



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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THE ADMINISTRATOR

As part of its mission to protect human health and the environment, EPA is committed to reducing its own energy and water usage, and maintaining cutting-edge environmental performance, leadership, accountability and carbon neutrality within our facilities and operations across the country.

The Agency has developed a strategy for protecting these goals. This E2PLAN Strategy addresses new and existing targets and tactics for achieving the highest possible environmental performance in the following six areas:

- Energy efficiency
- Water efficiency
- Sustainable buildings
- Renewable energy
- Transportation
- Environmental management systems (EMSs)

I urge all EPA employees to become familiar with, and adopt, the strategies outlined in this document. And EPA will continue to do more to improve our environmental performance, ensure accountability for reaching our Federal requirements and lead by example.

A handwritten signature in black ink, appearing to read "S. L. Johnson".

Stephen L. Johnson

E²PLAN Strategy for Sustainability

Energy and Environmental Performance,
Leadership, Accountability, and Neutrality at
the U.S. Environmental Protection Agency



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INTRODUCTION

Never before has saving energy, water, and other resources and protecting our environment been more important than it is in the 21st Century. With the security of our energy supply inextricably linked to our homeland security, efficient use of energy is critical to our nation's future. President George W. Bush called for greater energy independence from other countries when he signed the Energy Independence and Security Act in late 2007, and developing renewable energy sources within the United States will help our nation achieve that goal.

Anyone who has filled a gas tank lately knows that we need to decrease our dependence on foreign oil. But reducing our use of petroleum in vehicles is not only important because oil prices are rising, but to reduce the greenhouse gas emissions associated with climate change. And emissions don't just come from mobile sources; buildings with wasteful energy practices contribute a great deal to climate change. Forward-thinking organizations are starting to strive for carbon neutrality in their facilities and operations.

As droughts in the Southeast persist, Americans are becoming much more aware of the need to use our water resources more efficiently. In the next five years, according to the Government Accountability Office, at least 36 states predict local, regional, or statewide water shortages. As our population grows, our thirst grows even faster, with water demand tripling in the past 50 years, while the U.S. population doubled.

For federal agencies, the challenge is to establish and implement the management systems and strategies to reduce our environmental footprint. The federal government represents a large percentage of the country's gross national product, and it is our responsibility to model sustainable practices for other organizations. For the U.S. Environmental Protection Agency (EPA) in particular, the challenge is to manage a building inventory that requires more resources than standard facilities to accomplish our research objective.

In order to support the Agency's mission of protecting human health and the natural environment, we depend on more than 30 laboratories to research environmental and human health effects; however, laboratories use about 10 percent more energy than offices. As EPA enters our 38th year of existence and looks to modernize some of these facilities, we are also working to incorporate as many sustainable features as possible into our leased offices and other buildings we occupy.

Although the Agency has been a leader in green buildings, renewable energy, and resource efficiency in our facilities, we need to do even better to face the environmental challenges of tomorrow. EPA can do more to improve our environmental performance, demonstrate leadership among federal agencies, ensure accountability for reaching efficiency goals, and strive for carbon neutrality in our facilities.

To meet this challenge, EPA has developed the *Environmental and Energy Performance, Leadership, Accountability and Neutrality (E²PLAN) Strategy for Sustainability*. This document describes our strategic plans for improving our energy efficiency, water conservation, sustainable buildings, renewable energy, transportation emissions reductions, and environmental management systems. While EPA is not the only federal agency with such a plan, we hope to inspire other organizations to address today's energy and environmental challenges head-on with similar efforts.

I. EXECUTIVE SUMMARY

Since its inception in 1970, the U.S. Environmental Protection Agency (EPA) has promoted its mission to protect human health and the natural environment across the country. Nowhere is it more important to prove that we “walk the talk” when it comes to sustainability than in EPA’s own facilities and operations. EPA has long been a leader among federal agencies on environmental and energy stewardship: In 2006, we became the first major federal agency to purchase green power for 100 percent of our electricity needs, and we own the first federal laboratory to receive Gold certification from the U.S. Green Building Council, through its Leadership in Energy and Environmental Design (LEED®) rating system.

In recent years, requirements for federal agencies to reduce their energy and water consumption, greenhouse gas emissions, and overall environmental footprint have been more aggressive. Federal representatives and agencies are being held accountable for meeting annual targets and goals with a biannual “scorecard” collected by the Office of Management and Budget.



EPA's New England Regional Laboratory in Chelmsford, Massachusetts, is LEED Gold certified.

With these considerations in mind, EPA has created a strategy to not only respond to the new federal energy and environmental requirements, but to continue to show leadership among agencies on how to achieve—and exceed—sustainability. We have already worked to reduce energy and water intensity in our facilities, but we know we can do even better with aggressive efforts to revisit previous assessments and identify new opportunities for improvement. Where possible, EPA will look to not only reduce our environmental footprint, but achieve a more environmentally “neutral” footprint, as we did with our first carbon-neutral laboratory at the Robert S. Kerr Environmental Research Facility in Ada, Oklahoma. This document outlines how we can achieve these important goals.



The Robert S. Kerr Laboratory in Ada, Oklahoma, is EPA's first carbon-neutral facility.

We recognize the challenges inherent in improving our performance in these areas, and this strategy is designed to address these challenges with tools, funding, and responsibilities. We also acknowledge that we might struggle to meet the federal environmental requirements. EPA is prepared to go the extra mile to help define and implement strategies to assist other agencies in achieving their goals along the way. Furthermore, we are positioning ourselves to respond to the new environmental and energy challenges of the future by incorporating the management systems necessary to achieve ongoing progress.

Following is a brief summary of our plans for achieving **energy** and **environmental performance, leadership, accountability**, and, eventually, carbon **neutrality**—or our E²PLAN. This Strategy for Sustainability addresses the federal sustainability targets we must achieve, highlights places where we think we can exceed those objectives, and suggests long-term goals for the future. Our plan is based on six key areas:

- Energy efficiency
- Water efficiency
- Sustainable buildings
- Renewable energy
- Transportation
- Environmental management systems (EMSs).

THE E²PLAN STRATEGY FOR SUSTAINABILITY

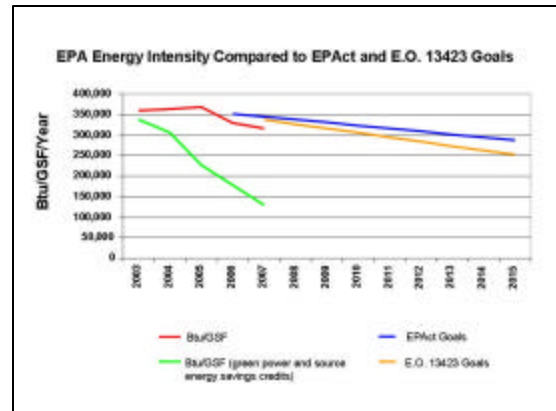
EPA strives to be a leader among federal agencies and exceed our goals wherever possible. In addition to stressing performance, our E²PLAN emphasizes leadership and accountability, identifying responsible managers wherever appropriate. Ultimately, we will strive to neutralize our environmental footprint wherever possible. To do so, we have set the following Agencywide goals:

Strategic Area	Performance Requirement	EPA Goal
Energy Efficiency	Steadily increasing annual targets to 30 percent reduction in energy intensity by FY 2015, from FY 2003 baseline	Exceed annual reduction targets wherever possible
Water Efficiency	Steadily increasing annual targets to 16 percent reduction in water intensity by FY 2015, from FY 2007 baseline	Meet annual targets from a low baseline and lead by example
Sustainable Buildings	Implement E.O. 13423/MOU in new construction, renovation, & 15 percent of existing inventory by FY 2015	Exceed E.O. 13423 goals & meet the MOU guiding principles
Renewable Energy	Steadily increasing annual targets to 7.5 percent of electricity use in FY 2013 derived from renewable sources	Exceed annual targets & lead with onsite renewable investments
Transportation	75 percent alternative fuel vehicles, 95 percent alternative fuel use in AFVs, & increase alternative fuel use 10 percent	Exceed AFV percentage & meet alternative fuel use requirements
EMS	Implement/use EMS as the primary approach to managing environmental aspects	Meet EMS requirements & lead with continuous improvement

EPA is challenging its employees to participate in this strategy for sustainability. Every employee, from our researchers and field workers to facility managers and contract specialists, plays a role in creating our Agency's environmental footprint, and everyone can help reduce it. From closing fume hood sashes to reporting water leaks to filling up with alternative fuels while on the road, EPA Administrator Stephen Johnson is charging every EPA employee with doing his or her part to achieve the strategies outlined in our E²PLAN.

Energy Efficiency

In the past, EPA met federal requirements to reduce energy use by combining energy improvements and green power purchases. Achieving current energy reduction goals requires more aggressive efficiency efforts. EPA not only plans to achieve federal requirements for energy reduction, but we want to exceed annual goals and neutralize our energy impact wherever possible. To meet this challenge, EPA has drafted a strategic plan to proactively address energy efficiency at all facilities where we control and report utilities. The plan, known as "ConservE," represents a departure from our traditional focus on national goals and voluntary reductions to a more equitable distribution of energy intensity reduction targets among all of our facilities.



This chart shows how EPA previously met its goals using both energy efficiency and green power.

Water Efficiency

EPA has long made water conservation a priority, far exceeding federal requirements to assess facilities and complete water management plans. By 2008, we had completed water assessments in all of our reporting laboratories. Long before E.O. 13423 made saving water mandatory, we set—and subsequently increased—our own voluntary water reduction goals. With an aggressive water management strategy already in place, EPA started out the baseline year of FY 2007 required by E.O. 13423 with a fairly low Agencywide water use number. Therefore, we created a "ConservW" strategy to reduce water intensity at all of our facilities.

Sustainable Buildings

EPA signed our first green building policy statement in 1995 and a memorandum of understanding with federal agencies in 2006. EPA has a Sustainable Buildings Implementation Plan and a "green check" process to incorporate environmental principles into facility design, construction, renovation, and delivery. EPA has required LEED Silver certification for new construction and major renovations since 2006, and we pursue LEED Gold where possible. Seven buildings achieved Gold and two are pending.



Solar panels were installed on the roof of EPA's Region 8 office in Denver, which achieved LEED Gold certification in 2007.

