

Environmentally Preferable Purchasing seeks the overall best value, taking into account price competitiveness, regulatory requirements, performance standards, and environmental impact. Because purchasers typically have clear sources of information on procurement and safety regulations and well-established methods for evaluating price and performance, the U.S. EPA EPP program has developed the EPP Update to help government purchasers consider the environmental factors in the EPP equation and to keep purchasers informed of EPP news. For more information about the EPP program's history, tools, and resources, please visit <www.epa.gov/epp>.

### Highlights

- Electronics Management
- EPA's Partnership Program and the Auto Supply Industry
- Biobased Products
- Green Buildings
- Greening National Parks
- White House Circle Award Winners

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# **Electronics Management Poses New Challenges**

omputers and other office electronics play a big role in our business and personal lives, helping us perform tasks both large and small in an efficient manner. Unfortunately, electronic equipment is part of an increasing and complex waste stream that poses challenging environmental management problems for federal agencies because of the hazardous constituents in many of these products. For example, cathode ray tubes, circuit boards, batteries, and other electronic components often contain toxic materials such as lead, mercury, and cadmium. The problem is exacerbated by the fact that many electronics have short life spans due to rapid changes in technology. Until recently, there was no cohesive management system in place within the federal government to improve the life cycle management of electronic equipment and build infrastructure for the reuse and recycling of obsolete electronics. But a new effort is underway that intends to change this.

# **Electronics Addressed by the Federal Electronics Challenge**

- Monitors
- CPUs
- Keyboards
- Photocopiers
- Laptop computers
- Equipment with LCD screens
- Printers
- Cell phones



Piloted in 2003 and rolled out in 2004, the Federal Electronics Challenge (FEC) aims to empower federal agencies to achieve cost-effective, environmentally responsible electronics management throughout the product's life cycle. The FEC is a voluntary partnership program for federal facilities or agencies that want



# EPA's Recycling Electronics and Asset Disposition (READ) Services Program

Recognizing the issues associated with electronics management, EPA initiated the **READ Services Program. This** program will help partners and non-partners alike properly manage their obsolete electronic equipment. The objective of READ is to provide all federal agencies with a government-wide procurement tool to properly manage electronic inventories and to recycle and properly dispose of excess or obsolete electronics using an environmentally responsible approach. To make the program accessible to all federal agencies across the country, READ is being administered under a governmentwide acquisition contract (GWAC). The GWAC provides a pool of qualified contractors that specialize in asset management services and gives an option to federal agencies for disposing of electronics in an environmentally sound manner. EPA has issued a five-year multiple award contract to seven small businesses. Under the contract, the companies will evaluate each piece of equipment and its components and then reuse, recycle, or dispose of them in an environmentally sound manner.

to purchase greener electronic products, manage their electronic assets in an environmentally sound manner, reduce the impacts of electronics during use, receive assistance in changing their current practices, and gain national recognition for their efforts.

As partners, agencies agree to do the following:

- Select a target challenge level (partner, bronze, silver, or gold) and pursue the necessary steps to reach that level.
- Sign the FEC Pilot Facility Pledge, complete a baseline survey, and identify goals.
- Participate in occasional conference calls to learn more about specific electronics management topics
- Document results so that FEC can promote successes through case studies.

To promote the FEC, a national training meeting was held at the National Institutes of Health in the beginning of February. Representatives from 26 federal agencies attended the

training, which covered all three phases of the life cycle management of electronics, including acquisition and procurement, operations and management, and end-of-life management. Presentations and supplemental materials from the training sessions are available on FEC's Web site at <www.federalelectronicschallenge.net>. Currently, 11 federal agencies plus the Executive Office of the President have signed up as partners in the FEC. Agencies can sign up by visiting <www.federalelectronicschallenge.net/pledge.htm>.

To assist partners, the FEC Steering Committee offers conference calls to teach them about program requirements, tools, and resources. Information about each upcoming call can be found at <www.federalelectronicschallenge.net/partcall.htm>, and partners can RSVP for the calls by sending an e-mail to <partner@electronicschallenge.net>.

For more information on the FEC, please contact Laura Nazef at (202) 564-7523 or <nazef.laura@epa.gov>, or visit <www.federalelectronicschallenge.net>.

