)	114	104
Total Building Gross Square Feet (GSF)	121,144,713	120,768,271
Operates in Number of Locations Throughout U.S.	47	47
Operates in Number of Locations Outside of U.S.	0	0
Total Number of Fleet Vehicles Owned	3,850	3,805
Total Number of Fleet Vehicles Leased	10,201	10,652
Total Number of Exempted-Fleet Vehicles (Tactical, Law Enforcement, Emergency, Etc.)	762	1,274
Total Amount Contracts Awarded as Reported in FPDS ($Millions)	25,065	25,002

GOAL 1: GREENHOUSE GAS (GHG) REDUCTION

Agency Progress toward Scope 1 & 2 GHG Goal

E.O. 13514 requires each agency establish a Scope 1 & 2 GHG emission reduction target to be achieved by FY 2020. The red bar represents the agency's FY 2008 baseline. The green bar represents the FY 2020 target reduction. The blue bars represent annual agency progress towards achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2008 baseline. A negative percentage value indicates that the emissions have decreased compared to the 2008 baseline.

Figure 1-1

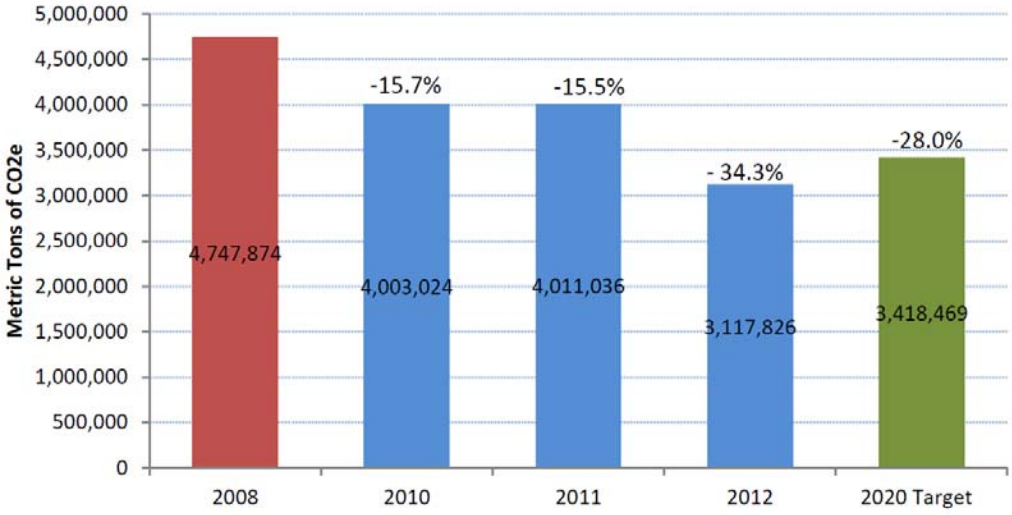


Table 1-1: Goal 1 Strategies – Scope 1 & 2 GHG Reductions

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Use the FEMP GHG emission report to identify/target high emission categories and implement specific actions to resolve high emission areas identified.	No	DOE utilizes the FEMP tool and multiple internal analyses to identify areas for prioritization. In addition, DOE is developing an enterprise sustainability reporting tool to consolidate analyses, and provide for overarching strategy prioritization by programs and sites. These reports and analyses will continue to help identify areas for GHG reduction strategy development and prioritization.	
Ensure that all major renovations and new building designs are 30% more efficient than applicable code.	No	DOE ensures facilities are designed, built and renovated to operate as efficiently as possible while achieving mission and research goals (e.g., 30% below ASHRAE 90.1 2007).	
Implement in EISA 432 covered facilities all lifecycle cost effective ECMs identified.	Yes	DOE will continue to utilize EISA audits at covered facilities to prioritize ECMs based on economic, social, and environmental considerations, deferred maintenance needs, and building condition index.	(1) Integrate ECM prioritization within new enterprise sustainability reporting tool.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Reduce on-site fossil-fuel consumption by installing more efficient boilers, generators, furnaces, etc. and/or use renewable fuels.	Yes	Building upon recent successes, including the installation of biomass boilers at two DOE sites, DOE will continue to focus on reducing on-site fossil-fuel consumption by implementing lifecycle cost-effective ECMs and accelerating deployment of on-site renewable generation including photovoltaic, biomass, landfill gas, combined heat and power and wind.	(1) Update and implement cost-effective ECMs across DOE sites including steam system decentralization, lighting upgrades, building management system improvements, and mechanical equipment upgrades. (2) Complete feasibility evaluation for on-site landfill gas generation at one DOE site.
Reduce grid-supplied electricity consumption by improving/upgrading motors, boilers, HVAC, chillers, compressors, lighting, etc.	Yes	DOE will improve the efficiency of existing buildings through EISA energy and water audits.	(1) Continue implementation of lifecycle cost-effective ECMs, when appropriate and cost effective. (2) Issue a case study on best practices of building management.
Employ operations and management best practices for energy consuming and emission generating equipment.	Yes	DOE will continue educational campaigns to change employee behavior when operating DOE facilities, including promoting the use of specialized equipment for inventory control, detecting emission leaks, and performing preventative maintenance.	(1) Deploy Peer-to-Peer network to partner high performing sites with low performing sites to share operational and management best practices. (2) Issue case study on best practices of operations and management of high energy consuming

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
			equipment.
Install building utility meters and benchmark performance to track energy and continuously optimize performance.	Yes	DOE's internal metering goals ensure 90 percent of electricity, natural gas, steam, and chilled water consumption is metered. DOE will continue to benchmark all metered buildings and enter the data into CTS. DOE will also leverage successes and lessons learned gained by DOE's continued participation in the Better Buildings Federal Competition to improve benchmarking and building performance.	(1) Re-evaluate, update, and issue internal metering guidance. (2) Install 100 meters across DOE sites. (3) Conduct data deep dives and identify opportunities for improvement.

Agency Progress toward Scope 3 GHG Goal

E.O. 13514 requires each agency establish a Scope 3 GHG emission reduction target to be achieved by FY 2020. The red bar represents the agency's FY 2008 baseline. The green bar represents the FY 2020 reduction target. The blue bars represent annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2008 baseline. A negative percentage value indicates that the emissions have been decreased compared to the FY 2008 baseline.