Renewable Energy

Renewable energy certificates (RECs) help EPA reduce greenhouse gas emissions associated with electricity use. In fact, we recently surpassed the 1 billion kilowatt-hour green power purchasing milestone. Aggressive green power purchasing has kept EPA far ahead of E.O. 13423 renewable energy goals. As we look to the future, EPA is developing a renewable energy strategy that considers investing more in onsite



REC purchases help support renewable energy supplies such as wind farms.

renewable energy generation, building on the photovoltaic installations we have at five of our facilities, and continuing to support 100 percent green power and REC purchases.

Transportation

Transportation has been one of the more challenging sustainability areas for EPA. Although we exceed requirements for purchasing AFVs for our fleet, we must improve alternative fuel purchasing, reporting, and leadership within the federal government to increase the availability of alternative fuels for purchase. EPA will work to improve the quality of our fuel consumption data, develop a system for reporting progress to senior managers, educate drivers and fleet managers, and work with other agencies to increase the locations where alternative fuel is available.



EPA held a demonstration project to test a hydrogen fuel cell car.

Environmental Management Systems (EMSs)

EPA has implemented EMSs at all of our major offices and laboratories in order to reduce our environmental footprint. Initially, our approach was to allow facilities to identify significant environmental aspects and environmental management programs to address them in a systematic way. By the end of 2005, 32 different office and laboratory locations had an EMS. In 2006, we issued a series of national objectives, targets, and metrics to guide those EMSs in meeting overall Agency and federal goals. In the future, our EMSs will cover additional facilities and more aspects of operations; drive continuous improvement; and better integrate all environmental, energy, and transportation-related sustainability efforts.

E²PLAN for the Future

Our strategic plan for sustainability is ambitious, but it is just the beginning. EPA is already planning ways to realize even more aggressive, longer term goals for the future. By 2030:

- We will strive to achieve carbon neutrality—through a combination of energy efficiency, onsite renewables, and green power purchases—in as many existing buildings as possible.
- We will design all new buildings/major renovations to be zero net energy, achieve and maintain the ENERGY STAR label, and use 30 percent less water than similar buildings.
- Our entire fleet of vehicles will be the highest miles per gallon vehicles available for their required use and powered by the most beneficial fuel or the best available technologies.
- We will reduce overall greenhouse gas emissions by 30 percent from a 2010 baseline.

II. FEDERAL ENERGY AND ENVIRONMENTAL REQUIREMENTS AND GOALS

Four significant directives govern EPA's Strategy for Sustainability. Two laws, an executive order, and a memorandum of understanding (MOU) require or encourage federal agencies to aggressively reduce their energy and water use, greenhouse gas emissions, and overall environmental footprint.

Following is a brief summary of these requirements, organized by six areas:

- Energy efficiency
- Water efficiency
- Sustainable buildings
- Renewable energy
- Transportation
- Environmental management systems

Details on EPA's strategic objectives for achieving and, in some cases, exceeding these goals can be found in Section III. EPA's Sustainable Buildings Implementation Plan (Appendix D) explains in further detail many of these requirements and guidelines, since it crosscuts all of the key areas described below.

EPA is also accountable to the biannual Office of Management and Budget (OMB) Scorecards for Energy, Transportation, and Environmental Stewardship metrics developed to help agencies meet many of the requirements and goals described below. Where relevant, this document references scorecard metrics in addition to statutory, executive order, and MOU requirements and guidelines.

ENERGY POLICY ACT OF 2005 (EPACT 2005)

EPAct 2005 was signed by President Bush on August 8, 2005, and marked the first major energy legislation that Congress had passed in 13 years. EPAct 2005 includes numerous federal government requirements, with the goal of increasing energy efficiency across the federal sector.

Energy Efficiency

EPAct 2005 requires federal agencies to reduce their energy intensity by 2 percent per year, relative to a fiscal year (FY) 2003 baseline, up to a cumulative 20 percent reduction by the end of FY 2015. In addition, federal agencies must have advanced metering capability for electricity by October 1, 2012, in order to provide energy managers with information to help reduce energy consumption and save money. EPAct 2005 also extends energy savings performance contracts (ESPCs) under the National Energy Conservation Policy Act to September 30, 2016.

Regarding purchasing products and equipment, EPAct 2005 requirements mirror initiatives EPA has been taking to purchase energy-efficient products and procure sustainable and energy-efficient buildings. Federal agencies are required to purchase ENERGY STAR labeled equipment or products designated by the Federal Energy Management Program (FEMP) and include ENERGY STAR references in construction procurements.

Water Efficiency

EPAct 2005 does not include specific goals for water conservation relative to federal agencies.

Sustainable Buildings

EPAct 2005 required the U.S. Department of Energy (DOE) to develop and issue a new federal building energy efficiency standard requiring all new federal buildings to be designed to use at least 30 percent less energy than that specified in ASHRAE standard 90.1-2004 or the International Energy Conservation Code.

Renewable Energy

For FY 2007 through FY 2009, at least 3 percent of all electricity that federal agencies consume must be derived from renewable sources, with this amount increasing to at least 5 percent from FY 2010 through FY 2012 and at least 7.5 percent beyond FY 2013.

Transportation

EPAct 2005 requires heads of federal agencies to lease or purchase fuel cell vehicles or hydrogen energy systems by 2010.

EMS

EPAct 2005 does not have specific goals for EMS relative to the federal government.

ENERGY INDEPENDENCE AND SECURITY ACT (EISA) OF 2007

President Bush signed EISA on December 19, 2007. The overarching goals of this legislation are to increase U.S. energy security, expand production of renewable fuels, and improve vehicle fuel economy.

Energy Efficiency

EISA reinforces the E.O. 13423 requirement that federal agencies reduce energy intensity 30 percent by FY 2015, compared to an FY 2003 baseline. To achieve this goal, EISA requires that by FY 2013, federal buildings overseen by the General Services Administration (GSA) be equipped with lighting fixtures and bulbs that are energy-efficient (e.g., ENERGY STAR labeled products or products designated by FEMP). In addition, beginning in FY 2010, federal agencies will be required to lease space that has earned the ENERGY STAR label in the most recent year.

According to EISA, each agency must identify all “covered facilities” that constitute at least 75 percent of the agency’s energy use and designate an energy manager responsible for implementing energy reduction measures at each facility. Agencies must complete comprehensive energy evaluations of 25 percent of covered facilities each year, so that each covered facility is evaluated once every four years, and implement identified energy efficiency measures. To help monitor energy consumption, EISA extends the existing requirements for advanced metering of electricity to natural gas and steam. It also provides permanent authorization for the use of ESPCs.

Water Efficiency

EISA does not include specific goals for water conservation relative to federal agencies, however it does require that agencies complete comprehensive water evaluations at 25 percent of “covered” facilities every year and implement identified water reduction measures.

Sustainable Buildings

EISA revises federal building energy efficiency performance standards. Specifically, buildings being renovated or newly constructed must be designed to reduce their fossil fuel-generated energy consumption (compared to an FY 2003 baseline) by 55 percent by FY 2010 and 100 percent by FY 2030. EISA also requires that a commercial buildings initiative be developed with a goal for buildings to achieve “zero net energy” in new buildings after 2025 and existing building retrofits by 2050. This would affect commercial buildings in which federal agencies are tenants.

Each federal agency must ensure that, in an existing building, any large capital energy investment that involves replacement of installed equipment or renovating, rehabilitating, expanding, or remodeling existing space, but is not considered a major renovation, incorporates the most energy-efficient designs, systems, equipment, and controls.

In an effort to minimize pollution from stormwater runoff on government landscapes, if a federal facility is developing or redeveloping a project affecting more than 5,000 square feet of outdoor space, the natural water cycle on the project site must replicate what existed before the project.

Renewable Energy

EISA requires that at least 30 percent of the hot water demand for each new federal building or existing federal buildings undergoing a major renovation be met through the use of solar hot water heating, if it is determined to be life-cycle cost-effective.

Transportation

Under EISA, federal agencies must procure low greenhouse gas-emitting light- and medium-duty passenger cars, where available, to meet their functional needs, or take other measures to reduce petroleum consumption to achieve the same greenhouse gas emissions reductions.

Another provision under EISA requires that, beginning in FY 2010, federal agencies reduce the petroleum consumption and increase the alternative fuel consumption of their fleets to meet goals of at least a 20 percent annual reduction in petroleum consumption and a 10 percent increase in alternative fuel use by FY 2015 (based on an FY 2005 baseline). The petroleum consumption reduction can be met by using alternative fuels; acquiring more fuel-efficient vehicles, such as hybrids; substituting cars for light trucks; increasing vehicle load factors; decreasing vehicle miles traveled; or decreasing fleet size. Federal agencies are required to install at least one renewable fuel pump at each federal fleet fueling center by FY 2010.

EMS

EISA 2007 does not have specific goals for EMS relative to the federal government.

EXECUTIVE ORDER (E.O.) 13423

President Bush signed E.O. 13423 on January 24, 2007. This comprehensive order, *Strengthening Federal Environmental, Energy, and Transportation Management*, consolidated five previous “green” executive orders (13101, 13123, 13134, 13148, and 13149) and two MOUs. E.O. 13423 set more aggressive requirements in the areas of energy efficiency, acquisition, renewable energy, toxics

reduction, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. E.O. 13423 also emphasized the use of EMSs to manage and continually improve these practices.

Energy Efficiency

Federal agencies must improve energy efficiency and reduce greenhouse gas emissions by reducing energy intensity by 3 percent annually through FY 2015, or by 30 percent by FY 2015, relative to an FY 2003 baseline. This represents a more aggressive energy reduction goal than EAct 2005.

Water Efficiency

Agencies must reduce water consumption intensity by 2 percent annually, ultimately reaching 16 percent reduction by FY 2015, relative to an FY 2007 baseline. Implementation instructions for E.O. 13423 also direct federal agencies to purchase products that have earned the EPA WaterSense[®] label for efficiency and performance, once product specifications in the relevant categories have been finalized.

Sustainable Buildings

Construction and renovation of federal buildings must be in compliance with the Guiding Principles set forth in the *Federal Leadership in High Performance and Sustainable Buildings MOU* (see below). The EAct 2005 requirement to design buildings to achieve energy performance 30 percent better than ASHRAE 90.1-2004 is also reiterated in E.O. 13423, but with an emphasis on energy costs.

