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TESTIMONY OF
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BEFORE THE
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT, ORGANIZATION, AND PROCUREMENT
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
UNITED STATES HOUSE OF REPRESENTATIVES
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Chairman Watson, Ranking Member Bilbray, and Members of the Subcommittee, thank you for providing me with the opportunity to appear before you today to discuss the U.S. Environmental Protection Agency's (EPA's) work, success stories, and ongoing challenges associated with green building practices and improving environmental performance in federal facilities.

Background

EPA occupies 11 million square feet (SF) of office, support and laboratory space across the country, which houses over 17,000 federal employees and 8,000 support personnel. The Agency relies upon the General Services Administration

(GSA) to acquire virtually all of its office and non-laboratory support facilities. EPA owns most, but not all its 4 million SF of laboratory space.

The Greening of EPA

The Agency is currently meeting or exceeding the green building requirements found in the Energy Independence and Security Act of 2007 (EISA) and EO 13514. Historically, EPA has been a leader in the federal government in the renovation and construction of green buildings, in both facilities owned by EPA and those provided by GSA.

We have worked very hard to acquire the U.S. Green Building Council's Leadership in Energy and Environmental Design – New Construction (LEED-NC) Certification for buildings we have constructed or are leasing through GSA and private property owners. As of last December, EPA owned over 186,000 gross SF of newly constructed buildings that have LEED-NC Gold or Silver certification.

Through our very successful and collaborative partnership with GSA, EPA also occupies more than 1 million rentable SF that has LEED-NC Gold or Silver certification. A great example of this is GSA's recently renovated McCormack Post Office and Court House. This complex houses one of EPA's 10 Regional

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Offices located in Boston. Just last month, these buildings received LEED Gold certification. In total, 1.3 million SF of space, or slightly over 10 percent of the office, laboratory, and support space EPA occupies is comprised of newly constructed, LEED certified, green buildings and EPA anticipates achieving the Executive Order goal to have 15% of its inventory meeting the Guiding Principles for High Performance Sustainable Building by 2015. Nine of ten EPA Regional Offices are currently housed in ENERGY STAR labeled buildings, with certification of the new EPA Boston Regional Office expected in 2011

Energy and Water Efficiency Savings

EPA has reduced energy use at its reporting facilities by over 18% since 2003. If the "temporary" Renewable Energy Credit is included, EPA was down 24.4%. A variety of approaches have been taken to achieve these results including implementation of Infrastructure Replacement Projects, Energy Savings Performance Contracting, upgrading mechanical systems, and mandatory commissioning and re-commissioning.

We are also proud of our achievements in purchasing Green Power and Green Power Renewable Energy Certificates (RECs). Since September 2006, the

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Agency has acquired “delivered Green Power” and RECs equivalent to 100% of its conventional electricity use.

In addition, the Agency has found a variety of innovative approaches, such as condensate recovery to help reduce water use by almost 11 % since 2007 (exceeding the EO goal by 7% to date). We have extensive experience in implementing “Wet Weather Green Infrastructure” approaches to stormwater management as stipulated in EO 13514. Both EPA and GSA facilities contain numerous green roofs, large and small pervious pavement parking lots, rain gardens and systems to harvest and re-use rainwater.

EPA also makes extensive use of recycled materials in its construction projects and carefully protects and maintains indoor air quality in both new and existing buildings. Recycling rates for construction waste on large projects routinely exceed 70 percent.

Energy efficiency is an essential component of green buildings. Several of EPA’s office buildings have earned the ENERGY STAR rating, highlighting the significance that EPA and GSA place on achieving top energy performance. EPA’s Region 8 building in Denver Colorado for example, was specifically

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designed to earn the ENERGY STAR rating, which it did after verifying its energy bills for one year.

Measuring Green Building Performance

EPA has implemented a number of performance measurement systems to track energy efficiency savings and other environmental results associated with green buildings. The Agency currently has systems in place to collect and measure data for energy efficiency, water conservation, construction waste recycling, and Scope 1 and 2 GHG facility emissions.

Throughout the federal government, agencies are working to improve systems for collecting information related to employee commuting (a Scope 3 GHG emission) and waste diversion rates.

