

# Energizing EPA

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


September 2004



## EPA Programs, People, and Partners Recognized for Outstanding Efforts

EPA received numerous accolades this year for its outstanding programs, partners, facilities, and employees. Awardees include: EPA's Green Power Purchase Program, which received a prestigious Presidential Award for Leadership in Federal Energy Management; the Agency's Kansas City Science & Technology Center was designated as a Federal Showcase Facility; and two EPA employees (Rick Dreisch and Kurt Johnson) were recognized with Federal Energy and Water Management Awards for individual achievements.



 In July 15, 2004, EPA and its Green Power Purchase Program Partners received a Presidential Award for Leadership in Federal Energy Management. EPA has worked in cooperation with the Department of Energy's (DOE's) National Renewable Energy Laboratory, the U.S. General Services Administration, the U.S. Department of Defense's Defense Energy Support Center, DOE's Federal Energy Management Program, and the Western Area Power Administration to acquire green power for 14 of its facilities (see related story on page 3).

"We are proud that EPA has been selected by the President to receive this prestigious award," said David O'Connor, EPA's Acting Assistant Administrator. "The award provides further motivation for EPA to continue to lead by example and work with other agencies and organizations to spur the growth of renewable energy use in the federal sector."

DOE's Assistant Secretary of Energy Efficiency and Renewable Energy, David Garman, presented plaques to the winners at the Presidential Awards ceremony in Washington, DC, during which winners of the federal Closing the Circle Awards were also commended by the Office of the Federal Environmental Executive. This year, EPA's Kansas City Science and Technology Center received an honorable mention in the Sustainable Design/Green Buildings category of that award program.

The Kansas City Science and Technology Center has also been designated as a Federal Energy Saver Showcase Facility for its efficient use of energy and water.



EPA and its partners receive a Presidential Award for their efforts in procuring green power for the Agency.

### Outstanding Employees

Two EPA employees will receive DOE Federal Energy and Water Management Awards for individual achievement at a ceremony on October 28, 2004, in Washington, DC:

- Rich Dreisch, facility manager at EPA's Environmental Science Center (ESC) in Fort Meade, Maryland, will receive a Federal Award in the water conservation category for his efforts to track and manage water use at ESC. Under his direction, ESC's water consumption dropped more than 32 percent during FY 2003, or 2.37 million gallons compared to FY 2002.
- Kurt Johnson is being honored in the exceptional service category for his leadership and direction in developing EPA's Green Power Partnership Program, which includes more than 350 public and private sector partners purchasing more than 1.2 billion kWh of green power annually.

For more information, visit <[www.epa.gov/greeningepa/greenpower.htm](http://www.epa.gov/greeningepa/greenpower.htm)> or contact Justin Spenillo at (202) 564-0639.



## Denver Leads Green Building Challenge at EPA

EPA is demonstrating its commitment to greening everyday practices with the construction and renovation of new office space throughout the United States. The Agency is striving to improve the environmental performance of its leased buildings, which are often build-to-suit projects, by adding “green lease” language to the solicitations for offers (SFOs). These amendments to traditional lease language emphasize energy, water, and resource conservation.

ENERGY STAR® estimates that nearly one-third of the energy used to run typical government buildings goes to waste. To address energy issues at its planned Region 8 office in Denver, Colorado, EPA is requiring the building contractor to:

- Obtain an ENERGY STAR label (awarded to buildings that perform in the top 25 percent of their sector).
- Meet Leadership in Energy and Environmental Design (LEED™) version 2.1 Silver certification level or better.
- Maximize water conservation through low-flow plumbing fixtures, water-conserving mechanical system design, low maintenance landscape design, and stormwater management.
- Ensure resource conservation throughout the planning, construction, and operation of the new facility, by recycling construction waste, selecting materials with postconsumer recycled content, and designing space for ongoing recycling efforts.
- Control indoor air quality through careful placement of exhaust and air intakes and the use of low volatile organic compound (VOC) adhesives, paints, sealants, and caulks, as well as environmentally preferable janitorial and cleaning products.

EPA and GSA worked together to structure the acquisition of the Region 8 office so that the new building represents the best in design, work environment, environmental performance, and security.

In August 2004, GSA awarded the development contract to the OPUS Team (consisting of OPUS Northwest, LLC, developer and owner; Zimmer-Gunsul-Frasca, architects and planners; Syska Hennessy, mechanical/electrical engineers; and Hinman Consulting, security consultants). The team has extensive national and local experience.

“We anticipated that the design competition would result in a highly efficient building with innovative technologies exceeding the base requirements,” said Cathy Berlow, an architect with EPA’s Sustainable Facilities Practices Branch (SFPB). The project should be completed and ready for occupancy in the summer of 2006.

### New Headquarters Facility

Another new EPA office project is the Agency’s new Headquarters space in Northern Virginia. In May 2004, GSA signed 10-year leases for more than 400,000 rentable square feet of space in a newly constructed building in Arlington, Virginia. This space will house EPA employees currently working in three separate buildings not far from the new site. Excavation is underway, and EPA occupancy is currently scheduled for completion by the end of summer 2006.