Figure 1-2

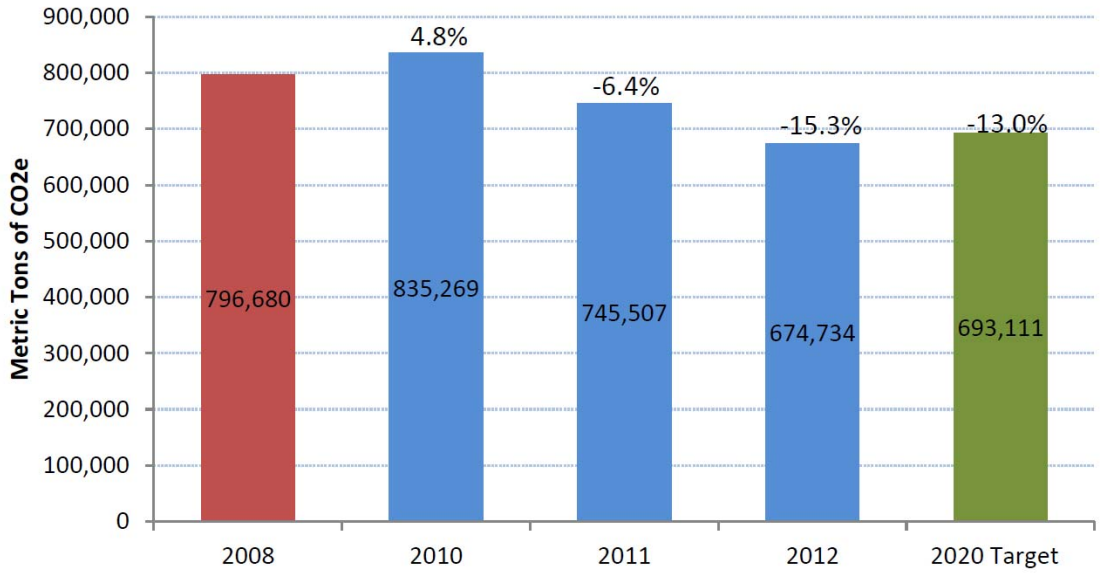


Table 1-2: Goal 1 Strategies – Scope 3 GHG Reductions

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Reduce employee business ground travel.	Yes	DOE reduced employee business ground travel emissions by 44.5 percent since FY 2008. DOE will continue to reduce emissions by: (1) Increasing the use of web-based meetings and teleconferencing facilities; and, (2) Reducing car rentals by promoting carpooling at meetings.	(1) Evaluate technological barriers for utilizing web-based and teleconferencing as a substitute for ground travel. (2) Issue best practices document for utilizing carpooling at meetings and events.
Reduce employee business air travel.	Yes	In concert with E.O. 13589, *Promoting Efficient Spending*, DOE will increase use of web-based meetings to reduce air travel. DOE will also promote the bundling of mission related trips to reduce travel costs and avoid emissions.	(1) Evaluate technological barriers for utilizing web-based and teleconferencing as a substitute for business air travel.
Develop and deploy employee commuter reduction plan.	Yes	DOE will continue to develop site commuter reduction plans and replicate successes from DOE sites.	(1) Issue best practices guide for the development of site-level employee commuting reduction plans.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Use employee commuting survey to identify opportunities and strategies for reducing commuter emissions.	Yes	DOE will continue to identify employee commuting reduction opportunities by evaluating commuting surveys from DOE sites.	(1) Issue employee commuting surveys through internal DOE sustainability data management system, based on guidance from CEQ. (2) Utilize Peer-to-Peer network to share best practices with underperforming sites.
Increase number of employees eligible for telework and/or the total number of days teleworked.	Yes	Per DOE Order 314.1, *DOE-FLEX: DOE's Telework Program*, DOE will develop a telework best practices document and provide training to promote remote work options.	(1) Issue telework best practice document based on lessons learned from DOE sites.
Develop and implement bicycle commuter program.	No	DOE will continue to coordinate with local planning and transportation demand management agencies to replicate successful bicycle commuter programs at DOE sites.	
Provide bicycle commuting infrastructure.	No	DOE will continue to replicate successful programs by identifying where intra-campus bicycle options are feasible and encouraging the	

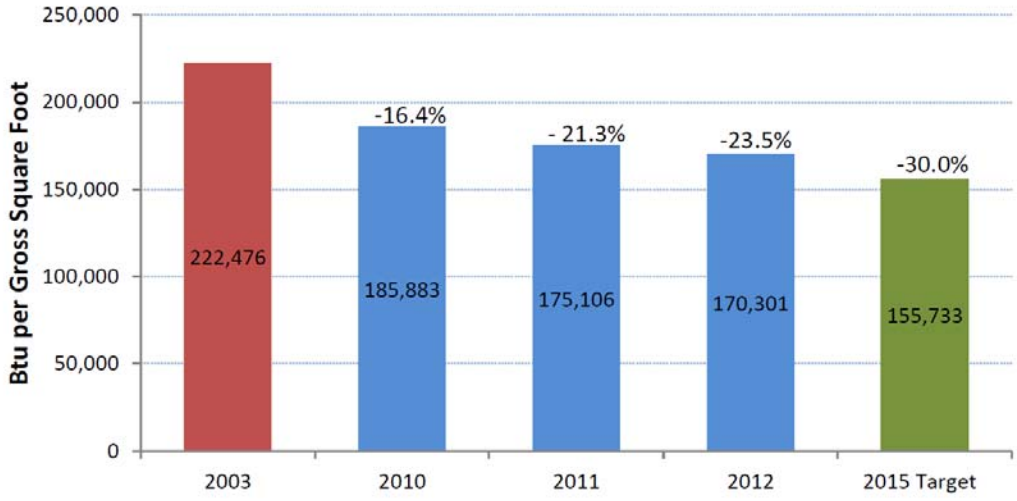
(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		development of bicycle-friendly infrastructure at additional DOE sites.	

GOAL 2: SUSTAINABLE BUILDINGS

Agency Progress toward Facility Energy Intensity Reduction Goal

E.O. 13514 Section 2 requires that agencies consider building energy intensity reductions. Further, the Energy Independence and Security Act of 2007 (EISA) requires each agency to reduce energy intensity 30 percent by FY 2015 as compared to the FY 2003 baseline. Agencies are expected to reduce energy intensity by 3 percent annually to meet the goal. The red bar represents the agency's FY 2003 baseline. The green bar represents the FY 2015 target reduction. The blue bars show annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2003 baseline. A negative percentage value indicates that the energy intensity has been decreased compared to the FY 2003 baseline.

Figure 2-1



Agency Progress toward Total Buildings Meeting the Guiding Principles

E.O. 13514 requires that by FY 2015, 15 percent of agencies' new, existing, and leased buildings greater than 5,000 square feet meet the Guiding Principles. In order to meet the FY 2015 goal, agencies should have increased the percentage of conforming buildings by approximately 2 percent annually from their FY 2007 baseline. The green bar represents the FY 2015 target. The blue bars represent annual agency progress on achieving this target.