# **EPA Partnership Program Adds Value to Auto Supply Chain**

n innovative initiative is making strides in greening the automotive industry while also helping to cut costs. The Suppliers Partnership for the Environment—a collaboration between EPA and automobile manufacturers and suppliers—assists small, medium, and large companies along the automobile supply chain as they work together to share innovative ideas, tools, and best practices. Ultimately, the Suppliers Partnership

aims to improve the competitiveness of these companies while decreasing their environmental impacts.

The Suppliers Partnership began as a pilot project conducted by EPA and the General Motors Corporation (GM) when the Saturn Vue SUV was being developed. The project revealed that just one simple wastereducing step—eliminating plastic seat wrapping during production—could save the company as much as \$520 million if adopted throughout

the supply chain. GM and EPA realized that other automotive manufacturers and suppliers, if provided the tools, information, and technical support, could improve their bottom line while reducing their environmental footprint. As a result of GM's leadership, the Suppliers Partnership for the Environment was launched in 2002.

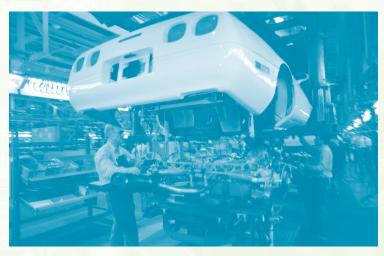
Over the past three years, the Suppliers Partnership has provided suppliers and manufacturers with the tools they need to improve products and processes, increase energy efficiency, and identify cost-saving opportunities. The savings realized by the Suppliers Partnership's members remain with the individual companies. This particularly benefits smaller, lower-tiered suppliers that cannot afford sophisticated environmental management on their own.

Cost savings are generally identified through company-specific workshops available to all Suppliers Partnership members. During these "Lean and Clean" workshops, employees from every tier of the company are involved in the process of cutting costs, eliminating waste, and optimizing resources and technologies.

"Workshops include a cross-section of a supplier's employees," EPA liaison Kristin Pierre said. "You need people pulling levers and flipping switches to see what's happening on the floor, and you need managers who make the decisions to be involved."

In addition to workshops, the Suppliers
Partnership provides value to automobile companies
through tools and information, quarterly meetings,
and work groups. Work groups address industry
issues such as Design for the Environment, including
Packaging and Life Cycle Management,
Environmental Metrics, and Lean Manufacturing.

Although the Suppliers Partnership is member-driven, EPA plays a vital role by providing topics for special projects, information, tools, and resources. The Agency also develops connections to other programs within EPA and other federal agencies. For example, EPA is coordinating with the Department of Energy to help automobile companies increase their energy efficiency. It also provides funds to the National Institute of Standards and Technology to conduct workshops.



The next steps for the Suppliers Partnership include developing a container-sharing program within Suppliers Partnership member companies and developing an industry-wide method for measuring the environmental performance of manufacturers and suppliers.

For more information about the Suppliers Partnership for the Environment, visit <a href="https://www.supplierspartnership.org">www.supplierspartnership.org</a> or contact Steve Hellem, executive director of the Suppliers Partnership, at (202) 530-0096, or Kristin Pierre of EPA at (202) 564-8837.



# Partnership Member Gets "Lean and Clean"

BAE Industries, an auto manufacturer specializing in seat mechanisms, discovered that it could reuse 50 gallons of die lube oil a week after an initial cost of \$2,400 for equipment. This change also resulted in a reduced disposal cost, for an annual savings of \$22,164. This improvement, as well as others identified during the company's "Lean and Clean" workshop, provided BAE Industries with \$323,487 in cost savings.

# **Environmental Summit Advances Stewardship**

Environmental stewardship was the name of the game at the recent National Environmental Partnership Summit in Chicago. The conference—which was a merger of the National Pollution Prevention Roundtable Spring Conference, the National Compliance Assistance Providers Forum, and the Performance Track Participants Association annual meeting took place from April 11-14, 2005, and involved more than 600 environmental leaders from government, industry, and nongovernmental and non-profit organizations. The purpose of the conference was to promote environmental stewardship by sharing information about innovations in pollution prevention and compliance assistance. The conference consisted of plenary sessions, interactive workshops, educational breakout sessions, onsite exhibitors, and offsite events and site visits.