Renewable Energy

At least half of an agency's current renewable energy purchases must come from "new" renewable sources, which means the energy source (such as a wind farm) came online after January 1, 1999.

Transportation

Agencies must reduce total consumption of petroleum in motor vehicle fleets by 2 percent annually from an FY 2005 baseline through FY 2015. In addition, they must increase alternative fuel consumption by at least 10 percent annually, and use plug-in hybrid vehicles if commercially available at a cost-competitive price.

EMS

Agencies are required to implement EMSs at all appropriate organizational levels, with increasing percentages required each fiscal year per the OMB Environmental Scorecard. EMSs must require the use of sustainable environmental practices, including the acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and paper with at least 30 percent postconsumer content. In addition, they must reduce the quantity of toxic and hazardous chemicals and materials purchased, used, and disposed. Furthermore, at least 95 percent of required electronics purchases must meet Electronic Product Environmental Assessment Tool (EPEAT) standards, and 100 percent of computers and monitors must enable ENERGY STAR features.

FEDERAL LEADERSHIP IN HIGH PERFORMANCE AND SUSTAINABLE BUILDINGS MOU

On January 24, 2006, EPA and 16 other federal agencies signed an MOU committing to design, construct, and operate their facilities in an energy-efficient and sustainable manner. Consistent with the goals of the federal policies, guidance, laws, and executive orders described above, the MOU put in place a set of sustainable Guiding Principles for integrated design, energy performance, water

conservation, indoor environmental quality, and materials use and disposal aimed at helping federal agencies reduce total ownership cost of facilities; improve energy efficiency and water conservation; provide safe, healthy, productively built environments; and promote sustainable environmental stewardship. EPA is working within the Agency and with its federal partners to address the spirit of the following principles.

Guiding Principles

- *Employ Integrated Design Principles.* Agencies should use a planning and design process that includes an integrated project team and incorporates performance goals for siting, energy, water, materials, and indoor environmental quality throughout the project design and life cycle. Agencies are encouraged to consider all stages of a building's life cycle, including deconstruction. This principle also calls for employing total building commissioning practices to verify building component and system performance and ensure that design requirements are met.
- *Optimize Energy Performance.* Agencies should set a goal of earning the ENERGY STAR label for new construction and major renovation and achieve 30 percent energy cost reduction for new construction compared to the baseline building performance rating, and a 20 percent energy cost reduction below a pre-renovation FY 2003 baseline for major renovations. In addition, in accordance with EPA Act, federal agencies should install meters in new major construction and renovation projects to track and continuously optimize performance.
- *Protect and Conserve Water.* Agencies should employ strategies that use at least 20 percent less indoor water compared to the baseline for the building after meeting the fixture performance requirements in EPA Act 1992. In addition, agencies should use water-efficient landscape and irrigation strategies to reduce outdoor water consumption by at least 50 percent over conventional practices.
- *Enhance Indoor Air Quality.* Federal agencies should meet specific standards for indoor ventilation and thermal comfort; establish and implement a moisture control strategy to prevent building damage and mold contamination; achieve a daylighting factor of 2 percent in 75 percent of all space used for critical visual tasks; specify materials and products with low pollutant emissions; and protect indoor air quality during construction by flushing out prior to and after occupancy.
- *Reduce the Environmental Impact of Materials.* For EPA-designated products under the Comprehensive Procurement Guidelines, federal agencies should use products that meet or exceed EPA's recycled-content recommendations, as well as strive for recycled content in other products. Agencies should use biobased products meeting the U.S. Department of Agriculture's recommendations, or, for other products, use products made from rapidly renewable resources or sustainable wood. In addition, during construction, agencies should recycle or salvage at least 50 percent of construction waste and eliminate the use of ozone-depleting compounds during and after construction when alternatives are available.

III. E²PLAN STRATEGY FOR SUSTAINABILITY

With the following strategy EPA plans to meet—or exceed—sustainability requirements in six areas:

A. ENERGY EFFICIENCY

EPA has set the following goal for energy efficiency:

Overall Goal: To EXCEED wherever possible the federal requirement of achieving at least 30 percent energy intensity reduction (from an FY 2003 baseline) by FY 2015.

EPA is already demonstrating energy efficiency leadership among federal agencies through a combination of conservation measures and innovative funding mechanisms. To meet EPAct 2005 and E.O. 13423 requirements of 30 percent better than ASHRAE 90.1-2004 for the Agency’s new buildings, we will need to do more. EPA has been working with its reporting facilities, or locations where it controls the utilities, to help meet—and exceed—the E.O. 13423 goal of reducing overall energy intensity by 30 percent by 2015 below the FY 2003 baseline, which is reinforced by EISA.

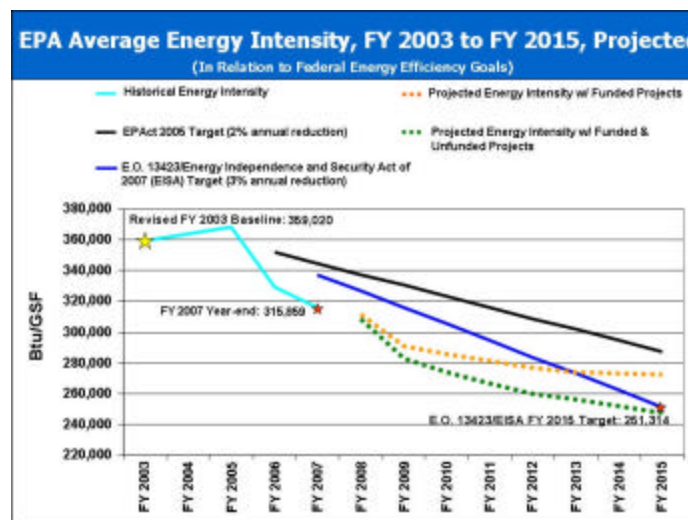
WHERE ARE WE NOW?

At the end of FY 2007, EPA was well on its way to meeting its energy efficiency goals:

Fiscal Year	E.O. 13423/EISA Energy Intensity Reduction Required Below FY 2003	EPA’s Energy Intensity Reduction Below FY 2003 Baseline
2006	3 percent	8.3 percent
2007	6 percent	12.0 percent
2008	9 percent	TBD

WHERE ARE WE GOING?

EPA has developed a strategy to identify and set facility-specific projects and reduction targets. The following chart outlines EPA’s projected energy savings from implementing this energy strategy:



EPA launched this strategy, known as “ConservE” in FY 2006 to proactively address energy efficiency at each of its reporting facilities (see Appendix B), and the Agency continued to refine the strategy in FY 2007. Through ConservE, the Agency assigns annual energy reduction targets to each reporting facility, based on historical energy performance and projected energy savings from funded energy projects and continued operations and maintenance (O&M) best practices. This approach helps EPA to strategically and equitably distribute the Agencywide burden among all facilities and ensures EPA’s continued success in meeting its required annual energy savings. Although the Agency already exceeded its FY 2008 energy reduction requirement in FY 2007, ConservE set a goal to further reduce Agencywide energy intensity by nearly 4 percent in FY 2008. As the chart shows, by 2013 EPA’s current efforts and funded projects will not allow the Agency to meet or exceed E.O. 13423 and EISA targets, unless EPA funds additional, more aggressive energy efficiency projects.

HOW DO WE GET THERE?

To keep its ConservE strategy on target and ensure ongoing performance and sustainability at existing and new buildings, EPA has identified the following objectives to help achieve its energy-efficiency goal:

- Identify opportunities for energy conservation and improvement at 100 percent of the Agency’s reporting facilities.
- Continue to provide national level energy efficiency education and training to all facility managers, laboratory directors, and other appropriate buildings and facility (B&F) staff.
- Identify financial opportunities, such as ESPCs, and/or commit the funds necessary to achieve energy efficiency and conservation goals.
- Make it a national priority to ensure that buildings perform to design specifications by promoting O&M best practices at 100 percent of EPA’s reporting facilities and recommissioning selected facilities as needed.
- Provide a “green check” on every new construction project and major renovation EPA conducts, to ensure compliance with legislative requirements.

EPA has identified specific activities to achieve each of these objectives, set timelines under which to complete each activity, and developed the tools needed to get the job done. For example, EPA has already conducted a number of energy assessments at several key facilities over the past decade. The Agency will revisit the results of these efforts in light of new ConservE facility targets. EISA also requires federal agencies to conduct comprehensive energy evaluations at 25 percent of its “covered” facilities annually, so that facilities covering 75 percent of the Agency’s energy use will be evaluated once every four years, and identify, implement, and follow up on energy conservation measures at each of those facilities. EPA will schedule reassessments to refine the scope of potential energy conservation measures identified to date at these facilities. EPA’s Office of Research and Development (ORD) also recently conducted an Agencywide study, “Agency’s Commonsense Actions and Best Practices That Improve Laboratory Efficiency and Effectiveness Report.” These ideas will also be taken into account as part of the energy assessment process.

The Agency has already provided training on energy reduction requirements, commissioning, advanced metering, and other key energy topics for B&F personnel at Headquarters. In 2008, EPA brought a nationwide training seminar to all B&F staff, laboratory directors, and other employees and intends to do more in 2009. EPA's Laboratories for the 21st Century (Labs21) program also makes introductory and advanced high-performance laboratory workshops available to EPA staff.

To finance these efficiency improvements, EPA plans to commit B&F funds through the facilities planning process. The Agency will also look into alternative financing mechanisms such as ESPCs. In addition to setting up a financial review process for these projects, EPA will develop a plan to review, prioritize, and monitor potential ESPC projects, including providing training to contracting officers as needed to implement these funding mechanisms.

Regular O&M is critical to ensuring that facilities designed to be high-performance buildings actually do perform as designed. EPA has already conducted a number of O&M assessments and surveyed facilities to identify and share best practices. The Agency will continue to address O&M from the national level.

EPA has already developed a "green check" process (see Appendix E) to ensure compliance with EPCRA 2005 and is refining its checklists to institutionalize them within the architecture, engineering, real estate, and construction procurement process and incorporate the E.O. 13423, EISA, and other environmental requirements.

Table 1 outlines the activities identified to achieve these objectives. For more details on how EPA will implement them, see Appendix A.