Figure 2-2

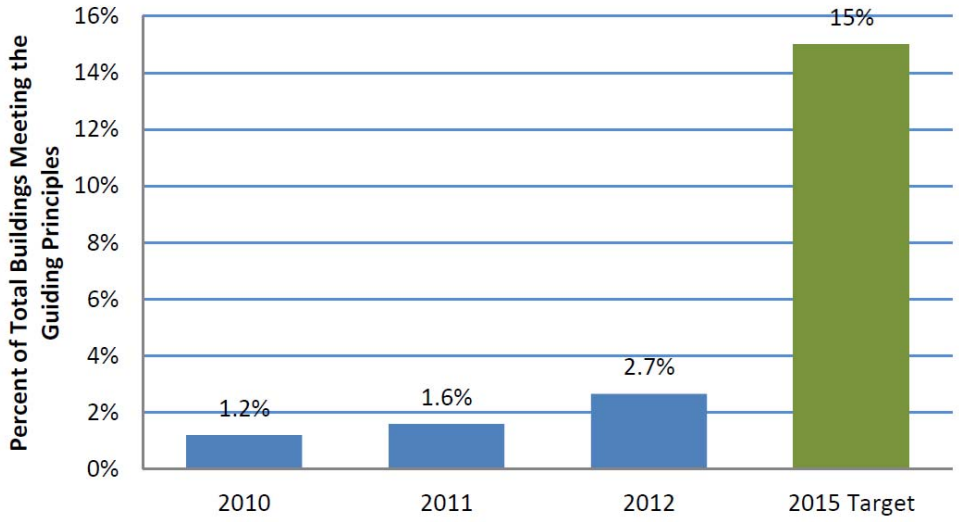


Table 2: Goal 2 Strategies – Sustainable Buildings

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Incorporate green building specifications into all new construction and major renovation projects.	Yes	DOE requires that all new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the Guiding Principles and where the work exceeds $5 million, must achieve LEED–NC Gold certification, unless determined not to be cost effective by the Senior Acquisition Official.	(1) Require, at CD-2, the reporting of incorporation of green building specifications.
Redesign or lease interior space to reduce energy use by daylighting, space optimization, sensors/control system installation, etc.	Yes	When acquiring new leased space, including build-to-suit lease solicitations, DOE will meet the requirements for leased facilities included in E.O. 13514 and include a preference for buildings certified as ENERGY STAR per EISA 2007 Section 435, LEED Gold or higher certified, and/or those that use renewable energy to the maximum extent practicable. When entering into renegotiation or extension of existing leases, DOE will include lease provisions that support the HPSB GPs.	(1) Assess existing DOE Green Lease Policies and Procedures for Lease Acquisition for additional opportunities to reduce energy use.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Deploy CEQ's Implementing Instructions –Sustainable Locations for Federal Facilities.	Yes	As new buildings are constructed on existing DOE sites, DOE will focus on strengthening regional transportation partnerships to increase the use of public transportation.	(1) Draft and issue best practices document based on lessons learned from recent relocations within the DOE complex.
Include in every construction contract all applicable sustainable acquisition requirements for recycled, biobased, energy efficient, and environmentally preferable products.	Yes	Develop sustainable construction contract baseline and establish path forward for full compliance.	(1) Develop sustainable construction contract baseline during quarterly sustainable acquisition contract reviews by 2014. (2) Analyze results and develop path forward, as needed, to incorporate sustainable attributes in all construction contracts.
Develop and deploy energy and sustainability training for all facility and energy managers.	Yes	As required by the Federal Buildings Personnel Training Act (FBPTA), DOE will provide training to ensure that staff are proficient in the appropriate core competencies. In addition, DOE regularly utilizes FEMP and other vendor training opportunities. The DOE Energy and Facility Contractors Group (EFCOG) maintains an Energy and Sustainability Subgroup (ESSG) comprising site energy	(1) Continue EFCOG teleconference sessions. (2) Ensure facility and energy managers are informed of training opportunities. Upcoming training events are disseminated through email, the SPO's website, and DOE's sustainability newsletter (SPOtlight). (3) Increase the number of facility energy managers that can demonstrate core competencies for facility managers as identified by GSA under the Federal Buildings

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		and facility managers and staff. The ESSG hosts a monthly teleconference on a variety of sustainability topics.	Personnel Training Act (FBPTA) or are qualified Certified Energy Managers.
Conduct detailed data analysis to identify areas of improvement in meeting the guiding principles.	Yes	DOE conducts regular data deep dives to assess gaps, pinpoint problem areas, and identify opportunities to provide technical assistance. These deep dives include review of progress, discussion of best practices, and direct technical assistance to meet additional guiding principles requirements.	(1) Conduct deep dive of HPSB data and identify additional opportunities for progress toward meeting the guiding principles.

GOAL 3: FLEET MANAGEMENT

Agency Progress toward Fleet Petroleum Use Reduction Goal

E.O. 13514 and the Energy Independence and Security Act of 2007 (EISA) require that by FY 2015 agencies reduce fleet petroleum use by 20 percent compared to a FY 2005 baseline. Agencies are expected to achieve at least a 2 percent annual reduction and a 30 percent reduction is required by FY 2020. The red bar represents the agency's FY 2005 baseline. The green bars represent the FY 2015 and FY 2020 target reductions. The blue bars represent annual agency progress on achieving these targets. The percentage at the top of each bar represents the reduction or increase from the FY 2005 baseline. A negative percentage indicates a decrease in fleet petroleum use.

Figure 3-1

Agency Progress toward Fleet Alternative Fuel Consumption Goal

E.O. 13423 requires that agencies increase total alternative fuel consumption by 10 percent annually from the prior year starting in FY 2005. By FY 2015, agencies must increase alternative fuel use by 159.4 percent, relative to FY 2005. The red bar represents the agency's FY 2005 baseline. The green bar represents the FY 2015 target. The blue bars represent annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2005 baseline.

Figure 3-2

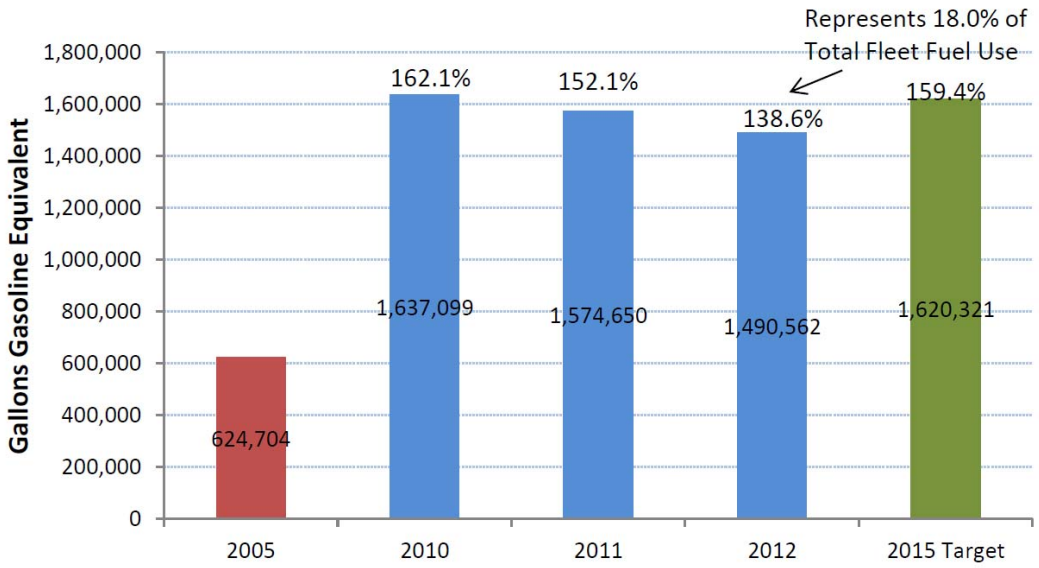


Table 3: Goal 3 Strategies – Fleet Management

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Optimize/Right-size the composition of the fleet (e.g., reduce vehicle size, eliminate underutilized vehicles, acquire and locate vehicles to match local fuel infrastructure).	Yes	DOE will execute Department-wide and site-level vehicle allocation methodologies to ensure fleet is properly composed to perform mission requirements.	(1) Perform Department-wide vehicle allocation methodology on an annual basis. (2) Perform site-level vehicle allocation methodology and develop site-level fleet management plans.
Reduce miles traveled (e.g., share vehicles, improve routing with telematics, eliminate trips, improve scheduling, use shuttles, etc.).	No	The Department will leverage tools developed at DOE sites to promote ride-sharing; develop vehicle pooling at DOE sites; and reduce vehicle trips through increased video teleconferencing. DOE will promote these strategies as applicable where mission requirements do not necessitate high mileage activities.	
Acquire only highly fuel-efficient, low greenhouse gas-emitting vehicles and alternative fuel vehicles (AFVs).	Yes	The Department will continue compliance with EPAct 2005 requirements and strive to meet the 2015 Presidential Memorandum goal requiring all light-duty vehicle acquisitions are	(1) 75 percent of light-duty vehicle acquisitions are alternative fueled vehicles in FY 2013 - 2015. (2) 100 percent of light-duty vehicle acquisitions are alternative fueled