For more information on the conference and to view program materials and presentations, visit <www.environmental summit.org>.

# **Report on EPP in EMS**

The report, "Integrating Green Purchasing into Your Environmental Management System" is now available at <www.epa.gov/epp/ems.htm>. The report gives guidance and federal facility examples for how to put green purchasing goals into federal facilities' EMS in order to help meet green purchasing and overall environmental management goals.

# **Biobased Products Get a Boost**

recently passed rule will encourage the procurement of biobased products and ultimately make it easier for federal customers to purchase them. In the "Guidelines for Designating Biobased Products for Federal Procurement," published on January 11, 2005, in the *Federal Register*, the U.S. Department of Agriculture (USDA) implemented a preferred procurement program for biobased products that the agency deems eligible. The biobased program was originally authorized in the Farm Security and Rural Investment Act of 2002, better known as the Farm Bill.

Under the rule, the federal government must give a preference to purchasing biobased products when practical, based on price, availability, and performance. Biobased products are any commercial or industrial product (other than food or feed) that is composed in whole or in significant part, of biological products, renewable domestic agricultural materials (including plant, animal, and marine materials), or forestry materials. In many ways, the biobased program is similar to EPA's Comprehensive Procurement Guidelines (CPG), which address the acquisition of products containing recycled materials.

The new rule establishes the process by which USDA will designate the preferred items for procurement. The designated "items" will consist of general groupings of products such as "industrial solvents," "fertilizers," and "cutting oils." Federal agencies have one year from the publication of the rule to ensure that their procurement specifications require the preference for biobased products. According to the Federal Register notice announcing the rule, USDA's biobased program has three primary objectives:

 To improve demand for biobased products, which would increase demand for many agricultural commodities that serve as feedstock for these products.

- To increase the pace of development of the industrial base through valueadded agricultural processing and manufacturing in rural communities.
- To enhance the country's energy security by substituting biobased products for fossil energy-based products derived from imported oil and natural gas.

According to Ann Veneman, former Secretary of Agriculture, "This rule promotes energy independence and the use of environmentally sustainable energy from biological sources, while at the same time creating new demand for agricultural commodities and new business investment and job growth in rural America."



In the next phase of the biobased program implementation, USDA will be issuing a series of proposed rules that will designate specific items for program eligibility and the level of biobased material to be contained in the items. To date. USDA has identified 83 items for consideration for program designation. Once an item is designated, all manufacturers of that product may claim preferred procurement status when marketing their product to the federal government, provided that the product contains the level of biobased materials specified in the rule. In addition, USDA will also be issuing a proposed rule to establish a voluntary biobased products labeling and certification program, which will allow authorized manufacturers to use a "USDA Certified Biobased Product" label.

For more information, please visit <www.biobased.oce.usda.gov> or contact Jim Darr at <darr.james@epa.gov> or (202) 564-8841.

# Federal Green Construction: Finally, A "How-to" Guide for Specifiers



rom homes to schools to offices to hospitals, the construction and operation of buildings requires tremendous natural resources and generates large quantities of pollution, and contributes to other environmental and human health impacts. As the owner of nearly half a million buildings, with another 57,000 leased, the federal government is in a unique position to serve as a model for green building design, construction, operation, and deconstruction. Recognizing this, the Office of the Federal Environmental Executive (OFEE) adopted sustainable buildings as one of its six priority areas in 2002 and has been working since then to mitigate the effects that the federal real estate portfolio has on the environment.

Currently, there is no single government-wide green building standard for all federal agencies to use as a model. There are, however, a number of existing policies, mandates, and Executive Orders (E.O.s) that establish "green minimums" and guide federal agencies in their decisionmaking during the design,

# In the United States buildings account for:

- 39 percent of total energy use
- 12 percent of total water consumption
- 38 percent of total carbon emissions (the most predominant human-made greenhouse gas).