TABLE 1: EPA ENERGY EFFICIENCY OBJECTIVES

Overall Goal: To EXCEED wherever possible the federal requirement of achieving at least 30 percent energy intensity reduction (from an FY 2003 baseline) by FY 2015.	
Objective	Activities
Identify opportunities for energy conservation and improvement at 100 percent of the Agency's reporting facilities	<ul style="list-style-type: none"> • Review energy assessments conducted to date. • Review and incorporate <i>Agency's Commonsense Actions and Best Practices That Improve Laboratory Efficiency and Effectiveness Report</i> and incorporate ideas into project development process. • Review master list of energy conservation measures and assess opportunities for implementing them at each reporting facility, though the ConservE process. • Investigate ideas for additional, innovative energy conservation measures (ECMs) not already identified during the ConservE master planning process. • Designate an energy manager at each facility and hold them accountable for meeting ConservE targets in their performance appraisal and recognition system. • Conduct updated assessments with each reporting facility, either as site visits, virtually, or through phone interviews.
Continue to provide national level energy efficiency education and training to all facility managers, laboratory directors, and other appropriate B&F staff	<ul style="list-style-type: none"> • Conduct trainings at EPA Headquarters on life-cycle assessment of potential ECMs facilities can undertake. • Coordinate a nationwide training seminar with B&F staff, energy managers, and lab directors. • Offer tailored training to specific facilities with the most promising opportunities for further efficiency gains. • Work through Labs21 to refine and deliver introductory and advanced training.
Identify financial opportunities, such as ESPCs, and/or commit the funds necessary to achieve energy efficiency and conservation goals	<ul style="list-style-type: none"> • Continue working with the master planning contractor to finalize the financial review process to analyze projects, life-cycle costs, and funding opportunities. • Coordinate five-year B&F spending with ConservE master planning process to prioritize ECMs and refine forecasted energy savings. • Review ESPC potential for key projects and develop a plan to review, implement, and monitor ESPCs.
Make it a national priority to ensure that buildings perform to design specifications by promoting O&M best practices at 100 percent of EPA's reporting facilities and recommissioning selected facilities as needed	<ul style="list-style-type: none"> • Set up a nationwide O&M program and designate a national O&M manager to assist in its implementation. • Develop national O&M guidelines for use by reporting facilities. • Continue conducting O&M assessments as needed at facilities.

<p>Provide a "green check" on every new construction project and major renovation EPA conducts, to ensure compliance with legislative requirements</p>	<ul style="list-style-type: none">• Implement "green check" process for all new construction and major renovation projects EPA conducts.• Update "green check" to include caveats for EISA, including "net zero energy" requirement for commercial office buildings.• Incorporate updates related to EPA's Energy Management Scorecard from OMB.
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B. WATER EFFICIENCY

EPA plans to continue its tradition of leadership in the federal government with the following water efficiency goal:

Overall Goal: To continue to LEAD the federal government in water efficiency by reducing EPA's water intensity 16 percent by FY 2015, from its already reduced FY 2007 baseline.

Water efficiency has long been a priority for EPA. When E.O. 13423 established requirements to reduce water consumption intensity by 2 percent per year between FY 2007 and FY 2015, EPA had already established—and, in some years, exceeded—its own, internal water conservation goals, as outlined below. EPA has conducted water assessments at all of its reporting laboratories and implemented numerous best management practices for saving water in its laboratories. As a result, by FY 2007, the Agency had significantly reduced its water use.

With FY 2007 as a new baseline, EPA is prepared to pursue more targeted water efficiency efforts in order to meet the E.O. 13423 goals, demonstrating ongoing leadership among federal agencies in how to make the most efficient use of its water resources.

WHERE ARE WE NOW?

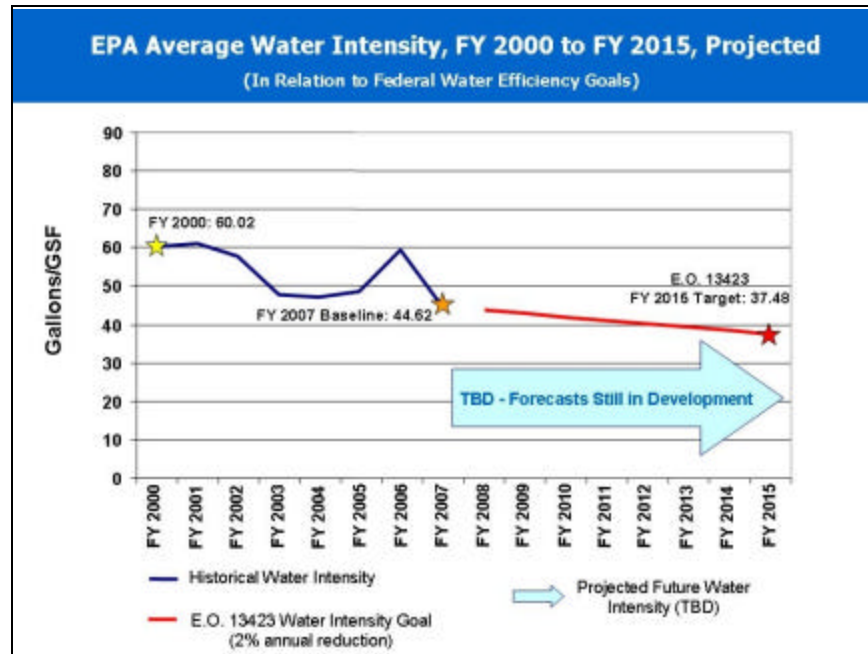
Starting in FY 2003, EPA has voluntarily set internal water reduction goals. Initially based on total gallons, EPA's first goal was to reduce water use 10 percent by FY 2010 from an FY 2000 baseline. Due to rapid progress toward that goal, in FY 2005 the Agency pushed its goal further, to 15 percent by FY 2010.

Fiscal Year	EPA's Internal Water Use Reduction Goals From FY 2000	EPA's Water Reduction (in Gallons) From FY 2000	E.O. 13423 Water Intensity Reduction Required From FY 2007
2003	10 percent by FY 2010	8.3 percent	N/A
2004	10 percent by FY 2010	9.4 percent	N/A
2005	15 percent by FY 2010	6.0 percent	N/A
2006	15 percent by FY 2010	Up 16.7 percent	N/A
2007	N/A	11.3 percent	Baseline year
2008	N/A	TBD	2 percent

WHERE ARE WE GOING?

Based on the same premise of its ConservE master planning process for energy efficiency, EPA drafted a "ConservW" strategy in FY 2007 to proactively address water conservation and efficiency at each of its reporting facilities (see Appendix C). Through ConservW, the Agency assigns annual water reduction targets, on a gallons per square foot basis, to each reporting facility, based on historical water use, water assessments previously conducted, best management practices identified, and projected water savings from planned water efficiency projects and continued O&M best

practices. This approach refines EPA's water conservation efforts based on key water efficiency areas and ensures EPA's continued success in meeting its required annual water savings. With an aggressively reduced FY 2007 baseline, this master planning process is necessary to help EPA succeed. The following chart graphs EPA's targets for water reduction; ConservW targets are still under development.



HOW DO WE GET THERE?

With ConservW as a road map, EPA is looking ahead to a more progressive water efficiency strategy based on the following objectives:

- Identify opportunities to further reduce water use at 100 percent of the Agency's reporting facilities by systematically reviewing and addressing five main areas: cooling tower water, irrigation, single-pass cooling, sanitary uses, and process water.
- Align EPA O&M activities at each reporting laboratory across the country with water efficiency best management practices identified by FEMP.
- Identify financial opportunities, life-cycle costs, and contracting options for funding water conservation projects.
- Provide water efficiency training to all reporting facility managers and educate all EPA employees on water conservation strategies.
- Incorporate the purchase of WaterSense labeled products into the "green check" process on every new construction project and major renovation EPA occupies, and integrate water efficiency into existing facilities' EMS objectives and targets.

To achieve these strategic objectives, EPA has identified a number of activities and established the tools and timelines to implement them. For example, although the Agency has done a very thorough job of conducting water assessments at all of its reporting facilities, EPA will revisit some of these assessments, not only because assessments at a certain percentage of federal facilities are required each year under E.O. 13423, but also to focus on the five main areas that EPA identified earlier in its assessments as likely candidates for further water reductions: cooling tower water, irrigation, single-pass cooling, sanitary uses, and process water.

FEMP has identified a number of best management practices, many of which EPA has already implemented at its reporting facilities. However, with an increased emphasis on O&M as a way of improving efficiency throughout the Agency, EPA will ensure that FEMP's best management practices for water are incorporated into national O&M guidelines, which will be distributed throughout the Agency, and facility managers will be held accountable for implementing them wherever feasible. To help them accomplish this task, EPA will provide training for facility managers on the O&M and other best management practices for saving water in EPA's laboratories. Where possible, the Agency will also train its employees to identify water-wasting practices, report leaks, and assist facility managers in saving water at all EPA locations.

To finance any upgrades or purchases that might be necessary to incorporate water-efficient best management practices in the five key areas, EPA will look to its B&F funding process, conduct life-cycle cost analysis, and examine ESPCs as an opportunity to finance major mechanical upgrades with both energy and water efficiency improvement potential.

The guidance published for E.O. 13423 includes a requirement that federal agencies purchase water-using products labeled through EPA's WaterSense program, where applicable. As specifications are published for products found in EPA facilities, the Agency will work to include them in its Architecture & Engineering (A/E) Guidelines, as well as the "green check" process for new construction and renovation. And, since employee behaviors can have an impact on any facility's water conservation efforts, EPA will encourage all of its EMS locations to incorporate water use as a significant environmental aspect targeted for improvement.