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		alternative fueled vehicles. To the extent practical, DOE will perform vehicle allocation methodologies and acquire only highly fuel-efficient and alternative fueled vehicles. Note: The ability to acquire these vehicles is dependent upon GSA availability and mission requirements. DOE will also promote the use of online tools to ensure alternative fueled vehicles are located near and utilize alternative fuel stations.	vehicles, including hybrid and electric vehicles, by December 31, 2015.
Increase utilization of alternative fuel in dual-fuel vehicles.	Yes	Utilize available tools (e.g., online alternative fuel station databases) to locate alternative fuel stations in close proximity to DOE facilities and operations.	(1) Increase alternative fuel utilization rate by 20 percent by FY 2016.
Use a Fleet Management Information System to track fuel consumption throughout the year for agency-owned, GSA-leased, and commercially-leased vehicles.	Yes	DOE is currently working with GSA to implement a fleet management system (FedFMS) to track agency-owned fleet assets at a corporate	(1) Deploy FedFMS pilot to manage agency owned vehicle assets.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		level. Presently, DOE-owned assets are managed at the site level with oversight provided at the Headquarters level.	
Increase GSA leased vehicles and decrease agency-owned fleet vehicles, when cost effective.	No	DOE evaluates fleet asset acquisitions on a case by case basis, with special considerations given for all costs involved. As applicable, DOE will increase use of the GSA leasing program as a means to standardize costs.	
Utilize GSA short-term leasing program to fulfill seasonal-based mission requirements.	Yes	Building off lessons learned from DOE sites, the Department will continue to encourage the leasing of vehicles through GSA's short-term leasing program to fulfill seasonal mission requirements. Short term leases would replace longer term leases to minimize leasing and operating costs.	(1) Develop informational guide for DOE Fleet Managers to increase awareness of GSA short-term leasing program.
Perform fleet data analysis to improve petroleum performance.	Yes	DOE will perform fleet data deep dives to examine goal gaps and areas for improvement.	(1) Perform data deep dives and provide analysis to DOE

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		These deep dives include review of progress, discussion of best practices, and direct technical assistance to meet the fleet petroleum requirements.	programs and sites.

GOAL 4: WATER USE EFFICIENCY & MANAGEMENT

Agency Progress toward Potable Water Intensity Reduction Goal

E.O. 13514 requires agencies to reduce potable water intensity by 2 percent annually through FY 2020 compared to an FY 2007 baseline. A 16 percent reduction is required by FY 2015 and a 26 percent reduction is required by FY 2020. The red bar represents the agency's FY 2007 baseline. The green bars represent the FY 2015 and FY 2020 target reductions. The blue bars represent annual agency progress on achieving these targets. The percentage at the top of each bar represents the reduction or increase from the FY 2007 baseline. A negative percentage value indicates that potable water use intensity has decreased compared to the FY 2007 baseline.

Figure 4-1

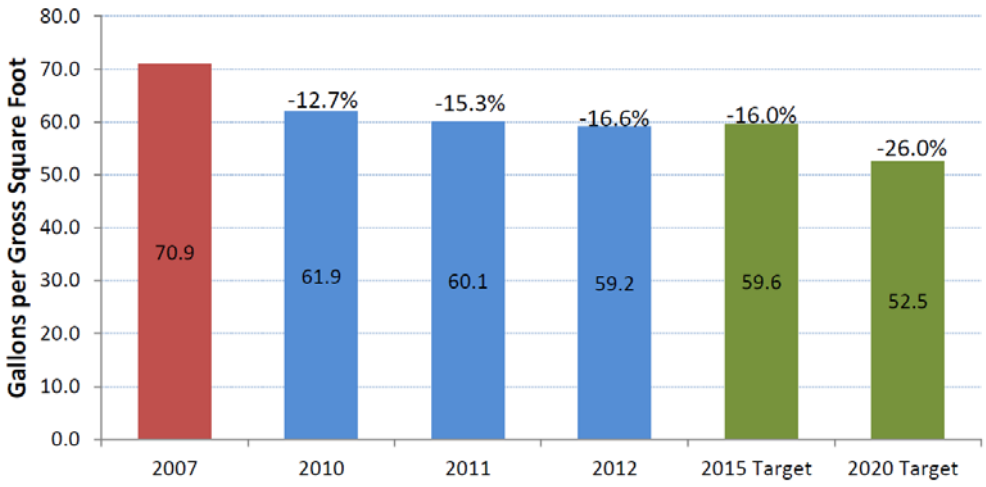


Table 4: Goal 4 Strategies – Water Use Efficiency & Management

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Purchase and install water efficient technologies (e.g., Waterwise, low-flow water fixtures and aeration devices).	Yes	DOE will continue to identify opportunities to replace current water fixtures and devices with more efficient technologies through evaluations and audits. The installation of water efficient technologies throughout DOE will continue to be encouraged and best practices and success will continue to be shared across the DOE complex.	(1) Update plumbing and water fixtures across DOE sites with more water efficient technologies, such as low-flow faucets, WaterSense products, and aerators. (2) Develop a list of latest water efficient technologies along with estimated cost and water savings to inform decision-makers when designing or replacing/upgrading water fixtures and systems.
Develop and deploy operational controls for leak detection including a distribution system audit, leak detection, and repair programs.	Yes	Over the past 5 years numerous audits and subsequent leak and water main repairs completed across the DOE complex led to an overall water consumption reduction of 20 percent. DOE will continue to conduct water evaluations at DOE sites, including leak detection and water balance analysis.	(1) Conduct site-level water assessments at high consuming sites as necessary. (2) Develop and issue best practices document for in-house water leak detection and repair program. (3) Review water management plans at the top 10 water consuming sites and update as necessary.
Design, install, and maintain landscape to reduce water use.	Yes	DOE is on target to achieve the interim target of 14 percent reduction in potable water intensity and 8	(1) Develop and issue best practices document for reductions in the design, installation, and landscape maintenance,

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		percent in industrial, landscaping, and agriculture consumption in FY 2014. DOE will continue to ensure compliance with EISA Section 438 for new buildings and renovations.	such as use of xeriscaping and/or use of local plants.
Design and deploy water closed-loop, capture, recharge, and/or reclamation systems.	Yes	DOE will continue to promote and encourage the deployment and replacement of cooling systems with closed-loop, condensate capture systems, along with use of alternative water sources for processes, when permitted by state/local laws.	(1) Review water management plans at the top 10 water consuming sites and update as necessary.
Install meters to measure and monitor potable and non-potable freshwater use in buildings, industrial processes, landscaping and, agricultural water use.	Yes	DOE will continue to encourage the use of cost-effective water meters and the collection of site-level water meter data, including water usage, at a building and/or process level. DOE will continue to encourage the metering of water as a best practice for usage reduction and water management.	(1) Install 50 additional water meters across DOE sites.

GOAL 5: POLLUTION PREVENTION & WASTE REDUCTION

Agency Progress toward Non-Hazardous Solid Waste Diversion (Non-Construction and Demolition)

E.O. 13514 requires that Federal agencies promote pollution prevention and eliminate waste. The E.O. requires agencies to minimize the use of toxic and hazardous chemicals and pursue acceptable alternatives. It also requires agencies minimize waste generation through source reduction, increase diversion of compostable materials, and by the end of FY 2015 divert at least 50% of non-hazardous and 50% of construction and demolition debris.