The SFO for this facility included environmental provisions developed by EPA to ensure that the building promotes energy and water efficiency and environmentally preferable materials and design. Like the Region 8 office, the new Virginia building must meet the LEED™ Silver certification requirement for new construction and achieve ENERGY STAR building performance standards.

To address the area’s congestion problems, the building will offer multiple alternative transportation options. For example, the building will be located near two bike paths and will offer extensive bike storage and shower facilities. For more information on this facility, visit



Rendering of the planned Region 8 office in Denver.

EPA’s New Potomac Yard Facility Intranet site at <<http://dcwww.dccic.epa.gov:9876/oa/potomacyard/index.htm>>.

### Renovation in Boston

EPA is participating in the renovation and rehabilitation of the John W. McCormack Post Office and Courthouse federal building for its new Region 1 office in Boston, Massachusetts. EPA met with GSA, which owns the building, early in the process to ensure that sustainable design and energy efficiency are taken into account when selecting the architect and engineering firm for this project. As part of this effort, a “green roof” for the building has been funded by EPA. A garden on the roof will be accessible from some floors. The building’s current roof will be structurally reinforced to accept the new green roof, which will help control stormwater runoff and the heat island effect. For more on green roofs, visit <[www.epa.gov/greeningepa/water/stormwater\\_techniques.htm](http://www.epa.gov/greeningepa/water/stormwater_techniques.htm)>.

Other EPA buildings that have successfully incorporated green lease language include the Region 3 office in Philadelphia, Pennsylvania; Region 7 office and Science and Technology Center in Kansas City, Kansas; and Region 10 office in Seattle, Washington.

To learn more, visit <[www.epa.gov/greeningepa/projects/index.htm](http://www.epa.gov/greeningepa/projects/index.htm)> or contact SFPB’s Cathy Berlow at <[berlow.cathy@epa.gov](mailto:berlow.cathy@epa.gov)>.

## Renewable Energy Certificates Help Boost Green Power

In June 2004, three new EPA facilities began purchasing green power, bringing the Agency total to 14 facilities that have purchased renewable energy for their electricity needs. With procurements in Duluth, Minnesota; Grosse Ile, Michigan; and Las Vegas, Nevada, the Agency is now purchasing green power—or renewable energy certificates (RECs)—at a rate of 121.5 million kilowatt hours (kWh) per year, or nearly 43 percent of the estimated electricity used nationwide by its laboratories and offices.

EPA's three recent green power procurements come in the form of RECs. EPA's Las Vegas laboratory contracted to purchase 4.65 million kWh of green power (4,650 RECs) annually from a wind farm in San Geronio Pass, California; the Duluth laboratory signed on to purchase 2.35 million kWh of green power (2,350 RECs) annually from a wind farm in Dodge Center, Minnesota; and the Grosse Ile lab agreed to purchase 700,000 kWh (700 RECs) annually from a landfill gas facility in Lenox, Michigan.

The three contracts are the latest additions in EPA's Green Power Purchase Program, a government partnership forged to foster growth in green power development. For the past five years, EPA and its partners have helped renewable energy find its niche within competitive electricity markets by making green power purchases accessible and affordable (see related story on awards, page 1).

### What Are RECs?

In many regions, green power is not offered through local electricity providers, or when offered, it is prohibitively costly. RECs, also known as renewable energy credits or "green tags," offer electricity users a way to "purchase" the environmental benefits associated with the production of renewable energy without actually receiving the delivered green power product. Electricity derived from renewable sources (e.g., wind, landfill gas, solar, or biomass) has fewer environmental impacts such as reduced emissions of carbon dioxide, sulfur dioxide, or nitrogen oxides into the atmosphere as compared to fossil fuels. By

supporting renewable energy generation, RECs ensure that less conventional energy sources (e.g., coal, oil, natural gas) are needed to meet demand and, as a result, fewer emissions are released into the air.

The price of producing green power is generally slightly higher than the price of conventional electricity, due to higher fixed costs or similar barriers inhibiting market entry. In competitive energy markets, it is difficult for renewable energy generators to compete with these higher costs. Customers such as EPA can support green power development through the purchase of RECs from a third party. Each REC purchased certifies support for the generation of a certain amount of electricity (generally 100 or 1,000 kWh) from a renewable energy source in a certain area (e.g., wind farm, landfill gas facility). For further explanation, visit <[www.epa.gov/greeningepa/content/energy/pdf/greentags.pdf](http://www.epa.gov/greeningepa/content/energy/pdf/greentags.pdf)>. For more information on EPA's Green Power Purchase Program, visit <[www.epa.gov/greeningepa/greenpower.htm](http://www.epa.gov/greeningepa/greenpower.htm)> or contact Justin Spenillo at (202) 564-0639.

## Sharing the Federal Perspective at the Labs21 Conference

As an integral part of the nation's research and development agenda, federal laboratories, including those owned or operated by EPA, face increasing energy demands and health and safety standards. These labs, however, also have an opportunity to lead the way to more sustainable facility designs and management.