More information is needed to effectively measure the impact that green buildings and improved indoor environmental quality have on employee productivity.

Barriers to Green Buildings

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While EPA works within its appropriation to implement the many dimensions of a green building program, the goal of EO 13514 is for agencies to prioritize cost-effective improvements that have a positive return on investment. EPA's laboratories constitute 4 million of the 11 million total square feet the Agency occupies. The Agency continuously strives to improve our lab infrastructure and ensures our research is conducted in a safe environment. EPA is currently addressing the challenges of allocating funds to upgrade old mechanical systems to improve their energy efficiency. Additionally, EPA has successfully used Energy Savings Performance Contracts in the past and will continue to analyze how existing alternative financing approaches can potentially address the needs of highly complex laboratory facilities.

An area that is having a growing impact on our green building efforts is building operations and maintenance. Buildings designed to be energy efficient are frequently complex to operate and maintain. Locating and retaining qualified, competent and experienced building operators is becoming increasingly difficult, leading to inefficient and ineffective facility operations in certain locations.

EPA is using EISA required energy assessments and re-commissioning to identify and correct poor preventative maintenance practices, improve mechanical

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system operating efficiency, and evaluate O and M contractor performance. EPA believes that EISA Sec 432 implementing guidance setting minimum training requirements for federal Energy Managers also should improve O and M at EPA and other federal facilities. EPA has also developed a Building Management Program to improve and standardize facility O&M best practices at all EPA-owned facilities.

Congressional Leadership

Congress and the Executive Branch played a significant role in promoting the design and use of green buildings through the passage of several significant pieces of legislation and executive orders including the Energy Policy Act of 2005, the Energy Independence Act of 2007, and EO 13423 and EO 13514. Taken collectively, these provisions have set challenging energy and water reduction goals for federal facilities and resulted in significant energy reductions. They have made and will continue to make a meaningful impact in helping EPA and other agencies reduce their environmental footprints.

Collaboration throughout the Federal Government

EPA has had a very positive experience working with other federal agencies to develop and transform our office and laboratory space into green facilities.

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EPA's partnership with other federal agencies stretches back more than a decade. It includes participation in a number of collaborative efforts such as the Interagency Energy Task Force and the Interagency Sustainability Working Group, coordinated by the Department of Energy (DOE) and GSA; our work with GSA mentioned at the beginning of my testimony; engagement with the Office of the Federal Environmental Executive; and many other forums. EPA has also collaborated with DOT, HUD, and others to develop recommendations under the EO for green locations for Federal buildings so that agency actions are aligned with the Livability Principles.

The Interagency Sustainability Working Group (ISWG), coordinated by the DOE's Federal Energy Management Program and GSA, have provided a critical service in assembling and sharing information about the best practices found in federal green buildings. The education and technical assistance that we have received from the ISWG has been very helpful.

GSA's Office of Federal High Performance Green Buildings and GSA's Public Building Service are a testing ground for new technologies and design approaches for green buildings. In addition, we have relied on research from the

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National Institute for Standards and Technology in helping us make green building technology decisions.

Several tools that EPA developed include the Portfolio Manager and Target Finder, two on-line energy management tracking and assessment tools. Portfolio Manager is being used by 15 billion SF of commercial building market (20% of the market) to track energy and water usage, assess the performance of buildings, set goals and make reductions across building portfolios. http://www.energystar.gov/ia/business/downloads/ENERGY_STAR_Snapshot_Spring_2010.pdf Recently, as part of a joint effort between EPA, DOE and GSA, EPA expanded Portfolio Manager to include the Federal Sustainability Checklist, allowing federal agencies to track and report their progress on the sustainability goals required as part of Executive Order 13514. EPA's ENERGY STAR Program is also providing training to federal agencies as part of this collaboration.

Additionally, EPA has worked with the Department of Transportation and the Department of Housing and Urban Development on a Partnership for Sustainable Communities (PSC). Formed in June 2009, this collaborative effort was designed to help improve access to affordable housing, identify more transportation options, and lower transportation costs while protecting the

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environment in communities nationwide. Through a set of guiding livability principles and a partnership agreement that guides the agencies' efforts, the PSC is coordinating federal housing, transportation, and other infrastructure investments to protect the environment, promote equitable development, and help address the challenges of climate change.