For more information on the environmental impacts of buildings, see <www.epa.gov/greenbuilding/whybuild.htm>.

specification, and construction phases of a new building and/or renovation (see box below). Many agencies are incorporating ENERGY STAR® standards and the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) rating system into construction and renovation projects. In addition, several agencies—including EPA—have implemented their own green building programs and policies that raise the bar beyond compliance with the aforementioned green mandates and further address areas such as green power, healthy indoor environments, environmentally preferable construction products, low impact landscaping techniques, and sustainable brownfield redevelopment.

Despite a strong mandate and good intentions, there are still challenges in implementing green building approaches. One key issue has been that, although a "Request for Proposals" may state an agency's green goals for a construction project, there is often little guidance defining "green,"

# What Makes a Building Green?

Green building is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Core elements of a green building include:

- Energy efficiency and renewable energy
- Water conservation and stormwater management practices
- Environmentally preferable building materials and methods
- Solid waste reduction and recycling
- Healthy and productive indoor environments
- Smart growth and sustainable development

To find EPA resources covering each of these areas, visit <www.epa.gov/greenbuilding>.

# Federal Regulations and Policies Governing Green Buildings

- Resource Conservation and Recovery Act (RCRA)
   Requires federal agencies to give preference to the purchase of specific EPA-designated recovered-content products under EPA's Comprehensive Procurement Guidelines (CPG) Program.
- Orders federal agencies to reduce their energy consumption per square foot of building, install energy and water conservation features, track energy and water consumption, and institute systems to facilitate the funding of energy efficiency improvements.
- E.O. 13101—Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition
  - Requires the procurement of environmentally preferable products and services, including products containing recovered materials.
- E.O. 13123—Greening the Government Through Efficient Energy Management
- Requires each agency to reduce building energy consumption and associated greenhouse gas emissions by specific levels relative to historical baseline years. The E.O. also requires each agency to meet ENERGY STAR® building criteria to the maximum extent possible and expand the use of renewable energy, among other provisions.
- E.O. 13134—Developing and Promoting Biobased Products and Energy
  - Expands the federal procurement activities and requirements related to biobased products and services and sets a goal of tripling the U.S. use of bioenergy and biobased products by 2010.
- E.O. 13148—Greening the Government Through Leadership in Environmental Management
  - Requires that an environmental management system (EMS) be implemented by federal agencies by 2005. Among other aspects, EMSs include a preference for procuring environmentally preferable products.
- OMB Circular A-11

Encourages federal agencies to incorporate ENERGY STAR® or the LEED® rating system into upfront design concepts for new building construction or renovations.

and no means for agencies to ensure they get what they want in the end. To address this need for a comprehensive guide for procuring green construction services within the federal government, EPA is partnering with OFEE and the multiagency-sponsored Whole Building Design Guide (WBDG) to develop a guide containing model green construction specification language to be used to supplement full project specifications.

The Federal Green Construction Guide for Specifiers, currently in draft form, is intended to assist federal agencies in meeting various mandates, as established by statute and E.O.s (see sidebar), and address EPA and DOE program recommendations. In addition, the Guide will help federal agencies continue to use the LEED® rating system and a number of valuntary consensu

tem and a number of voluntary consensus standards more effectively as metrics for its green building practices. Organized according to the Construction Specifications Institute's MasterFormat™, the Guide assists in specifying environmental performance requirements of materials and installation methods. It also prescribes the quality standards of construction procedures to be executed on the project. And, key in the Agency's efforts to measure results, the Guide lays out the contractor's submittal requirements. "The Guide provides users with multiple, performance-based options, allowing for flexibility in application," says Alison Kinn Bennett, EPA's lead on the project. "We intend the Guide to be a living document—expanding into new sections and raising the bar as the green building industry matures."

For more information about green building programs at EPA, visit <a href="mailto:kwww.epa.gov/greenbuilding">kwww.epa.gov/greenbuilding</a>. For more information about The Federal Green Construction Guide for Specifiers, visit <a href="mailto:kttp://fedgreenspecs.wbdg.org">http://fedgreenspecs.wbdg.org</a> or contact Alison Kinn Bennett at (202) 564-8859 or <a href="mailto:kttp://kttp

# **OFEE's Promotion of Federal Green Building Efforts**

OFEE, which reports to the White House Council on Environmental Quality, is responsible for promoting sustainable environmental stewardship throughout the federal government, including green building practices. In September 2003, OFEE published *The Federal Commitment to Green Building: Experiences and Expectations*, a report documenting, for the first time, green building practices, policies, and tools being used by the federal government. To view a copy of the full report, visit <www.ofee.gov/sb/fgb\_report.html>.