TABLE 2: EPA WATER EFFICIENCY OBJECTIVES

Overall Goal: To continue to LEAD the federal government in water efficiency by reducing EPA's water intensity 16 percent by FY 2015, from its already reduced FY 2007 baseline.	
Objective	Activities
Identify opportunities to further reduce water use at 100 percent of the Agency's reporting facilities by systematically reviewing and addressing five main areas: cooling tower water, irrigation, single-pass cooling, sanitary uses, and process water	<ul style="list-style-type: none"> • Complete ConservW master planning process. • Review water assessments conducted to date. • Investigate opportunities for additional water management best practices in the five key areas. • Conduct more in-depth water assessments and feasibility studies as necessary. • Review <i>Agency's Commonsense Actions and Best Practices That Improve Laboratory Efficiency and Effectiveness Report</i> for water-saving ideas.
Align EPA O&M activities at each reporting laboratory across the country with water efficiency best management practices identified by FEMP	<ul style="list-style-type: none"> • Set up a nationwide O&M program and appoint a national O&M manager to assist in its implementation. • Develop national O&M guidelines to include water management best practices from FEMP guidelines.
Identify financial opportunities, life-cycle costs, and contracting options for funding water conservation projects	<ul style="list-style-type: none"> • Continue working with the master planning contractor to finalize the financial review process to analyze projects, life-cycle costs, and funding opportunities. • Coordinate five-year B&F spending with ConservW master planning process to prioritize water-saving projects. • Review ESPC potential for key projects and develop a plan to review, implement, and monitor ESPCs.
Provide water efficiency training to all reporting facility managers and educate employees on water conservation strategies	<ul style="list-style-type: none"> • Conduct national training and facility-specific trainings on specific laboratory best management practices. • Work through Labs21 to refine and deliver introductory and advanced training. • Develop employee education program on saving water.
Incorporate the purchase of WaterSense labeled products into the "green check" process on every new construction project and major renovation EPA occupies, and integrate water efficiency into existing facilities' EMS objectives and targets	<ul style="list-style-type: none"> • Update "green check" process to include purchase of WaterSense labeled products as new specifications are developed. • Incorporate water efficiency into all facility EMS targets and objectives.

C. SUSTAINABLE BUILDINGS

EPA has long been a leader in the green building arena. Following is our strategic goal:

Overall Goal: To EXCEED the federal government green building goals outlined in E.O. 13423 and MEET the *Federal Leadership in High Performance and Sustainable Buildings MOU* Guiding Principles for all new construction and major renovation projects and for at least 15 percent of our existing building inventory by FY 2015.

EPA is committed to ensuring that its own buildings and practices reflect EPA's mission. Toward this end, EPA has been developing an integrated approach to sustainable building design, construction, renovation, operation, and maintenance. As more "green" buildings come online and sustainable practices are added to existing facilities, EPA will continue to monitor and assess the status of each facility's progress in meeting specific requirements and goals. The Agency also will take corrective action to ensure full implementation of sustainability in all of its facilities.

WHERE ARE WE NOW?

Since EPA adopted its first green building vision statement in 1995, the Agency has consistently set—and exceeded—high goals for sustainable facilities. EPA has been using the LEED for New Construction and Major Renovation (LEED NC) Rating System as a starting point for ensuring sustainable construction of owned facilities and lease acquisitions requiring new construction or major renovations since FY 2000, and the Agency has since made LEED NC a requirement for all new major projects. In addition, the Agency considers other, facility-specific environmental performance requirements that help EPA's facilities achieve maximum building performance while reducing their environment footprint.

While EPA has required LEED Silver certification since FY 2006, EPA has been pursuing Gold where possible. The LEED NC Rating System includes many of the guiding principles included in the MOU. The following table lists the nine EPA facilities that either have achieved certification or are in the process of acquiring certification.

Facility	Location	Occupation Date	Level of Certification	LEED Version
New England Regional Lab	Chelmsford, MA	October 2001	Gold	1.0
National Computer Center	Research Triangle Park (RTP), NC	January 2002	Silver	2.0
Science and Technology Center Region 7 Lab	Kansas City, KS	May 2003	Gold	2.0
EPA Headquarters Potomac Yard One	Arlington, VA	May 2006	Gold	2.1
EPA Headquarters Potomac Yard Two	Arlington, VA	July 2006	Gold	2.1
Region 8 Headquarters	Denver, CO	January 2007	Gold	2.1
Cincinnati Annex II*	Cincinnati, OH	November 2007	Gold	2.1/2.2
Child Care Center	RTP, NC	January 2007	Silver	2.2
Region 1 Headquarters*	Boston, MA	April 2009	Gold	2.2

* Under construction, LEED Gold anticipated

WHERE ARE WE GOING?

EPA will continue to work to achieve the green building goals outlined in E.O. 13423 and the MOU Guiding Principles. Through the acquisition of new property and the renovation of existing inventory, EPA is slated to meet these goals for at least 15 percent of the building inventory by 2015. Not content to just meet the baseline requirement, however, EPA will strive for more energy, water, and carbon-neutral buildings in the future, as EPA looks ahead to the zero net energy initiative outlined in EISA for the commercial buildings it occupies. The Agency also will make green practices the standard for all of its building O&M activities. The lessons learned from past sustainable design projects and other “green” practices such as pollution prevention and recycling will be leveraged into “best practice environmental lease provisions” in a standard GSA solicitation for offers (SFO) for future lease solicitations. These accomplishments also contribute toward meeting the Agency’s water and energy efficiency goals.

HOW DO WE GET THERE?

EPA has identified the following objectives to help achieve its sustainable building goals:

- Continue to incorporate sustainability principles in the acquisition of buildings, including all new construction, major renovations, and leased space, wherever possible.
- Incorporate more sustainability practices in the O&M of EPA owned and leased facilities.
- Increase the procurement of sustainable goods and services (e.g., recycled-content and environmentally preferable products) that support building construction, renovation, operations, and maintenance.
- Provide sustainability training to all regional office and laboratory facility managers and facility acquisition staff.
- Improve facility manager and real estate accountability, recordkeeping, and reporting activities associated with sustainable buildings.

EPA has or is in the process of incorporating the MOU Guiding Principles into the planning processes for building construction, lease acquisition, and O&M of its facilities. In addition to the requirement that all EPA new construction and major renovation projects achieve at least a LEED Silver rating, the Agency will use a system such as the LEED for Existing Buildings O&M Rating System (LEED EB) to address whole-building cleaning and maintenance issues (including chemical use), recycling programs, exterior maintenance programs, and systems upgrades. EPA is working to achieve a Gold LEED EB O&M rating for its Region 8 office in Denver, for example.

For new facilities and renovations, EPA’s “green check” process lists environmental performance goals to be considered during design, construction, renovation, and operation of each major new facility or renovation. After a successful pilot program, “green check” is now being integrated into the standard procedures followed by architecture, engineering, and real estate professionals at EPA Headquarters to assist facilities in meeting environmental compliance and sustainable building goals. EPA also makes a point of hiring A/E firms with LEED Accredited Professional (AP) architects, designers, energy conservation and green building experience, and commissioning capabilities.

EPA's Sustainable Buildings Implementation Plan (see Appendix D) provides the approach for acquiring facilities in accordance with a tiered process, which identifies the most critical projects and buildings and focuses on those projects that will have the greatest impact on the Agency's environmental footprint. The process is designed to be comprehensive of all capital projects and will lead to meeting the sustainable goals required by legislation and executive orders.

For years, EPA has used long-term master planning for its facilities renovations, upgrades, and acquisitions; more recently, EPA has incorporated its sustainability goals into the process. EPA awarded a Sustainable Master Planning contract in May 2006, and the Agency intends to implement this process on two facilities over the next year. As part of this effort, EPA will strengthen the energy modeling components of its Sustainable Master Planning Procedures. The Agency is also planning to update its Facilities Manual in FY 2009 to include sustainable building goals and strategies based on the requirements in EPAct 2005, EISA, the MOU, and E.O. 13423.

EPA has compiled a Best Practice Environmental Lease Provisions document in a standard GSA SFO format, which is used for new lease solicitations. This document includes provisions to: pursue compliance with the MOU, E.O. 13423, and EPAct 2005; obtain LEED NC certification if new construction or major renovations are involved; and obtain LEED EB certification to cover building O&M during the life of the lease. The provisions incorporate a standardized lessons-learned process (harvesting knowledge gained from recently completed building projects) to improve future projects. EPA also has developed specific language that highlights the Agency's sustainable design priorities, to be used in GSA's construction source selection plans. Model lease submittals and contract language will be developed to provide templates for construction source selection, commissioning, indoor air quality management, green housekeeping, integrated pest management, landscape maintenance, and recycling.

EPA also will continue to use tools and resources available within the Agency and its program offices to support sustainable building and operations, including Labs21, EPA's Environmentally Preferable Purchasing Program, the Comprehensive Procurement Guidelines for recycled-content products, and other internal sources of information and assistance. For example, in keeping with the principals of its smart growth initiatives, EPA has a policy to locate its facilities in transit-served, high-density, downtown locations, whenever feasible.

Table 3 outlines the activities identified to achieve these objectives; for more details on how EPA will implement them, see Appendices A and D.

TABLE 3: EPA SUSTAINABLE BUILDINGS OBJECTIVES

<p>Overall Goal: To EXCEED the federal government green building goals outlined in E.O. 13423 and MEET the <i>Federal Leadership in High Performance and Sustainable Buildings MOU</i> Guiding Principles for all new construction and major renovation projects and for at least 15 percent of our existing building inventory by FY 2015.</p>	
Objective	Activities
<p>Continue to incorporate sustainability principles in the acquisition of buildings, including all new construction, major renovations, and leased space, wherever possible</p>	<ul style="list-style-type: none"> • Design and construct new/renovated facilities in accordance with LEED NC and using EPA's LEED Plus criteria. Achieve LEED Silver certification and the ENERGY STAR label, and pursue LEED Gold certification where possible. • Strengthen the sustainable master planning procedures and implement these procedures where appropriate. • Revise EPA Facilities Manual to include EAct 2005, EISA, MOU, and E.O. 13423 requirements and Best Practice Environmental Lease Provisions. • Follow smart growth criteria when locating facilities. • Follow a design approach that includes an integrated team of architects, engineers, contractors, consultants, and users, and life-cycle cost analysis in making investment decisions. • Hire A/E firms with LEED AP architects, designers, energy conservation and green building experience, and commissioning capabilities. • Ensure that each new major construction or renovation project meets environmental performance goals during design, construction, renovation, and operation. • Ensure sustainability is incorporated in leased facility acquisition.
<p>Incorporate more sustainability practices in the O&M of EPA owned and leased facilities</p>	<ul style="list-style-type: none"> • Ensure that new and existing facilities operate in accordance with LEED EB criteria. Pursue LEED EB where possible. • Conduct energy efficiency metering and projects through the implementation of the Agency's advanced metering strategy. • Conduct water efficiency audits and projects. • Recommission buildings where appropriate, as outlined in the ConservE and ConservW strategies (Appendices B and C). • Develop national O&M guidelines. • Ensure that building owners and property managers are held accountable for meeting or exceeding EPA goals. • Coordinate with the national O&M program described in the energy strategy section above.