Table 5: Goal 5 Strategies – Pollution Prevention & Waste Reduction

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Establish a tracking and reporting system for construction and demolition debris elimination.	Yes	DOE will continue to track construction and demolition debris and municipal solid waste. Two C&D categories are tracked: landfill and diverted waste. Six MSW categories are tracked: on-site landfill, off-site landfill, waste-to-energy, diverted, on-site composting, and off-site composting.	(1) Integrate MSW and C&D tracking and reporting into enterprise sustainability reporting tool.
Eliminate, reduce, or recover refrigerants and other fugitive emissions.	Yes	DOE tracks and focuses on reducing all fugitive emissions within the complex. SF_6 is used for a variety of purposes within DOE, and comprises over 95 percent of all DOE fugitive GHG emissions. In 2012, 13 DOE sites emitted more than 100	(1) DOE will install two new stationary SF_6 reclaimers to improve recovery efficiency at two major pulsed power experiments, and implement experiment-level SF_6 inventory tracking at all pulsed power experiments.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		pounds of SF_6, all of which have a documented SF_6 capture program. Best practices for fugitive emissions reductions are shared between DOE laboratories. The Power Marketing Administrations have also instituted effective SF_6 leak detection and repair processes and utilize low-leak breakers during replacements and upgrades.	
Reduce waste generation through elimination, source reduction, and recycling.	Yes	In FY 2012, DOE diverted 46 percent of municipal solid waste from landfills. DOE will give preference to contracts which allow the greatest range of products to be recycled.	(1) Achieve a diversion rate of 50 percent for solid waste through increasing recyclable waste streams, including assessing viability of bundling recycling services at closely located DOE sites. (2) Develop an FAQ outlining recycling options, price premiums, and effects on goal progress.
Implement integrated pest management and improved landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals/materials.	Yes	Pursuant to EO 13514, DOE sites implement integrated pest management and improved landscape management.	(1) Increase number of DOE sites with site-level integrated pest management programs. (2) Educate sites on requirements and best practices from DOE, EPA, and other agencies' programs.

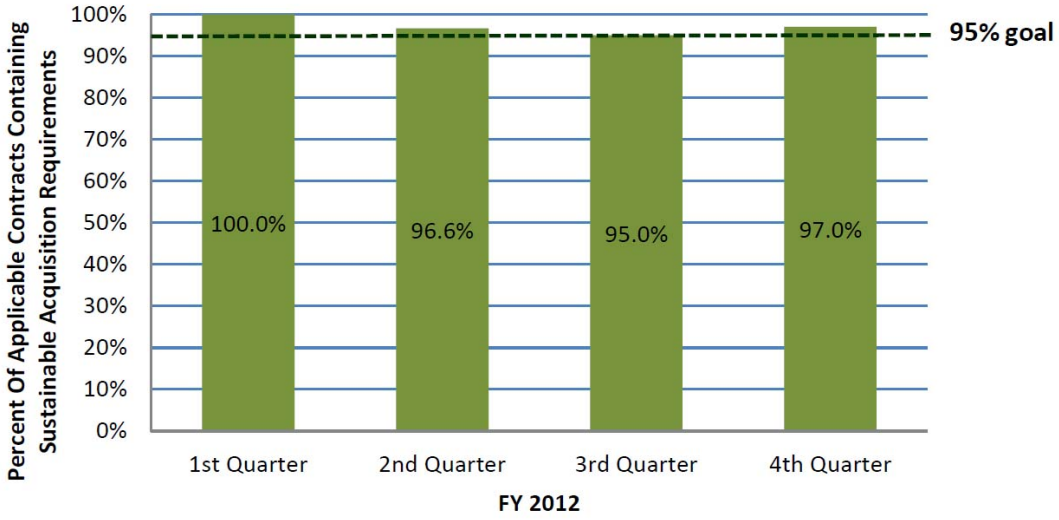
(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Develop/revise Agency Chemicals Inventory Plans and identify and deploy chemical elimination, substitution, and/or management opportunities.	No	In response to E.O. 13423, DOE sites develop individual strategies to reduce chemicals through their Environmental Management System. DOE sites established performance-based goals for toxic chemical reduction and elimination efforts.	
Improve availability and usage of on-site and off-site composting at DOE facilities.	Yes	In FY 2012, 19 out of 47 DOE sites utilized some form of on- or off-site composting to divert waste which would otherwise be sent to a landfill. DOE will focus on increasing the number of sites with composting capabilities.	(1) Develop composting best practices document based on existing DOE and other agencies' programs. (2) Assess the barriers to implementation at additional sites.

GOAL 6: SUSTAINABLE ACQUISITION

Agency Progress toward Sustainable Acquisition Goal

E.O. 13514 requires agencies to advance sustainable acquisition and ensure that 95 percent of applicable new contract actions meet federal mandates for acquiring products that are energy efficient, water efficient, biobased, environmentally preferable, non-ozone depleting, recycled content, or are non-toxic or less toxic alternatives, where these products meet performance requirements. To monitor performance, agencies perform quarterly reviews of at least 5 percent of applicable new contract actions to determine if sustainable acquisition requirements are included.

Figure 6-1



Federal Procurement Data System Standard Reports on Biopreferred Procurement Actions

The Federal Procurement Data System (FPDS) is used by federal agencies to record and manage contract actions. On the pie chart below, the blue area represents the total number of contract actions reported by the agency in FPDS in FY 2012 that are "applicable" to the sustainable procurement requirements. Applicable contract actions are new domestic contracts, task and delivery orders, excluding weapons systems and those actions that are unlikely to use biobased products (e.g., research and social development contracts, education and training, social services, and the lease or rental of equipment). The green area represents the total number of applicable contract actions that the agency reported in FPDS as containing biobased product requirements.

