EPA United States Environmental Protection Agency

Energizing EPA

Office of Administration and Resources Management's Newsletter on Energy Conservation and Sustainable Facilities

September 2007

E.O. 13423 Plans

EPA is gearing up to implement the new Executive Order (E.O.) 13423's more stringent federal sustainability requirements:

- Reduce energy intensity and greenhouse gas emissions by 30 percent by 2015, or a 3-percent reduction each year (compared to a FY 2003 baseline).
- Reduce annual water consumption intensity by 2 percent each year from FY 2007.
- Reduce petroleum consumption in the fleet by 2 percent each year from FY 2005; increase annual alternative fuel consumption by 10 percent; and purchase more alternative fuel, hybrid, and plug-in hybrid vehicles.
- Expand purchases of environmentally sound goods and services, including biobased products.
- Establish standards for the purchase and disposal of electronic devices.
- Construct and renovate buildings in accordance with the recent federal green building memorandum of understanding (MOU) (See *Energizing EPA*, March 2006).

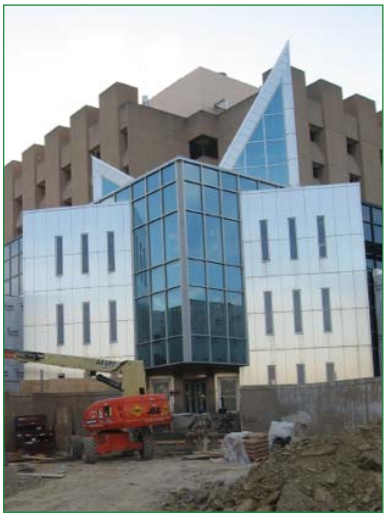
For more information, see <www.epa.gov/greeningepa/content/eo13423_instructions_508.pdf>.

Cincinnati Annex 2 Shines Gold

What started as "swing space" to accommodate a major renovation at one of EPA's largest research facilities has become a way for EPA to "walk the talk" when it comes to green buildings. The newly constructed, 42,400-gross square foot "Annex 2" of the Andrew W. Breidenbach Environmental Research Center (AWBERC) in Cincinnati, Ohio, has been designed to achieve Leadership in Energy and Environmental Design (LEED®) Gold certification.

Annex 2 is providing initial temporary work space for employees relocated as part of a larger AWBERC renovation project, but its minimal environmental footprint will have a lasting effect. The new construction has proven to be less expensive than renting office space during the AWBERC remodel and provides the added benefit of becoming a permanent workplace for EPA employees currently based at the nearby Norwood facility once its function as swing space is complete.

Annex 2's sustainable energy features are particularly notable. The annex contains state-of-the-art building systems and controls, including under-floor ventilation that is not only more comfortable for building occupants than the usual overhead air delivery, but also reduces energy use by 5 to 7 percent. Advanced metering systems will also be installed to carefully track energy and water use throughout the building. In addition to efficiency measures, Annex 2 is included in EPA's green power contract for 100 percent of its electricity consumption at its three main Cincinnati facilities, providing more than 15 million kilowatt hours of renewable energy certificates annually for three years.



Annex 2, pictured in front of the main AWBERC facility, was completed in June 2007.

Water-efficient plumbing fixtures help Annex 2 reduce water use by 30 percent compared to an average office building. Outside, a "green roof" is covered with native vegetation to absorb rain runoff, and the porous courtyard below will improve the building's stormwater management.

To ensure that Annex 2's green design works as well in practice as it does in blueprints, EPA hired a third-party commissioning firm to oversee the building's start-up and operation. In June, the firm commissioned all of the building's energy and water efficiency features and will return in 10 months to confirm that operations are still functioning properly.

Annex 2's construction is one part of a six-year, multi-phased renovation project at the 492,000-gross square foot AWBERC facility.

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Earth Day Sparks Electronics Recycling Challenge

READ Catches on to Recycle Electronics

The results are in, and more than half of EPA's facilities are actively recycling and disposing of their electronics in an environmentally preferable manner through the Recycling Electronics and Asset Disposition (READ) services contract. READ is a contract available to all federal agencies that provides access to electronics recyclers that EPA has audited to ensure proper and secure equipment processing and/or disposal. Seven electronics recycling companies across the country are accessible through the READ contract.

EPA's Headquarters, Research Triangle Park, and the Region 4 office were the first to use the READ contract, starting in May 2005. By 2006, 20 facilities, or 52 percent of those surveyed, had processed excess electronics through the READ contract. In fact, the Agency recycled more than 96 tons of equipment through READ in 2006:

- **Region 1** recycled 515 monitors, 160 central processing units (CPUs), 33 printers, 21 pieces of lab equipment, and 10 typewriters.
- **Region 3** recycled 336 personal computers, 22 laptops, and 202 monitors.
- **Region 5** sent approximately 2,400 pounds of equipment to be recycled in 2006, including 70 monitors, 74 CPUs, and 119 hard drives.
- **Region 10** recycled 170 CPUs, 67 monitors, 12 routers, 27 printers, 13 typewriters, 22 docking stations, six fax machines, and 40 servers.