# A Greening Success at Our National Parks

f you have visited one of America's beautiful national parks lately, you may have noticed some changes. Perhaps you saw numerous recycling bins and heard park rangers conveying environmental messages to visitors. Or maybe you observed new alternatively fueled vehicles (AFVs) or energy-efficient lighting along a park walkway. These environmental features and many others like them are a result of the efforts of the National Park Service (NPS) to promote green purchasing and sustainability in our national monuments, parks, and preserves. To further these greening efforts, NPS has been working in collaboration with EPA's EPP program to sponsor a series of greening charrettes in an effort to help create and implement strategic green action plans, establish areas of measurable green improvements, identify venues to share greening information among park stakeholders, and engage park employees and partners to assist in greening efforts. The following are some of the highlights from the charrettes:



## **Big Cypress National Preserve**

Big Cypress National Preserve, located in South Florida, consists of 729,000 acres of mixed-use land that includes private homes, hunting, cattle grazing, oil and gas exploration, and off-road vehicle use. As the site of the first charrette in March 2002, Big Cypress has inspired many with impressive strides toward sustainability (see related article in *EPP Update #11*, <www.epa.gov/epp/pubs/update11.pdf>). Environmental messages have been added to staff newsletters and communications with park visitors. In addition, sustainable concepts have been incorporated into park planning documents and funding requests. The charrette also inspired park officials to

request energy audits, which led to lighting and air conditioning upgrades in park facilities and housing units. Recycling has increased in the park, as well as green procurement, such as high recycled content paper products, ENERGY STAR® equipment, green cleaning products, and biodiesel.

### **Boston National Historic Park**

The Boston National Historic Park, consisting of historic sites dating from the American Revolution and connected by the Freedom Trail, faced unique challenges, as some of the sites are co-owned and operated by other agencies and non-profits, and any actions must take into account historic preservation as well as sustainability. To address these challenges, the greening charrette, held in October 2002, prompted not only the reactivation of the park's green team, but also motivated other groups to work on specific issues such as recycling, AFVs, and the completion of the park's environmental management system (EMS). The park was able to obtain two AFV sedans and two hybrid SUVs and has led the way in developing a regional approach for AFV fueling stations in the Boston and New York City area. In one of its most successful operations, the park introduced a comprehensive recycling program in the Navy Yard, recycling 36,000 pounds of paper, cans, and large metal items from industrial work around the Yard last vear alone.

### **Bandelier National Monument**

Northwest of Santa Fe, New Mexico, Bandelier National Monument contains Puebloan cliff dwellings, Civilian Conservation Corps buildings from the 1930s, and 33,000 acres of wilderness. The park undertook its greening charrette in April 2003 and reports increased motivation of park staff to take more sustainability initiatives, such as turning off lights and computers, carpooling and walking more, and seeking out green purchasing opportunities. Bandelier has also engaged in a partnership with Los Alamos National Laboratory for hazardous waste material disposal and biodiesel purchases and held training sessions on green procurement. The park also included environmental requirements in its recently renegotiated concessions contracts and reduced the use of asphalt for walking trails by using durable, non-hazardous, and local flagstone.

# **Point Reyes National Seashore**

One of the top 25 most biologically diverse, yet most threatened areas of the world, Point Reyes National Seashore consists of grasslands, chaparral ridges, valleys, forests, meadowlands, beaches, and cliffs overlooking the Pacific Ocean. Point Reyes' greening charrette, held in June 2003, provided the foundation and impetus to develop an EMS plan. The park is also negotiating with the General Services Administration to replace 50 percent of its fleet with hybrid or biodiesel vehicles, and sustainability and energy efficiency has become an important factor in facilities design and construction since the charrette. In addition, the park has increased green procurement by purchasing biobased hydraulic fluids, green cleaning products, biobased trail crew materials, and soy-based products in lieu of gasoline.