Increase the procurement of sustainable goods and services that support building construction, renovation, operations, and maintenance	<ul style="list-style-type: none"> • Provide training and tools to project specifiers and purchasing agents. • Coordinate with EPA's information technology and purchasing offices to execute and meet the goals of the Agency's Electronics Stewardship Implementation Plan. • Coordinate with EMS training on green purchasing.
Provide sustainability training to all regional office and laboratory facility managers and facility acquisition staff	<ul style="list-style-type: none"> • Ensure that all applicable staff receives the current training that incorporates the requirements and goals of EPA Act 2005, E.O. 13423, EISA, and the MOU.
Improve facility manager and real estate accountability, recordkeeping, and reporting activities associated with sustainable buildings	<ul style="list-style-type: none"> • Ensure that sustainable building construction, renovation, and operational performance are measured and evaluated to determine program success. • Develop an assessment of Guiding Principles implementation at existing major facilities.

D. RENEWABLE ENERGY

Although EPA has led the federal government in green power purchases in recent years, we are not content to rest on that achievement. The Agency has set the following goal to enhance our renewable energy efforts:

Overall Goal: To EXCEED the federal government minimum renewable energy requirements through strategic green power purchases and increased investment in onsite renewable energy generation.

In the past, E.O. 13123 required federal agencies to secure a minimum of 2.5 percent of their electricity consumption from renewable sources. EAct 2005 continued that requirement in FY 2006 and requires federal agencies to procure renewable energy according to the following schedule:

Fiscal Year	Minimum Percent of Annual Electricity Consumption Derived From Renewable Sources	
	EAct 2005/E.O. 13123 Requirements	Green Power as a Percentage of ALL of EPA's Electricity*
2005	2.5 percent	78 percent
2006	2.5 percent	100 percent
2007 to 2009	3.0 percent	100 percent (FY 2007)
2010 to 2012	5.0 percent	
2013 +	7.5 percent	

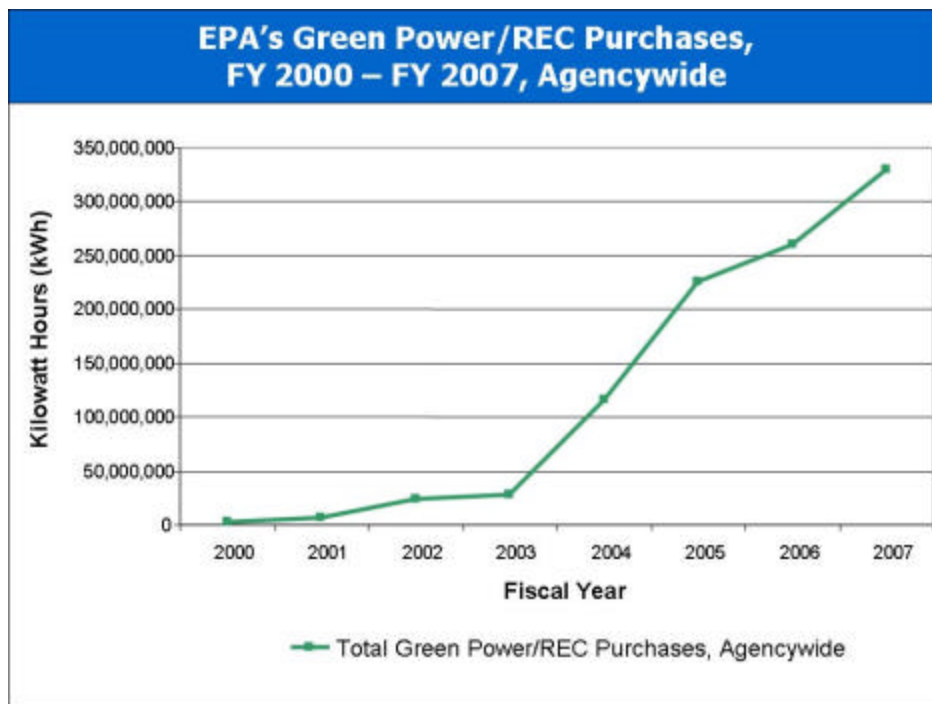
*Note: The requirements apply to EPA's "reportable" electricity consumption at the Agency's 34 reporting facilities; however, these numbers reflect the amount of green power EPA was under contract to purchase at the end of the fiscal year, as a percentage of total electricity use for all facilities the Agency occupied.

WHERE ARE WE NOW?

Over the past several years, EPA has helped support the green power market, including:

- Making the first 100 percent green power purchase for a single federal facility, at its Richmond, California, Region 9 Laboratory.
- Purchasing, to date, a total of more than 1 billion kilowatt-hours of renewable energy.
- Becoming the first major federal agency to offset 100 percent of its annual Agencywide electricity consumption with renewable energy.
- Making the Green Power Partnership's list of "National Top 25" green power purchasers.
- Installing renewable energy projects at several facilities, including 131 kilowatts of onsite photovoltaic technology at five facilities, solar water heaters, and a ground-source heat pump.

Since FY 2000, EPA has steadily increased our annual purchases of green power and RECs, as illustrated below.



This increasing investment in the green power market has not only allowed EPA to far surpass our federal renewable energy requirements to date, but also has allowed EPA to offset 100 percent of the entire Agency's annual electricity consumption with renewable energy beginning in September 2006.

WHERE ARE WE GOING?

EPA will continue to make strategic and sound investments in renewable energy generation. The Agency will continue to offset 100 percent of our electricity use with green power/REC purchases at the national level.

In the coming years, however, EPA will increase its focus to include onsite renewable energy generation, including demonstration projects for promising technologies such as photovoltaics, solar water heating, and geothermal systems. This approach will not only help the Agency continue to exceed federal renewable energy requirements, but will also help further development and growth in the renewable energy market. In addition, EPA will evaluate new renewable projects that will be compatible with the Agency's facility infrastructure replacement and improvement plan. In new facilities or major renovations, EPA will work to incorporate cost-effective solar hot water heating for at least 30 percent of the buildings' hot water demand.

As a result, EPA will build a more sustainable, long-term energy infrastructure that could reduce the Agency's demand on the nation's power grid and ensure a more reliable and clean energy supply.

HOW DO WE GET THERE?

To continue its tradition of federal leadership in the renewable energy sector, EPA has identified the following objectives to help achieve its renewable energy goal:

- Complete and formalize the Agency's short-, mid-, and long-term plan for renewable energy purchases and development of onsite renewable energy generation.
- Perform detailed feasibility studies at four facilities each year to identify new opportunities for economically viable and innovative applications of onsite renewable energy generation.
- By the end of FY 2010, have four new renewable energy demonstration projects installed and operable that showcase emerging renewable energy technologies.
- Commit increased funding for continued investment in onsite renewable energy projects; maximize opportunities for including onsite renewable energy projects into ESPCs.
- Further reduce greenhouse gas (GHG) emissions resulting from the operation of EPA's reporting facilities by developing a consistent framework for accurately tracking GHG emissions and striving for carbon neutrality to the greatest extent possible; integrate EPA's renewable energy initiatives into this framework and GHG emissions reduction strategy.

EPA has identified specific activities, tools, and timelines to achieve each of these objectives. For example, EPA has already conducted a number of renewable energy feasibility studies at several key facilities over the past few years. The Agency will revisit the results of those efforts to identify short-term opportunities for onsite renewable energy generation and continue these studies into the future to help EPA further expand its portfolio of onsite renewable applications.

The Agency has already developed a variety of options for its short-, mid-, and long-term investments in renewable energy, which include a combination of purchased green power and RECs and expanded applications of onsite renewable energy. In further developing and clearly documenting this phased approach, EPA will create a clear vision for its future endeavors in the renewable energy arena and its continued leadership in the federal community.

To date, EPA has installed onsite renewable energy generation at seven of its laboratories and three of its regional offices, including photovoltaic panels and geothermal heat pumps. To investigate additional opportunities for onsite renewable applications, EPA will continue to perform four feasibility studies on an annual basis throughout its inventory of owned and leased facilities.

Continued implementation of onsite renewable energy generation will reduce EPA's demand on the national power grid and also help stimulate the global renewable energy market. In addition to these benefits, EPA also strives to help open the market to new and emerging renewable technologies that are not yet economically viable on a large scale. To meet this objective, EPA will work with the National Renewable Energy Laboratory (NREL) and other consultants to help identify and investigate onsite renewable energy demonstration projects.

EPA will continue to procure RECs and make direct green power purchases, working with other agencies such as GSA, the Defense Energy Supply Center, and the Western Area Power Association, to make these purchases in the most cost-effective manner. To finance more onsite renewable energy applications, EPA will revisit funding options and look at the budget currently designated for green power/REC purchases to determine if some funds may be redirected to demonstration projects. The Agency also will closely examine its opportunities for third-party financing of new onsite renewable applications through ESPCs and power purchase agreements.

As part of its comprehensive strategy for continued investment in renewable energy, EPA will strategically implement innovative renewable energy projects at facilities where carbon neutrality is a feasible option given—among other things—the site characteristics, energy consumption profile, and local regulations and codes. To support this effort, in FY 2008, EPA began developing a baseline GHG emissions inventory and preparing quarterly reports highlighting the GHG emissions of each of EPA's 34 reporting facilities. In addition, EPA will sign on as a partner to the Agency's Climate Leaders Program.

Table 4 outlines the activities identified to achieve these objectives; for more details on how EPA will implement them, see Appendix A.