For more information about the READ contract and electronics recycling, contact David Fuller at <fuller.david@epa.gov> or visit <www.epa.gov/oam/read>.

Earth Day 2007 wasn't just one day at EPA Headquarters—it was a whole week. In honor of this global event, EPA celebrated for five days, with an emphasis on electronics recycling that culminated in an Agencywide challenge.

Several downtown Headquarters offices hosted electronics recycling collections, providing employees with an opportunity to clean out their closets and bring in used electronics from home for proper recycling. At four EPA events and an EPA table at a citywide event, nearly 200 Headquarters employees donated more than seven pallets of electronics equipment.

These collection events sparked a longer term EPA Earth Day Electronics Recycling Challenge, issued by Assistant Administrator Luis A. Luna to all 10 regions, to meet or exceed (on a per employee basis) the amount of electronic equipment Headquarters recycled during Earth Day 2007. Announced at the beginning of April, the challenge lasted until June 1, and allowed regional offices to use creative strategies to encourage employees to recycle old personal electronic equipment. The winners are still being tabulated, but the regional entity where employees recycled the most personal electronic equipment will be recognized at an awards ceremony.

Nearly 200 EPA Headquarters employees donated more than seven pallets of electronics equipment for recycling at Earth Day events.

Various EPA Headquarters locations hosted events and fairs with tips on how to be better environmental stewards at EPA and at home. At the 1310 L Street office, 100 employees received compact fluorescent light bulbs and signed a pledge to remove one incandescent bulb from their home. Participants at the Federal Triangle office's fair learned how to safely handle batteries for recycling, helping to ensure employees' safety and expand the battery recycling program. Deskside recycling for mixed office paper also became even easier for those who wanted to trade smaller, cardboard deskside recycling containers for larger, plastic ones.

EPA Headquarters' satellite location at Potomac Yard in Arlington, Virginia, celebrated Earth Day with an environmental fair that featured tips on sustainable landscaping and a "trashless" potluck lunch that produced less than one bag of waste. To start the full-day event, local government representatives spoke about green initiatives in their communities and answered attendees' questions about their efforts. The day continued with a showcase about native and invasive plants, as well as an update on Potomac Yard's Integrated Pest Management program, and concluded with a lively plant swap—which provided garden-variety souvenirs for an Earth Day 2007 that was anything but boring.

For more information on the Earth Day Electronics Recycling Challenge, please contact Dexter Johnson at (202) 564-0179 or <johnson.dexter@epa.gov>.

Labs21 Partnership Program in the Spotlight

In 1999, EPA and the U.S. Department of Energy established Laboratories for the 21st Century (Labs21®) to improve the environmental performance of their own laboratories, as well as support the improvement of laboratories owned by other federal agencies and public and private organizations.

The recently released *Instructions for Implementing Executive Order 13423* highlighted participation in Labs21 as an effective method for federal agencies to improve the energy efficiency of their laboratories and encourage development of sustainable, high-performance, and low-energy laboratories nationwide. As a program grounded in an effort to green the federal government and based on the expertise of federal employees, Labs21 has already provided support for a number of federal agencies and would welcome all others as Labs21 Partners. Now, seven years after the program was launched, Labs21 includes 47 Partners that receive direct technical assistance from the Labs21 Team for approximately 78 facilities—more than half of which are federal.

The National Renewable Energy Laboratory's (NREL's) new Science and Technology Facility in Golden, Colorado, provides an example of how Labs21 supports federal facilities. As one of the 15 Labs21 Pilot Partners, NREL set high environmental performance goals for the facility, which houses nine laboratories. Through the Labs21 program, staff worked with the design team to analyze, design, review, and implement numerous energy-saving features that helped the facility achieve the U.S. Green Building Council's highest rating for Leadership in Energy and Environmental Design (LEED®)—Platinum. Not only is the Science and Technology Facility the second laboratory facility in the world to receive LEED Platinum certification, but it is the first federal facility—laboratory or office—to achieve this feat.

NREL's Science and Technology Facility also received a 2006 Federal Energy and Water Management Award along with a second Labs21 Pilot Partner, the Lawrence Berkeley National Laboratory (LBNL). LBNL received the award for its new Molecular Foundry, projected to consume 30 percent less energy than the stringent California requirement for laboratory buildings.

Labs21 Federal Partners

Argonne National Laboratory
Food and Drug Administration
Lawrence Berkeley National Laboratory
National Aeronautics and Space Administration
National Oceanic & Atmospheric Administration
National Renewable Energy Laboratory
National Science Foundation
Pacific Northwest National Laboratory
Sandia National Laboratory
U.S. Department of Agriculture
U.S. Environmental Protection Agency

Labs21 has also achieved recent success in its support of private sector laboratories. One such Labs21 Partner, Sierra Nevada College, worked within a unique partnership among public and private institutions of higher education in Nevada and California to open its Tahoe Center for Environmental Sciences (TCES). TCES was designed with the support of Labs21 to achieve LEED Platinum certification and is anticipated to be the third laboratory to receive the distinction.