The PSC is also working with GSA to educate federal and local officials and private real estate interests on ways to ensure that their location policies and practices follow agency-recommended location criteria. Along with the PSC, EPA is helping to develop tools and guidance to assist federal agencies to implement these criteria and to incorporate them into the Federal Management Regulations.

Taken collectively, we have been encouraged and pleased with our work with other federal agencies to advance green building throughout the federal government, and specifically, within EPA's offices and laboratories.

EPA's Role in Promoting Green Buildings

The Agency has known for a long time that buildings and development, in addition to using a major share of the nation's resources, have a significant impact on the environment and human health.

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Some of EPA's greatest success in promoting green buildings and green technologies can be found in our numerous, voluntary partnership and product labeling programs including ENERGY STAR, WaterSense, Climate Leaders, Environmental Preferable Purchasing, Construction and Demolition Materials Recycling and Reuse and Resource Conservation Challenge, just to name a few.

Setting energy targets during the design phase of new building development, and tracking energy on a continuous basis to guide investment in efficient technologies and practices, leads to significant improvements in energy performance. The ENERGY STAR program, which provides government agencies and private organizations with ENERGY STAR Guidelines for Energy Management has resulted in average greenhouse gas emission reductions and energy savings in the range of 35% per building. http://www.energystar.gov/ia/business/downloads/Decade_of_Energy_Star.pdf

Another area in which EPA has taken a leading role in helping other agencies improve their green building performance was through our development of stormwater guidance released in December 2009. This guidance provides information about green building technologies that include permeable pavement

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and roofing options to control the potential environmental impact on our nation's waterways associated with water runoff.

The private sector has made great strides in advancing green building through programs such as LEED Certification. We have also seen how the concept of "green building," is growing exponentially in the marketplace. These advances, however, can create problems when buildings advertised as "green" perform below claims or expectations. Key stakeholders and members of the public frequently ask EPA to serve as a neutral arbiter of green building standards, labels and claims. To address these issues, EPA works both in partnership with other federal agencies and with the marketplace to ensure that green building systems lead to the most environmentally protective results possible for air, land, water quality and human health – across the life of a building.

In addition, EPA works with voluntary standards organizations, such as the American Society for Testing and Materials International, the U.S. Green Building Council, the National Association of Home Builders, the International Code Council, and Underwriters Laboratory-Environment to strengthen their green building standards. The Agency also supports critical research in building

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products and supporting small business innovations for green building technologies.

EPA has also collaborated with other government agencies to develop and disseminate tools such as the Whole Building Design Guide and the Federal Green Construction Guide for Specifiers. Educational tools are also available to the public through resources like our new Green Building and Green Homes websites.

Green Buildings are Good for the Environment

EPA's mission is to protect human health and the environment. EPA's green building practices have reduced the consumption of energy, water and materials in our facilities. Looking at our most recent performance data and using 2003 as the baseline year, energy use is down 18.1%, water use is down 10.8% and we are recycling 70% of our construction waste. By continuing to adopt green building practices, the federal government reduces energy and water consumption and the volume of agency generated waste. These practices also increase the use of both materials with recycled content and environmentally preferable products. All of these steps maximize economic and environmental performance by reducing the federal government's overall environmental foot print, and demonstrate a commitment to sustainability.

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Conclusion

To address and reduce the environmental and health impacts of buildings, EPA has worked across the federal government to facilitate the mainstream adoption of effective green building practices, through better standards, targeted research and strategic technical assistance. Our green building activities are helping to ensure that local governments, architects, planners, facility managers, builders, remodelers, homeowners, and others can make more environmentally sound decisions when it comes to locating, designing, constructing, operating, renovating and reusing buildings.

EPA strongly endorses the many benefits associated with green buildings and looks forward to continuing our work with this Subcommittee, our partners throughout other federal agencies, and the public to ensure an economically and environmentally healthier country for all Americans.

Thank you again for inviting me to testify here today, and I look forward to answering your questions.