Figure 6-2

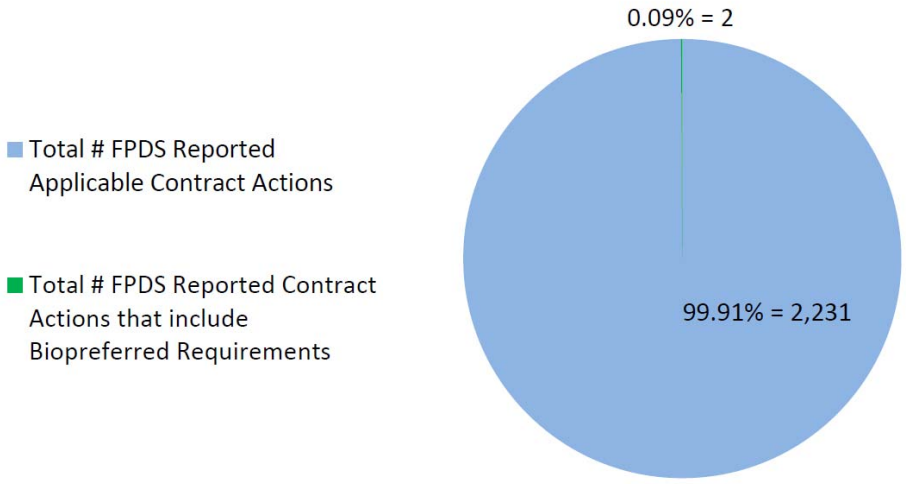


Table 6: Goal 6 Strategies – Sustainable Acquisition

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Update and deploy agency procurement policies and programs to ensure that federally- mandated designated sustainable products are included in all relevant procurements and services.	Yes	DOE ensures all applicable contracts include sustainable provisions and clauses by updating Departmental policies, providing training, and disseminating guidance to field office procurement specialists.	(1) Update DOE Acquisition Guide to include sustainable acquisition priorities; best practices; and procurement guidelines.
Deploy corrective actions to address identified barriers to increasing sustainable procurements with special emphasis on biobased purchasing.	Yes	During the FY 2012 quarterly sustainable acquisition contract reviews, DOE maintained an average of 97 percent compliance for new contract actions containing sustainable clauses. In addition, during the FY 2012 Q3 and Q4 reviews, the DOE established a baseline of 35 percent for contracts that contained a preference for biobased products. During these reviews, the Department noted the lack of a uniform approach for coding contract attributes within FPDS. The Department will issue guidance, through DOE's Acquisition Guide, to increase awareness of policies and procedures for	(1) Update DOE Acquisition Guide to include guidelines for coding contract attributes within FPDS and ensuring the purchase of biobased products, when available as suitable replacements for conventional products.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		sustainable acquisition and biobased requirements.	
Include biobased and other FAR sustainability clauses in all applicable construction and other relevant service contracts.	Yes	DOE promotes the inclusion of sustainability and biobased related clauses into new contract actions, as applicable, to ensure compliance with 95 percent of all new contracts actions.	(1) Issue updated DOE Acquisition Guide and provide appropriate training to DOE contract specialists as needed. (2) Develop sustainable construction contract baseline during quarterly sustainable acquisition contract reviews. (3) Analyze contract review results and develop path forward, as needed, to incorporate sustainable attributes in all construction and relevant service contracts.
Review and update agency specifications to include and encourage biobased and other designated green products to enable meeting sustainable acquisition goals.	N/A	While the Department does not maintain agency product specifications, DOE utilizes other agencies' certified products, programs, and tools to promote sustainable purchasing, including USDA's biopreferred products and EPA's Electronic Product Environmental Assessment Tool (EPEAT).	
Use Federal Strategic Sourcing Initiatives, such as Blanket Purchase Agreements	Yes	The Department pursues strategic sourcing initiatives to	(1) Issue guidance to procurement specialists for implementing

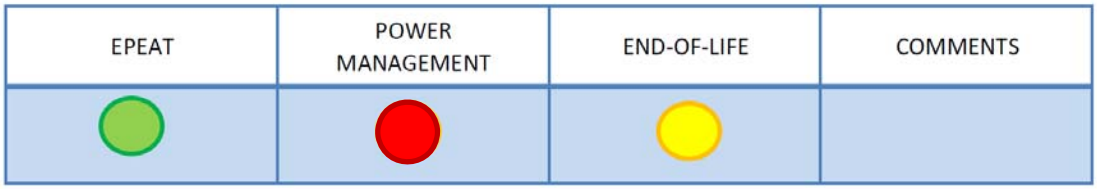
(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
(BPAs) for office products and imaging equipment, which include sustainable acquisition requirements.		increase widespread adoption of sustainable contracting. Blanket Purchase Agreements will serve as one tool for the Department to ensure sustainable products and services are readily accessible for Departmental procurement officials. The Integrated Contractor Purchasing Team, an organization of DOE M&O contractors, is currently pursuing the establishment of a blanket purchase agreement that all DOE sites could utilize.	strategic sourcing initiatives to promote sustainable purchasing.
Report on sustainability compliance in contractor performance reviews.	Yes	DOE will encourage the incorporation of sustainability compliance aspects into support service contractor performance reviews.	(1) Issue guidance on incorporating sustainability compliance into contractor performance reviews.

GOAL 7: ELECTRONIC STEWARDSHIP & DATA CENTERS

Agency Progress toward EPEAT, Power Management & End of Life Goals

E.O. 13514 requires agencies to promote electronics stewardship by: ensuring procurement preference for EPEAT-registered products; implementing policies to enable power management, duplex printing, and other energy-efficient features; employing environmentally sound practices with respect to the disposition of electronic products; procuring Energy Star and FEMP designated electronics; and, implementing best management practices for data center operations.

Figure 7-1



EPEAT:

	95% or more Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide
	85-94% or more Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide
	84% or less Monitors and PCs/Laptops purchased in FY2011 was EPEAT Compliant Agency-wide

Power Management:

	100% Power Management Enabled Computers, Laptops and Monitors Agency-wide
	90-99% Power Management Enabled Computers, Laptops and Monitors Agency-wide
	89% or less Power Management Enabled Computers, Laptops and Monitors Agency-wide

End-of-Life:

	100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor or Certified Recycler (R2, E-Stewards)
	100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor and/or non-Certified Recycler
	Less than 100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor or non-Certified Recycler

Table 7: Goal 7 Strategies – Electronic Stewardship & Data Centers

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Identify agency "Core" and "Non-Core" Data.	Yes	DOE recently established an integrated project team (IPT) composed of representatives from across the Department to implement a holistic strategy for IT sustainability transformation. The OCIO led team will guide efforts to meet IT sustainability goals, including operating data centers and IT functions in an energy-efficient, cost-effective manner. DOE will develop criteria for agency Core and Non-core data to begin the process of classifying the data. Subsequently, DOE will identify Core and Non-Core data and begin tracking.	(1) Complete development of criteria. (2) Identify Core and Non-core data.
Consolidate 40% of agency non-core data centers.	Yes	DOE will prioritize data centers for consolidation based on core/non-core determinations with consideration given to all costs involved.	(1) Reassess and update, as necessary, agency data centers previously targeted for closure.
Optimize agency Core Data Centers across total cost of ownership metrics.	Yes	In conjunction with consolidation efforts, DOE will optimize core data centers by	(1) Conduct assessments of core data centers upon determining which are

		implementing energy efficiency and cost effective operational best practices, including hot and cold aisle containment, liquid cooling, virtualization, and other measures where appropriate.	core and non-core.
Ensure that power management, duplex printing, and other energy efficiency or environmentally preferable options and features are enabled on all eligible electronics and monitor compliance.	Yes	35 DOE sites are Federal Electronics Challenge (FEC) partners. In 2012, 11 sites received FEC awards, the most of any agency and a third of all awards presented. DOE sites are implementing cost-effective software applications for advanced power management and striving to maintain 100% compliance. DOE will issue a Print Management Guide for use with DOE Order 436.1, *Departmental Sustainability*. The Guide will identify print management best practices and provide recommendations.	(1) Issue a Print Management guide by 2014. (2) Provide ongoing technical assistance to sites on power management.
Update and deploy policies to use environmentally sound practices for disposition of all agency excess or surplus electronic products, including use of certified eSteward and/or R2 electronic recyclers, and monitor compliance.	Yes	DOE is committed to increasing the quantity of electronic assets disposed through sound disposition practices such as disposal through GSA Xcess, recycling through Unicor, donation through GSA's Computer for Learning (CFL) and other non-profit organizations, and/or recycling through a	(1) Review existing policies and update as needed. (2) Execute electronic recycling programs.

		private recycler certified under the R2 guidance or equivalent certification. The Department also recently partnered with the United States Postal Service's (USPS) electronic recycling program, which offers a free-of-charge service for recycling outdated and unused electronics.	
Ensure acquisition of 95% EPEAT registered and 100% of ENERGY STAR qualified and FEMP designated electronic office products.	Yes	DOE ensures acquisition of EPEAT registered, ENERGY STAR qualified, and FEMP designated electronics where cost-effective.	(1) Review existing procurement and training policies and update as needed.

GOAL 8: RENEWABLE ENERGY

Agency Renewable Energy Percentage of Total Electricity Usage

E.O. 13514 requires that agencies increase use of renewable energy. Further, EPACT 2005 requires agencies to increase renewable energy use such that 7.5 percent of the agency's total electricity consumption is generated by renewable energy sources for FY 2013 and beyond. For FY 2012, the required target was 5 percent of an agency's total electricity consumption.