TABLE 4: EPA RENEWABLE ENERGY OBJECTIVES

<p>Overall Goal: To EXCEED the federal government minimum renewable energy requirements through strategic green power purchases and increased investment in onsite renewable energy generation.</p>	
Objective	Activities
<p>Complete and formalize the Agency's short-, mid-, and long-term plan for renewable energy purchases and development of onsite renewable energy generation</p>	<ul style="list-style-type: none"> • Review EPA's existing green power/REC contracts and onsite renewable energy generation for inclusion into EPA's official renewable energy strategy (i.e., gap analysis between existing purchases and future goals). • Distribute strategy to appropriate stakeholders for review and comment. • Complete strategy and have ready for official briefing and approval. • To maximize the environmental benefit of purchased green power/RECs and to ensure full compliance with federal renewable energy requirements, develop a matrix of items to consider for all future green power contracts (e.g., requirement that sources are "new," or online after January 1, 1999, preference for renewable sources based on regional fuel mix of conventional power generation). • Complete EPA's revised "green power tracking tool" and update as necessary.
<p>Perform detailed feasibility studies at four facilities each year to identify new opportunities for economically viable and innovative applications of onsite renewable energy generation</p>	<ul style="list-style-type: none"> • Review completed renewable energy feasibility studies. • Develop Agencywide inventory of potential onsite renewable energy projects through assessments and facility requests, including solar hot water heating in new facilities and those undergoing major renovations. • Develop funding plan and implementation timeline for completing remaining feasibility studies. • Task engineering consultants to perform feasibility studies according to implementation plan and timeline. • Update EPA's A/E Guidelines to include requirement that onsite renewable energy generation be considered for all new construction and major renovations. • Update EPA's leasing standards and lease language to include minimum consideration and requirements for onsite renewable energy.
<p>By the end of FY 2010, have four new renewable energy demonstration projects installed and operable that showcase emerging renewable energy technologies</p>	<ul style="list-style-type: none"> • Develop prioritized list of EPA facilities that would be most suitable sites for a demonstration project (based on geography, available funding, existing mechanical systems at facility, size, and energy consumption of facility, etc.). • Review completed feasibility studies and incorporate findings into plan for implementation of demonstration

	<p>projects.</p> <ul style="list-style-type: none"> • Develop funding plan and implementation timeline for implementing demonstration projects. • Explore options for implementing demonstration projects as part of ESPC projects.
<p>Commit increased funding for continued investment in onsite renewable energy projects; maximize opportunities for including onsite renewable energy projects into ESPCs</p>	<ul style="list-style-type: none"> • Review existing list of EPA’s potential ESPC projects and ensure renewable energy projects are included to the maximum extent possible. • Incorporate an ESPC financial review process into the master planning and B&F operating plan process. • Actively work with DOE and OMB to encourage Congress to extend the renewable energy tax credits established by EAct 2005. • Brief EPA senior management on the importance of the Agency’s continued leadership in renewable energy support and the associated funding requirements.
<p>Further reduce GHG emissions resulting from the operation of EPA’s reporting facilities by developing a consistent framework for accurately tracking GHG emissions and striving for carbon neutrality to the greatest extent possible; integrate EPA’s renewable energy initiatives into this framework and GHG emissions reduction strategy</p>	<ul style="list-style-type: none"> • Initiate and maintain quarterly reporting of GHG emissions for EPA’s reporting facilities, and report the impact of onsite renewable energy generation and purchased green power/RECs on EPA’s goal of carbon neutrality. • Initiate carbon neutrality demonstration project at RTP campus.

E. TRANSPORTATION

While EPA has successfully acquired alternative fuel vehicles (AFVs) for our fleet, the Agency set a goal to improve alternative fuel use in those vehicles and improve the market for alternative fuels:

Overall Goal: To continue to EXCEED federal government requirements for AFV acquisition and petroleum reduction, while improving our performance in order to MEET Agency targets for the use of alternative fuels in AFVs.

EPA has met and exceeded federal goals for acquiring AFVs since FY 2000. The Agency also has been successful in reducing its petroleum use by replacing less fuel-efficient vehicles with more efficient ones and encouraging carpooling, trip consolidation, public transportation, telecommuting, and teleconferencing. EPA's main transportation challenge, however, is that not all of the AFVs in its fleet are using alternative fuels to their full potential. This strategy outlines EPA's plans for continuing its AFV acquisition success and improving Agencywide use of alternative fuels.

WHERE ARE WE NOW?

Transportation Goal	Regulation/EO	FY 2007 Requirement	FY 2007 Actual
AFV acquisition	EPA 1992/2005	75 percent of covered vehicles	108 percent *
Use of alternative fuels in AFVs	EPA 2005	100 percent of AFVs	9.6 percent
Petroleum reduction	EO 13423	4 percent decrease from FY 2005	8.5 percent decrease
Alternative fuel annual increase	EO 13423	21 percent increase from FY 2005	57.9 percent decrease
Use of plug-in hybrid electric vehicles	EPA 2005	Consider use of these vehicles as available	N/A (not available commercially)

*EPA is eligible for additional credits that have counted toward AFV goals and helped the Agency exceed 100 percent.

EPA has met—and significantly exceeded—acquisition goals for AFVs since FY 2000. In FY 2007, EPA's petroleum consumption was 8.5 percent below the FY 2005 baseline, well exceeding the 2 percent target. In FY 2007, EPA calculated that its AFVs used 18,787 gasoline gallon equivalents (GGE) of alternative fuels such as E85, an ethanol blend. However, in order to meet its E.O. 13423 target, the Agency needed to have purchased nearly 54,000 GGEs of these fuels. As a result, EPA scored red for this metric on its OMB Scorecard for FY 2007. (OMB metrics for FY 2007-2009 are summarized at the end of this section).

WHERE ARE WE GOING?

EPA is continuing to meet its acquisition targets through centralized control and review of the vehicle acquisitions process. EPA's policy is to lease vehicles rather than purchase them, with GSA as the preferred provider. All leased vehicles must be AFVs unless cleared by the Agency fleet manager. EPA will continue to meet its petroleum reduction targets through a combination of measures, including reducing the absolute number of vehicles operated, replacing less efficient vehicles with more efficient ones, and increasing the use of alternative fuels.

In terms of increasing its use of alternative fuels, the Agency has had limited accessibility to retail outlets for some of these fuels. Approximately 44 percent of EPA's AFVs have received a waiver or were exempted from meeting the requirements by DOE, based on the limited availability of alternative fuel. EPA also is working to improve the quality of its fuel consumption data reporting system. Past reporting performance has been spotty, which the Agency believes may have resulted in the reporting of inaccurate data, including possibly over-reporting of EPA's alternative fuel consumption baseline in FY 2005. Increasing access to and use of alternative fuels, where available, will be the priority going forward.

HOW DO WE GET THERE?

EPA has identified the following objectives to help achieve its transportation goals:

- Continue to require all new acquisitions to be AFVs, making exceptions only in extenuating circumstances, and replace or eliminate non-AFVs through the normal attrition process, to exceed the 75 percent AFV acquisition requirement.
- Reduce the size of the EPA fleet and/or amount of driving required by EPA employees, where possible, in order to reduce EPA's overall petroleum use by 2 percent annually through 2015.
- Ensure that alternative fuels are being used in all applicable AFVs by holding senior managers accountable for reviewing fuel use data and training fleet managers and drivers on where to buy alternative fuels conveniently and efficiently.
- Work with other federal agencies to increase the availability of alternative fuels near EPA locations, by enhancing local infrastructure for alternative fuels.
- Improve the quality and timeliness of EPA's vehicle fuel consumption data and reporting.

To remind management and employees of the requirements and ensure accountability for meeting these objectives, EPA is finalizing a new *EPA Fleet Management Manual*. The manual sets out a detailed policy for Agency acquisition decisions, which must be approved by the senior transportation official, who is responsible for meeting the Agency's transportation goals.

To reduce miles driven, EPA has been installing video teleconferencing systems in its facilities. Vehicle dispatching systems are designed to recognize opportunities for carpooling, i.e., motor pool coordinators encourage employees to share rides when traveling to the same place on the same day.

To increase its use of alternative fuels, EPA is considering a number of initiatives, depending on the location of the vehicles and how the local motor pool is managed. To educate employees who use the fleet, EPA is installing yellow gas caps with a message about the type of fuel each flex-fuel vehicle requires and giving employees information about the flex-fuel capabilities of the vehicle assigned to them. Maps and listings of filling stations in their service area where alternative fuel is available will help drivers identify alternative refueling options. DOE's Alternative Fuel Station Locator can also identify alternative fuel vendors within a specific radius of any city, address, or ZIP code. This information is shared with the regions during the monthly transportation conference call, but employees need more training and outreach to help them understand and use these resources.

EPA also sends its fleet managers to GSA's annual FedFleet conference, which offers training on fleet-related regulations, reporting requirements, tools, and management systems.

EPA is developing a two-part tracking and compliance strategy for using more E85. The first part will focus on identifying the regions that are furthest from meeting the alternative fuel use goals for E85. Once identified, these organizations will be contacted at the senior management level to remind them of the requirement. EPA will also create an E85 tracking system by incorporating the metric into the Deputy Administrator's "EPASat Quarterly Report" (EQR). The EQR will track E85 use and compliance on a regional and program basis, and the Deputy Administrator will review them on quarterly calls with regional administrators and program officials.

Where alternative fuels are not available, EPA will work with other federal agencies to put pressure on the marketplace and increase the number of outlets carrying E85 and other options. To ensure accountability in all its locations where alternative fuels are available, EPA will require reporting on alternative fuel use to reach the Assistant Administrator level, so that program offices, laboratories, and other locations can take responsibility for bringing EPA up to performance requirements.

EPA has developed an Environmental Compliance Dashboard, a Web-based tool that allows senior managers to easily track their fleets' progress toward meeting targets for petroleum reduction, alternative fuel use, and AFV acquisition. On a quarterly basis, senior managers will be required to certify the data, attest to its accuracy, and address any deficiencies.

Accurately reporting fuel purchases has been one of EPA's historical challenges in the transportation arena; although the Agency maintains an Automotive Statistical Tool (AST) database, properly recording receipts has been difficult. EPA has conducted a thorough investigation of the reporting issues surrounding its fuel consumption and will implement additional controls that should greatly enhance the accuracy of future reporting. Table 5 outlines the activities identified to achieve these objectives; for more details on how EPA will implement them, see Appendix A.