# **C&O Canal National Historic Park**

Straddling the Potomac River for nearly 200 miles from Washington, DC, to Cumberland, Maryland, the C&O Canal National Historic Park contains more than 1,400 historic structures and is

home to approximately 1,200 species of native plants. The park held its greening charrette in December of 2003 and established a Greening Group to work on the park's EMS and best management practices. The park has also been a leader in demolition waste recycling and reuse and is currently using innovative green practices for a historic Lockhouse renovation. Finally, the park has made impressive strides in green procurement, using green cleaning products, providing training on green purchasing, developing a green procurement policy statement, and testing the use of composting toilets for the park.

Overall, the greening charrettes have been well-received and successful in bringing about a positive culture shift within the national park system. As more charrettes are held, EPA and NPS will continue to encourage collaboration among the parks and share information about sustainability and green purchasing.

For more information on the greening charrettes, contact Julie Shannon of EPA at (202) 564-8834 or <shannon.julie@epa.gov>.



# White House Announces "Closing the Circle" Award Winners

ach year, dozens of federal agencies submit "Closing the Circle" award applications in the hopes that their environmental efforts will be recognized by the White House. These prestigious awards focus on waste prevention, recycling, and green purchasing activities under Executive Order (E.O.) 13101, environmental management under E.O. 13148, green/sustainable buildings under both of these E.O.s, and reduced fuel usage under E.O. 13149. On April 7, 2005. Federal Environmental Executive Edwin Piñero announced the 2005 winners, saying, "We recognize those programs and individuals who understand that environmental stewardship delivers dividends not only for the environment and the American people, but also for the federal government's mission and operations."

One of this year's winners, chosen from nearly 200 nominations, is the EPA's Green Office Supply Blanket Purchase Agreement (BPA). The BPA was initiated with Corporate Express to encourage the use of green office products, giving employees access to an online catalogue including more than 1,000 recycled content, biobased, and environmentally preferable green products that fulfill E.O. 13101. The BPA, which is mandatory for all EPA offices and labs nationwide, will enable EPA to measure progress in its green purchasing efforts, help reduce toxic substances, divert tons of materials from disposal, save energy, and make our air and water cleaner and healthier.

For more information on the 2005 White House "Closing the Circle" Awards and winners, please visit <www.ofee.gov>.

# **2005 White House Closing the Circle Awards Winners**

# Recycling

- Recycling Successes at Little Rock AFB AR, Department of Defense, Little Rock Air Force Base, AR, Little Rock AFB Recycling Center
- Model Consumer Recycling Program at Integrated Support Command Kodiak Alaska, Department of Homeland Security, Integrated Support Command (ISC) Kodiak, AK, Environmental & Fire Protection Branch, Facilities Engineering Division
- Protecting Our Environment Is the Right Thing To Do, Department of Justice, Federal Correctional Complex, Florence, CO, Mike Berger

### Waste Pollution/Prevention

- Defining the Next Era of Pollution Prevention at Luke AFB, Department of Defense, Luke Air Force Base, AZ, Luke AFB Pollution Prevention Team
- Source Reduction and Green Initiatives at USCG Air Station Borinquen, Department of Homeland Security, USCG Air Station Borinquen Aguadilla, Puerto Rico, AIRSTA Borinquen Facilities Engineering

# Sustainable Design/ Green Buildings

 LEED Gold Certified Seattle TRACON, Department of Transportation, FAA-Northwest Mountain Region, Renton, WA

# **Energy Efficiency in Transportation**

- NASA Motor Vehicle Efficiency, National Aeronautics and Space Administration, Headquarters, Washington, DC, NASA Motor Vehicle Efficiency Team
- Petroleum Reduction for Marine Corps Transportation, Department of Defense, US Marine Corps, Washington, DC

### **EMS**

- CDC's Leadership, Innovation, and Execution of a Corporate Environmental Management System (EMS), Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, Georgia, CDC, Environmental Protection Section (EPS)
- Environmental Management Systems Used at DSCR Facility Department of Defense, Defense Supply Center Richmond, VA

# **Green Purchasing**

 EPA's Green Office Supply BPA, Environmental Protection Agency, US EPA Headquarters Washington, DC, EPA's Green Office Supply BPA Team