Figure 8-1

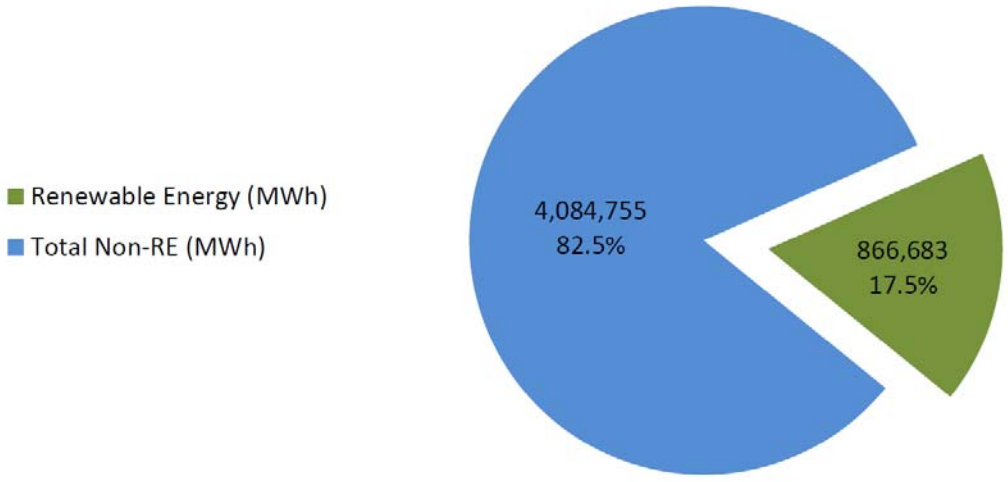


Table 8: Goal 8 Strategies – Renewable Energy

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Purchase renewable energy directly or through Renewable Energy Credits (RECs).	Yes	DOE develops on-site renewable energy to the greatest extent practical. RECs and green energy purchases are utilized to supplement on-site generation. Whenever possible, RECs will be purchased through third party bundlers to achieve the greatest cost savings. Per the EPA Green Power Partnership, in 2012 DOE was the top purchaser of green energy within the Federal government, and ranked 6th overall in the country. DOE implemented Section 503 of EPAct 2005 by issuing, *Purchase of Electricity, Energy Products, and Energy By-Products from Indian Tribes*, a policy providing purchasing preference to tribal renewable energy based on prevailing market rates.	(1) Continue to purchase RECs to supplement on-site renewable energy generation to meet renewable energy and GHG goals.
Install onsite renewable energy on federal sites.	Yes	DOE is a leader in the Federal government in the use of ESPCs, UESCs, and PPAs to finance large scale	(1) DOE will begin construction on five 2.3 MW wind turbines at the Pantex Plant funded through an ESPC by

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		renewable energy projects. The Department will continue to pursue on-site renewables whenever possible. In addition to ESPCs, DOE will pursue other methods of installing on-site renewable energy generation when cost effective.	2014. (2) Update 2008 internal scoping study evaluating feasibility of renewable energy on DOE land to account for changing economic environment for renewable technologies by 2014. (3) Issue guidance promoting the integration of on-site renewable energy into all new construction projects.
Lease land for renewable energy infrastructure.	Yes	DOE encourages the use of excess land for beneficial public uses when practical. Brookhaven National Laboratory currently hosts a 32MW solar array, the largest photovoltaic array in the eastern United States. The array is located on land leased from DOE, is co-owned by BP Solar and MetLife, with the power purchased by the Long Island Power Authority.	(1) DOE does not expect to enter in new leases within the next 12 months, but will continue to pursue opportunities to lease land for renewable energy development.
Develop biomass capacity for energy generation.	No	DOE views biomass as a key technology in a portfolio of renewable energy opportunities, and pursues its use	

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		whenever feasible. In 2012, DOE completed installation of two large scale biomass systems financed through ESPCs. ORNL replaced four of its six natural gas boilers with biomass boilers. SRS replaced its 1950s era coal-fired plant with a biomass cogeneration facility that produces most of the steam and electricity required by the site. DOE will continue to pursue opportunities where available.	
Utilize performance contracting methodologies for implementing ECMs and increasing renewable energy.	Yes	Performance-based contracts are an integral part of DOE's sustainability strategy. DOE launched a major initiative in 2007 to increase use of performance contracts, leading to $375 million in ESPC awards in 2008 and 2009. DOE sites continue to evaluate the feasibility of ESPCs on a continuous basis.	(1) Continue to strive toward DOE's $100 million commitment to the President's Performance Contracting Challenge, and report progress on a monthly basis to OMB/CEQ.
Work with other agencies to create volume discount incentives for increased renewable energy purchases.	Yes	DOE sites are encouraged to purchase RECs through third party groups to pool	(1) All applicable DOE sites will continue to purchase their RECs through third party

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		resources and solicit multiple bids to minimize cost. DOE sites are primarily contractor-operated, thus they pool resources as bulk discounts are not always available individually. The primary third party purchasers utilized by DOE sites are the Western Area Power Administration and Defense Logistics Agency Energy.	groups, where applicable.

GOAL 9: CLIMATE CHANGE RESILIENCE

Agency Climate Change Resilience

E.O. 13514 requires each agency to evaluate agency climate change risks and vulnerabilities to identify and manage the effects of climate change on the agency's operations and mission in both the short and long term.

Table 9: Goal 9 Strategies – Climate Change Resilience

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Ensure climate change adaptation is integrated into both agency-wide and regional planning efforts, in coordination with other Federal agencies as well as state and local partners, Tribal governments, and private stakeholders.	Yes	DOE incorporated adaptation into a multitude of planning efforts per findings of its High Level Vulnerability Assessment issued in 2012. For example, Pacific Northwest National Laboratory researchers are collaborating with scientists at Washington State University, Oregon State University, and other institutions through the Biosphere-Relevant Earth System Model (BioEarth) to improve understanding of the interactions of carbon, nitrogen, and water at the regional scale, in the context of climate change. As climate models and	(1) Complete a review of all DOE Orders, Guides and Technical Standards to determine which require updates, and prioritize updates on a multi-year schedule. (2) Identify program specific planning documents and guidance that should be updated for climate change resiliency. (3) Expand regional collaboration efforts with universities and government agencies at the site and agency level. (4) Collect information on site-level regional coordination efforts through internal planning documents; disseminate best practices with DOE

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		data continue to evolve and become more useful at scales relevant for planning, these activities will continue to inform decision making at various levels.	community. (5) Issue a Climate Change Modeling FAQ for site-level planning.
Update agency emergency response procedures and protocols to account for projected climate change, including extreme weather events.	Yes	As outlined in DOE's 2012 Adaptation Plan, the Department began updating agency emergency response procedures and protocols to prepare for the potential effects of climate change, including extreme weather events. Through groups, such as the DOE Emergency Management Issues Special Interest Group (EMI SIG), DOE is conducting dialogue regarding communication and education of climate adaptation in emergency response. Led by the Office of Electricity Delivery and Energy Reliability (OE), DOE will continue to leverage lessons learned from responses to extreme weather disasters, such	(1) Complete review and update of all Emergency Response Plans for climate change, as appropriate, in accordance with updated DOE orders, guides and technical standards.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		as Hurricane Sandy.	
Ensure workforce protocols and policies reflect projected human health and safety impacts of climate change.	No	DOE is assessing internal policies and orders, including workforce protocols and policies, in regards to climate change. For example, the Department is currently reviewing DOE Order 440.1B which addresses risk mitigation for health and human safety and workplace hazards, including chemical, biological, radiological and environmental hazards.	
Update agency external programs and policies (including grants, loans, technical assistance, etc.) to incentivize planning for, and addressing the impacts of, climate change.	No	DOE's recent study of the climate change vulnerabilities of the U.S. energy sector is scheduled for public release in late FY 2013. The incorporation of climate change adaptation considerations into external policies, guidance, and program will continue, where appropriate.	