The upcoming Laboratories for the 21st Century (Labs21) conference, October 5-7, 2004, in St. Louis, Missouri, will offer an array of discussions and presentations on the unique challenges and opportunities facing federal laboratories, including:

- **Environmental Management Systems (EMS).** Speakers will offer an overview of how agencies are implementing EMS throughout the federal government, highlighting the EMS currently in place at EPA's Environmental Science Center in Fort Meade, Maryland.
- **Commissioning.** Attendees will learn how federal agencies are incorporating the commissioning process into the design and construction of labs.
- **Federal Laboratory Success Stories.** This session will feature case studies from several federal laboratories, including EPA's new Kansas City Science and Technology Center.



Share your perspective at the Labs21 2004 Annual Conference and discover strategies for improving laboratory performance. This event offers numerous opportunities to discuss sustainable design strategies and trends with experts and facility managers from around the world. Registration and details on the conference are now available at <[www.labs21century.gov/conf/upcoming/2004/index.htm](http://www.labs21century.gov/conf/upcoming/2004/index.htm)>.



# Wiping out Toxic Chemicals with Greener Cleaners

Since many people spend 90 percent of their time in homes, offices, and other facilities, clean and sanitary buildings are necessary to ensure comfortable and healthy indoor environments. Some cleaning products and techniques, however, can raise concerns by introducing toxic chemicals into building environments, potentially injuring janitorial workers and polluting air, water, and waste streams. To combat these negative effects, EPA is implementing green cleaning practices at its laboratory and office facilities.

About three-quarters of EPA facilities are making an effort to encourage greener custodial practices. For example:

- The Region 2 office in New York City and the National Air and Radiation Environmental Laboratory in Montgomery, Alabama, ensure that all chemicals used by the custodial contractor are reviewed and approved by EPA health and safety and environmental staff.
- The Region 6 office in Dallas, Texas, discusses new and environmentally preferable cleaning techniques and procedures with the building's contracted custodial supervisor during monthly meetings.
- Region 8's EMS team, in conjunction with a regional toxicologist, conducted a survey of cleaning products used in the Denver, Colorado, office. The team used the results to convince building management to pursue the use of greener cleaning agents.
- The Region 9 office in San Francisco, California, developed an environmental

## What Is Green Cleaning?

Green cleaning involves selecting alternative products, using those products properly, evaluating and/or changing occupant and janitorial staff behaviors, and re-examining how building spaces are used. For example, janitorial workers may be using a misting spray bottle to apply glass cleaner in an office building. The spray produces fine particles that can irritate eyes and lungs and could cause long-term health effects if it contains toxic chemicals. Changing to a nontoxic cleaner and applying the product in a stream or directly to a cloth can greatly reduce the negative health and environmental effects.

Green cleaning practices have many positive benefits for building owners,

occupants, and maintenance staff:

- Reduced harmful health effects (e.g., skin, eye, and respiratory irritation).
- Increased worker and occupant safety from avoided spills and fires.
- Reduced amounts of toxic chemicals entering the environment.
- Reduced operation and management costs associated with sick leave, health care, productivity loss, and litigation.
- Improved occupant and janitorial worker satisfaction through decreased health effects and other nuisances such as unpleasant chemical cleaner odors.

EPA has published, for public comment, a draft guide for selecting green cleaning products that can be viewed at <http://docket.epa.gov/edkpub/index.jsp>, number OPPT-2002-0039.

management plan to study chemical use by custodial staff and identify greener alternatives.

- The Region 10 office in Seattle, Washington, discusses janitorial practices and supplies with the building manager at weekly meetings. As a result, the janitorial staff has changed the cleaning agents used and allows the health and safety officer to review new products.
- The Research Triangle Park, North Carolina, contract includes language that requires the use of environmentally friendly products. The campus has also reduced the frequency of maintenance where practicable to decrease the

amount of cleaning agents used.

Several organizations have established voluntary standards and helpful guidance for government

agencies, businesses, and others looking to implement green cleaning practices. The American Society for Testing and Materials' (ASTM) *Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings* (ASTM E-1971) helps owners and operators of commercial and institutional buildings adopt green cleaning and house-keeping practices. Green Seal—an independent, nonprofit organization dedicated to protecting the environment by promoting the manufacture and sale of environmentally responsible consumer products—developed a consensus-based cleaners standard that outlines green product attributes.

For additional information on green cleaning, visit EPA's Environmentally Preferable Purchasing Web site, [www.epa.gov/epp/cleaner.htm](http://www.epa.gov/epp/cleaner.htm), which contains green cleaning resources from state and local governments and other organizations, or contact Jim Darr at [darr.james@epa.gov](mailto:darr.james@epa.gov) or (202) 564-8841.

## Contact Us

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

**Marjorie Buchanan**

**Email:** [buchanan.marjorie@epa.gov](mailto:buchanan.marjorie@epa.gov)

**Phone:** (202) 564-8206

**Web Site:** [www.epa.gov/greeningepa](http://www.epa.gov/greeningepa)