As of 2006, NREL, LBNL, Sierra Nevada College, and 15 other currently reporting Labs21 Partners, including EPA, have reduced their combined annual energy use by 533,442 million British thermal units with the help of Labs21—equal to the average annual electricity use of more than 14,500 U.S. homes. Not only have these energy reductions saved these 18 Labs21 Partners nearly $18 million per year, they have also led to a reduction in carbon dioxide emissions by more than 242 million pounds annually—the equivalent of removing nearly 21,000 cars from the road.

For more information on Labs21, please visit <www.labs21century.gov> or contact <labs21@erg.com>. And don't forget, registration opened June 1 for the Labs21 2007 Annual Conference to be held October 2 to 4 in North Charleston, South Carolina. To find out more, visit <www.labs21century.gov/conf>.

Cincinnati Annex 2

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The project is designed to:

- Transform AWBERC into a state-of-the-art research facility.
- Provide flexible, secure, and safe infrastructure.
- Reduce energy consumption.
- Increase the laboratory-to-office ratio.

Empty office space in the main AWBERC facility can be converted to new laboratories now that employees are temporarily relocated to Annex 2. The annex can house approximately 70 personnel, and its north wing will also serve as the permanent home for 50 employees from EPA's National Homeland Security Research Center.

For more information, contact Abbas Keshavarz at (202) 564-5075 or <keshavarz.abbas@epa.gov>.

Meadow Grass Grows Greener at Duluth Laboratory

The meadow surrounding EPA's Mid-Continent Ecology Division (MED) Laboratory in Duluth, Minnesota, is greener than ever. These days, sustainable landscaping beautifies the laboratory grounds, where native plants have replaced a water- and energy-intensive bluegrass lawn.

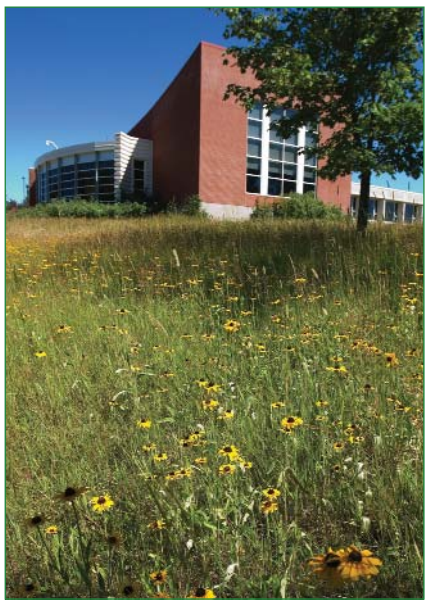
The 2 acres of meadow are now mowed once per year, instead of once per week. MED facilities manager Rodney Booth estimates that the laboratory saves about $4,000 each year in avoided labor expenses and equipment maintenance, and it no longer uses the 100 gallons of diesel fuel that the lawn mower previously guzzled annually.

The "green" landscaping project started in 2002, after a building renovation that year damaged the lawn. The laboratory decided it was an opportune time to apply the sustainable landscaping mandates of Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*, by planting native meadow grasses such as poverty oat grass and other plants that thrive in the Minnesota climate. Plants take time to grow, however, so a degree of patience is needed to allow these projects to come to fruition. Even now, the native species are still filling in at the Duluth facility.

The two plots of meadow surrounding the building also serve as an educational tool to teach the public about sustainable landscaping. MED staff created an insert for the visitors' brochure describing "What's Happening With Our Lawn?" as well as a poster for the lobby and signs posted in the meadow. Eric Mead, the MED safety, health, and environmental manager, said future plans might include adding an interpretive trail through the meadow.

The team of nine laboratory employees responsible for the meadow has been so successful in cultivating an environmentally conscientious landscape that they were recently honored with the first-ever EPA Office of Administration Green Thumb Award. The award-winning landscaping team at the MED laboratory includes Rodney Booth, Alex Hoffman, Janet Keough, Patricia Kosian, Elizabeth Makynen, Christine Russom, Mary Ann Starus, Debra Taylor, and Corlis West.

Interpretive signs are posted in the meadow to educate visitors about the sustainable landscaping project.



Native meadow grass species thrive outside the Mid-Continent Ecology Division Laboratory, replacing a traditional water- and energy-intensive bluegrass lawn.

For more information, contact Rodney Booth at (218) 529-5040 or <booth.rod@epa.gov>.

Contact Us

For more information about *Energizing EPA* or the activities of EPA's Sustainable Facilities Practices Branch in the Facilities Management and Services Division, please contact:

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Events To Catch!

National Recycling Coalition's 26th Annual Congress & Expo
September 16-19, 2007
Denver, Colorado
www.recyclingconference.org

Solar Power 2007
September 24-27, 2007
Long Beach, California
www.solarpowerconference.com

Labs21 2007 Annual Conference
October 2-4, 2007
North Charleston, South Carolina
www.labs21century.gov/conf

GreenBuild
November 7-9, 2007
Chicago, Illinois
www.greenbuildexpo.org