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Ensure agency principals demonstrate commitment to adaptation efforts through internal communications and policies.	Yes	DOE developed an internal agency adaptation working group to share strategies and best practices throughout the Department. Additionally, DOE sites and programs are required to report on adaptation activities at the site level through annual internal plan. This structure ensures awareness and commitment to climate change efforts across the Department.	(1) Continue the multitude of efforts already in place, including maintaining the DOE Adaptation Working Group and requiring reporting on program and site level climate change adaptation.

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
Identify vulnerable communities that are served by agency mission and are potentially impacted by climate change and identify measures to address those vulnerabilities where possible.	Yes	DOE's mission does not directly serve vulnerable communities, however the Department operates at 47 major sites throughout the country and has identified risks in all U.S. climate regions. For example, BPA indicated that studies of the Pacific Northwest show increased risk of higher winter flows/generation, coupled with decreased summer flows/generation, as more winter precipitation falls as rain and spring runoff shifts earlier into the spring. This flow timing change would impact hydropower availability during high demand times during summer months.	(1) Conduct an easily replicable site vulnerability assessment pilot. Coordinate and partner with other federal agencies and state and local governments at the chosen pilot site.
Ensure that agency climate adaptation and resilience policies and programs reflect best available current climate change science, updated as	Yes	DOE utilizes the best available data and science to inform decision making in all climate change	(1) Continue utilizing climate and atmospheric research and modeling in DOE site planning. (2) Continue group

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
necessary.		activities. For example, DOE's Adaptation Plan utilized internal resources as well as climate data produced by other agencies. DOE will continue to leverage internal resources, such as work being conducted for the Integrated Assessment Program by the Office of Biological and Environmental Research (BER). In addition, DOE will utilize grid and water vulnerability mapping, and other readily available data.	participation at DOE and inter-agency level, to ensure awareness of current and best available climate science and associated technologies. (3) Issue a Climate Change Modeling FAQ, to increase awareness and planning at DOE facilities. (4) Continue to share data and best practices across programs and mission areas.
Design and construct new or modify/manage existing agency facilities and/or infrastructure to account for the potential impacts of projected climate change.	No	DOE operates in 47 geographically dispersed locations across the U.S. in every major climate region. The Department began assessing facilities-level vulnerabilities, but does not currently have specific plans to address this strategy. DOE will conduct a site vulnerability	

(A) **Will the agency implement the following strategies to achieve this goal?**	(B) **Top Five? Yes/No/NA**	(C) **Strategy Narrative** (100 word limit)	(D) **Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months**
		assessment pilot, which may serve to inform future year infrastructure planning. Additionally, DOE will look to incorporate climate change into EISA water assessments and building technical assistance efforts.	
Incorporate climate preparedness and resilience into planning and implementation guidelines for agency-implemented projects.	No	As outlined in DOE's 2012 Adaptation Plan, DOE is assessing internal policies and orders in regards to climate change, and will determine which require updating, and prioritize updates according to a multi-year schedule. As applicable, DOE will support and utilize the updated CEQ guidance to incorporate climate change considerations in the NEPA review process.	

Appendix to the 2013 Strategic Sustainability Performance Plan: Responding to the President's Memorandum on Promotion of Biobased Markets

On February 21, 2012, President Obama signed a Memorandum, *Driving Innovation and Creating Jobs in Rural America through Biobased and Sustainable Product Procurement*, requiring all federal agencies to undertake a number of activities to increase the purchase of biobased products. The Department of Energy (DOE) is moving aggressively to implement the Presidential Memorandum requirements.

Accomplishments to date include:

- DOE continues to exceed the sustainable acquisition requirements of Executive Order (E.O.) 13514. During the FY 2012, DOE exceeded the 95 percent requirement and averaged 97 percent compliance for applicable new contract actions that included sustainability clauses and provisions. The Department will maintain compliance by ensuring future applicable contract actions include provisions and clauses for sustainable and biobased products.
- At the Strategic Petroleum Reserve (SPR), the Buy-it-Green program was developed to tie together environmentally preferable purchasing with toxics reduction, recycling, and waste reduction. Through this integrated solution, the site has maintained a nearly 100 percent affirmative procurement compliance.
- The National Renewable Energy Laboratory (NREL) awarded its first green janitorial contract in FY 2011. The requirements under this contract are based on LEED for Existing Buildings: Operations & Maintenance. Since FY 2011, 30 percent of cleaning products have been biobased and 100 percent of paper products have been from recycled content.

Baseline for Biobased Contracting:

In FY 2012, DOE issued its first Biobased Purchasing Strategy as an appendix to its Strategic Sustainability Performance Plan. This strategy called for the development of a baseline for contract actions that included clauses and preferences for biobased products. At the time this strategy was issued, DOE did not have an accurate baseline for biobased clauses and preferences.

As a corrective action, DOE reevaluated the FY 2012 third and fourth quarter sustainable acquisition contract reviews to establish a biobased baseline. After review of the applicable new contract actions, the Department noted that 35 percent of all actions reviewed contained preferences for biobased products.

FY 2014 Target/Compliance Goal:

Based on DOE's FY 2012 biobased baseline of 35 percent, DOE will improve performance by 15 percent and strive to include preferences for biobased products in 50 percent of all applicable new contract actions by the end of FY 2014.

Strategies for Improving Compliance:

The Department of Energy's strategy for improving compliance--full incorporation of requirements and clauses for biobased products in relevant and appropriate contracts and follow on activities to ensure compliance is achieved--includes the following elements:

- The Department will update DOE's Acquisition Guide to include sustainable and biobased acquisition priorities. The Acquisition Guide contains guidance, lessons learned, best practices and resources for DOE's contracting personnel. The Acquisition Guide will also include elements to specifically promote biobased purchasing, including guidance on the President's 2012 Memorandum on Biobased Procurement and FAR clause 52.223-2 "*Affirmative Procurement of Biobased Products Under Service and Construction Contracts.*"

- The Department will continue to leverage successful programs and policies at DOE sites and National Laboratories by sharing best practices and lessons learned. For example, DOE's Energy Facilities Contractors Group (EFCOG) hosts a monthly teleconference series on a variety of sustainability topics. Sustainable Acquisition was recently featured and included participation from procurement officials and facility managers from throughout the DOE complex.

- The Department of Energy's Sustainable Acquisition Working Group has a proven track record of disseminating valuable information and providing training to DOE's acquisition and procurement community. The Working Group includes more than 400 Federal and contractor staff and meets bi-monthly to address current issues and requirements and share lessons learned. The Working Group will continue to emphasize bio-preferred purchasing to ensure the Department increases its purchases of biobased products and includes provisions in future contract actions.

- Most DOE sites have already incorporated sustainable acquisition into their site-level Environmental Management Systems (EMS). DOE will continue to leverage EMS processes to promote further expansion of preferences for biobased procurements.

- DOE sites have implemented policies to promote the purchase of sustainable and biobased products. At the Oak Ride Operations Office (ORO), purchases of non-compliant products under the Purchasing Card (P-Card) program require written pre-approval from the subject matter expert. In addition, the site's suppliers under the hosted catalogs are required to provide only compliant energy, water, recycled, and bio-based products. The Department will promote this program as a model for other sites and National Laboratories.

- The Department will continue to recognize sustainable acquisition achievements through its GreenBuy Program and annual sustainability awards ceremony.

Required Specification Reviews:

Not applicable.