OFFICE OF MANAGEMENT AND BUDGET TRANSPORTATION SCORECARD METRICS 2007-2009

Metric	Scoring Criteria
1 Percent of new vehicle acquisitions that are AFVs	GREEN: 75%
	YELLOW: 60%
	RED: < 60%
2 Use of alternative fuels in nonwaivered AFVs	GREEN: 95%
	YELLOW: 51%
	RED: < 51%
3 Reduction in annual fleet petroleum use compared to 2005 baseline	GREEN 2% annually and/or on track for 20% by 2015
	YELLOW: =1.5% annually
	RED: <1.5% annually
4 Increase in annual alternative fuel consumption as projected from 2005	GREEN 10% annual reductions, AF use =5% of total fuel use
	YELLOW: 10% annual reductions, AF use <5% of total fuel use
	RED: <10% annual reductions
5 E.O. 13423 incorporated in Agency Senior Official, other relevant staff descriptions	GREEN Position descriptions and performance evaluations
	YELLOW: Position descriptions only
	RED: No performance evaluation/position description

TABLE 5: EPA TRANSPORTATION OBJECTIVES

Overall Goal: To continue to EXCEED federal government requirements for AFV acquisition and petroleum reduction, while improving our performance in order to MEET Agency targets for the use of alternative fuels in AFVs.	
Objective	Activities
Continue to require all new acquisitions to be AFVs, making exceptions only in extenuating circumstances, and replace or eliminate non-AFVs through the normal attrition process, to exceed the 75 percent AFV acquisition requirement	<ul style="list-style-type: none"> • Coordinate with regional and program management to incorporate AFV requirements into all procurement actions. • Finalize and distribute <i>EPA Fleet Management Manual</i>. • Approve all Agency fleet decisions not to purchase AFVs through Agency fleet manager. • Provide standardized procurement language in contracts.
Reduce the size of the EPA fleet and/or amount of driving required by EPA employees, where possible, in order to reduce EPA's overall petroleum use by 2 percent annually through 2015	<ul style="list-style-type: none"> • Install and use videoconferencing services and telecommuting options. • Encourage carpooling, trip sharing, and public transportation through EMSs and other efforts. • Challenge Assistant Administrators to reduce vehicle miles traveled in each program/location.
Ensure that alternative fuels are being used in all applicable AFVs by holding senior managers accountable for reviewing fuel use data and training fleet managers and drivers on where to buy alternative fuels conveniently and efficiently	<ul style="list-style-type: none"> • Fuel Executive Motor Pool with only alternative fuels. • Provide training and education to managers and employees on alternative fuel use and availability. • Increase accountability for meeting alternative fuel goal, starting at the Assistant Administrator level.
Work with other federal agencies to increase the availability of alternative fuels near EPA locations, by enhancing local infrastructure for alternative fuels	<ul style="list-style-type: none"> • Work with GSA and other federal agencies near EPA locations to pressure local infrastructure to provide alternative fuels.
Improve the quality and timeliness of EPA's vehicle fuel consumption data and reporting	<ul style="list-style-type: none"> • Use Environmental Compliance Dashboard to provide data on AFV acquisition, petroleum reduction, and alternative fuel use. • Require senior managers to certify quarterly data, attest to its accuracy, and address any deficiencies. • Continue to assess and enhance reporting procedures through the AST system.

F. ENVIRONMENTAL MANAGEMENT SYSTEMS

EPA continues its tradition of leadership in the EMS arena with a goal for continuing to improve EMSs throughout our facilities:

Overall Goal: To MEET the EMS requirement at all appropriate levels within the Agency and LEAD with continuous improvement of EMS as the primary approach for managing all of our environmental aspects, including those aspects associated with transportation, water, and energy.

EPA's top management has articulated a strong commitment to EMS, starting with the distribution by the Administrator of an Agency implementation policy in 2002, followed by a position statement in 2005 and a commitment statement in 2006. EPA's 32 facility EMSs cover all of its major office and laboratory facilities and more than 90 percent of its workforce.

E.O. 13423 requires agencies to implement EMSs at all appropriate levels and to use EMSs as the "primary management approach" for addressing environmental aspects associated with their operations. The executive order requires agencies to establish objectives and targets within their EMSs to help meet the specific executive order goals related to energy, transportation, water, electronics stewardship, and toxic chemicals, among others. EPA has issued national objectives, targets, and metrics that are being integrated into every facility EMS across the Agency.

WHERE ARE WE NOW?

EPA has EMSs in place covering its 10 regional offices, 10 regional laboratories, 15 program laboratories, and its Headquarters facilities. EMSs are under development at three additional facilities, with completion expected in 2008.

As part of its Environmental Stewardship Scorecard, OMB has developed an EMS performance metric for federal agencies to gauge the extent to which each Agency is meeting the spirit and intent of the EMS requirements in E.O. 13423.

In FY 2007, to achieve green on the OMB Scorecard, 75 percent of the Agency's designated EMS facilities had to achieve a "green" rating on average for seven EMS metrics developed by an interagency work group under E.O. 13423. EPA has met that requirement by receiving 91 percent in "green" ratings in FY 2007. EPA continues to expand the reach of its EMS by adding new facilities and by encouraging existing facilities to extend the scope of their EMSs to include field and contractor activities. EPA also provides facilities with model contract language they can incorporate into new or renegotiated contracts to ensure that contractors providing facility services will support EPA's EMS goals.

WHERE ARE WE GOING?

EPA is promoting continuous improvement in its facility EMSs in an effort to maintain its leadership status in the federal government and maximize the benefit it can attain from having effective systems in place.

EPA also is striving for improved integration of EMS with all environmental, energy, and transportation-related programs and initiatives, with the goal of using EMS as a single, umbrella framework under which the Agency: manages these aspects of its operations; sets and pursues its objectives and targets; and monitors, measures, and reports on its results.

HOW DO WE GET THERE?

EPA has identified the following objectives to help achieve its EMS goals:

- Establish, maintain, and keep updated a set of Agencywide objectives, targets, and metrics in accordance with E.O. 13423 and the OMB Scorecard that all facilities are required to meet.
- Provide guidance and training to EMS coordinators, mid- and senior managers, and other stakeholders, as appropriate, on integrating E.O. 13423 goals and OMB Scorecard metrics into their facility EMSs through the Agencywide objectives, targets, and metrics.
- Monitor the extent to which facility EMSs are being kept up to date, audited, and subjected to regular review by top management to meet EMS performance metrics.
- Promote awareness of the E.O. 13423 goals among all EPA employees.
- Identify opportunities for expanding existing EMSs to address elements of facility operations that have not been covered to date.
- Implement EMSs at additional facilities and/or integrate field office activities into existing EMSs at regional facilities.
- Increase the pool of trained EMS internal auditors.
- Incorporate EMS reviews into regularly scheduled Safety, Health and Environmental Management (SHEM) program audits.

Consistent with E.O. 13423, EPA decided to use EMS as the framework by which the Agency will improve environmental performance and reduce its environmental footprint. To accomplish the above tasks, the Agency's Environmental Executive has issued a set of Agencywide EMS objectives, targets, and metrics covering the areas targeted in E.O. 13423. EPA also developed and piloted an Agencywide E.O. 13423 awareness training program; began developing guidance for use by all facilities; and provided pilot training to EMS coordinators on how to integrate the Agencywide objectives, targets, and metrics into their EMSs.

EPA conducts regular conference calls with its facility EMS coordinators to apprise them of new developments, exchange information, and consult with them on maintaining and improving their EMSs. EPA also regularly collects data about facility-level EMS implementation and utilization progress and uses the information to identify any areas where additional support is needed.

EPA senior managers and EMS coordinators understand the importance of establishing and maintaining a robust EMS internal auditing program. Regular reviews of the EMS by a qualified

auditing team provide the facility constructive feedback on what it is doing well and opportunities for improvement. To ensure that a qualified pool of personnel is available to participate in internal EMS audits, EPA is providing internal auditor training at a number of its facilities.

Table 6 outlines the activities identified to achieve these objectives; for more details on how EPA will implement them, see Appendices A and F.

TABLE 6: EPA EMS OBJECTIVES

Overall Goal: To MEET the EMS requirement at all appropriate levels within the Agency and LEAD with continuous improvement of EMS as the primary approach for managing all of our environmental aspects, including those aspects associated with transportation, water, and energy.	
Objective	Activities
Establish, maintain, and keep updated a set of Agencywide objectives, targets, and metrics in accordance with E.O. 13423 and the OMB Scorecard that all facilities are required to help meet	<ul style="list-style-type: none"> Reissue, through the Administrator, an updated set of Agencywide objectives, targets, and metrics every two years, or as needed in response to changing national priorities.
Provide guidance and training to EMS coordinators, mid- and senior managers, and other stakeholders, as appropriate, on integrating E.O. 13423 goals and OMB Scorecard metrics into their facility EMSs through the Agencywide objectives, targets, and metrics	<ul style="list-style-type: none"> Finalize the draft Agencywide EMS Objectives, Targets, and Metrics guidance and distribute it to all EPA facilities with EMSs in place or under development. Provide support to EMS facilities on integration and utilization of Agencywide objectives, targets, and metrics.
Monitor the extent to which facility EMSs are being kept up to date, audited, and subjected to regular review by top management to meet EMS performance metrics	<ul style="list-style-type: none"> Require each facility to indicate how they expect to perform on the semiannual OMB Scorecard metrics questionnaire. Review responses and require facilities to implement corrective actions for any metrics projected to score below "green."
Promote awareness of the E.O. 13423 goals among all EPA employees	<ul style="list-style-type: none"> Complete development of the online Agencywide EMS Objectives, Targets, and Metrics training and make it mandatory for all EPA employees to complete it by December 31, 2009.
Identify opportunities for expanding existing EMSs to address elements of facility operations that have not been covered to date	<ul style="list-style-type: none"> Identify contracts that may have potential environmental aspects associated with them and establish operational control over those aspects through contract modifications, etc. Identify facility EMSs that initially excluded activities such as field operations and bring these activities under the scope.
Implement EMSs at additional facilities and/or integrate field office activities into existing EMSs at regional facilities	<ul style="list-style-type: none"> Complete EMS implementation at three additional facilities by December 31, 2009.
Increase the pool of trained EMS internal auditors	<ul style="list-style-type: none"> Provide formal EMS internal auditor training to EPA employees to ensure that a sufficient pool of trained auditors is available.

	<ul style="list-style-type: none"> • Review options for streamlining and resource augmentation to support access to trained EMS auditors.
<p>Incorporate EMS reviews into regularly scheduled SHEM program audits</p>	<ul style="list-style-type: none"> • Revise and update the SHEM audit protocols and guidance to include audit criteria needed to verify the EMS is fully implemented and functioning.