

# Closing the Circle News

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*Closing the Circle News to go all electronic - See back page for more information!!!*

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*President George W. Bush looks over a scooter powered by solid hydrogen fuel during a recent demonstration of energy technologies in Washington, D.C.*

## Special Issue: Leading By Example

**P**resident Bush has called on the Federal government to lead by example as a good environmental steward, and he's started at his own home. In late 2002, the White House installed a solar electric system, placing 167 solar electric panels on the roof of the White House complex's primary maintenance building, and installing two solar thermal systems to heat the pool and spa. The solar panels feed electricity into the White House grounds' distribution system, supplementing its power supply. This is just one of the many ways in which the Federal government is working to improve its environmental stewardship.

Every two years, the Federal Environmental Executive reports to the President on the state of the government's environmental stewardship efforts. In this special issue of Closing the Circle

News, we provide you with the key findings reported in the biennial report on Federal Energy and Environmental Management, and we examine the Federal government's progress in environmental leadership. This issue highlights important accomplishments in environmental management, waste prevention and recycling, market development, energy efficiency, renewable energy, sustainable buildings, and transportation and fleet management. For a full copy of the report, visit [www.ofee.gov](http://www.ofee.gov) and click on the "Leading by Example" A Report to the President icon. ■



# Environmental Management

**What this means:** Environmental Management Systems integrate environmental priorities into an organization's operational, planning, and management decisions.

**Goals:** To conduct agency-level EMS reviews by October 2001, implement EMSs at appropriate Federal facilities by December 2005, and further reduce toxic chemical releases 40 percent by December 2006.

**Simply said:** Federal agencies should adopt EMSs to ensure regulatory compliance, increase efficiency, enhance accountability, and improve employee morale and community relations.

## Quick Facts

- Today, more than 180 Federal facilities are using EMSs.
- Of those 180 facilities, almost 20 are registered as complying with the International Organization for Standardization (ISO) 14001 EMS standard.
- E.O. 13148 requires a 40 percent reduction in toxic releases by December 31, 2006 from a baseline year of 2001. Given data from FY 2000, this reduction should result in the elimination of nearly 33 million pounds of chemical pollutants by 2006.
- The Dept of Energy's (DOE) pollution prevention program resulted in estimated life-cycle savings from 1994 to 1998 of \$311 million as a result of 262 projects with project implementation costs of \$19 million.

**E**nvironmental Management Systems (EMSs) are key tools to meeting the President's management and stewardship agendas. Executive Order 13148, Greening the Government Through Leadership in Environmental Management, requires that an EMS be implemented at appropriate Federal facilities by the end of 2005, based on a facility's size, complexity, and environmental aspects. To increase awareness of the EMS concept, agencies were required to initiate EMS pilots at agency facilities in early 2002. In addition, each agency was required to prepare an environmental management strategy to achieve the goals of the Order. Such a policy is critical to the success of an EMS.

Several Federal agencies' experience to date is that EMS concepts, such as life cycle costing and pollution prevention, can yield many positive results, including significant savings. Federal agencies that track the benefits of their environmental programs found them to be cost effective. Some agencies are developing sophisticated,

web-based systems to better track and manage facility assets. These systems will provide vital information for identifying and responding to environmental aspects identified as part of a facility's EMS. Additionally, with the assistance of the Office of Management and Budget (OMB), Federal agencies are working to fully incorporate environmental considerations and EMS benefits into their budget and planning documents.

On June 27, 2002, OMB issued guidance in its Circular No.A-11 that states that, "Federal agencies should develop and implement environmental management systems in order to integrate environmental accountability into agency day-to-day decision making and long term planning processes across all agency missions, activities, and functions. These efforts . . . should include, but not be limited to, the following components: initial self assessments, development of performance measures, policy, and establishment of management systems." ■

## Accomplishments

**I**n September 2000, Fort Lewis, Washington, was the first Army installation to obtain ISO 14001 EMS registration for its Department of Public Works. Fort Lewis has noted a number of benefits as a result of its EMS, including improvements in effectiveness and efficiency, cost savings and avoidance of more than \$1 million, reduction in greenhouse gas emissions of 78 tons, and elimination of the use of 89 tons of hazardous chemicals.

**T**he Department of Defense (DOD) calculates that it achieved an estimated 52 percent return on investment (ROI) from its pollution prevention program between FY 1996 and FY 2001. This ROI is based only on reduced environmental compliance costs. Returns are likely to be much larger because most pollution prevention investments have benefits outside of the environmental compliance budget, such as improved health, environmental protection, and quality of life. Much of the return on investment from pollution prevention is reduced supply, logistics, maintenance, and operational costs, which are not accounted for in the environmental compliance budget.

**T**he Tennessee Valley Authority (TVA) updated its EMS to factor environmental considerations into every business decision and allow performance tracking. TVA expects increased conservation of materials and energy, better management of environmental protection, and an overall reduction in costs.

# Waste Prevention and Recycling

**What this means:** Waste prevention and recycling result in a reduction of waste, either through recycling or reusing materials, or through eliminating waste streams.

**Goals:** To incorporate waste prevention and recycling practices in Federal agencies' daily operations, develop government-wide strategies to further implement these practices, meet the 35 percent waste diversion rate by 2005, and use pilots to evaluate EPA's environmentally preferable purchasing program.

**Simply said:** The Federal government should implement waste prevention and recycling practices into its daily practices.

In 1999, the Task Force issued the first government-wide Strategic Plan for waste prevention, recycling, and Federal acquisition. One of the unique aspects of the Plan was the establishment of an aggressive new national recycling goal for the Federal government of 35 percent waste diversion by 2005. The national policy, established with the Pollution Prevention Act of 1990, is to prefer pollution prevention, whenever feasible. Pollution that cannot be prevented should be recycled. Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort. Today, almost every Federal government office has a recycling program to collect items like aluminum cans, glass bottles, and office paper. Electronic equipment, motor oil, and construction debris, are also routinely recycled at many Federal facilities.

In addition, the Environmentally Preferable Purchasing (EPP) program

promotes Federal government use of products and services that have reduced impacts on human health and the environment. The goal of the program is to make environmental performance a factor in Federal government purchasing decisions, along with product performance and cost.

Also, the Federal government's growing use of partnering options for the delivery of its programs and services is being successfully incorporated into its waste prevention and sustainable development efforts. These partnerships are designed to facilitate access to new recycling and waste prevention opportunities and enable the use of new capabilities and technologies. Already, Federal agencies and their partners are working together to increase the use of recycled materials in road construction, create better life-cycle management practices for electronics, and host more environmentally friendly meetings. Their continued interactions are helping to green the government. ■

## Quick Facts

- In 2000, the percentage of municipal solid waste recovered nationwide increased to 30 percent.
- In 2001, the Department of Defense and the Department of Energy both exceeded the national 35 percent recycling goal, reaching 36 percent and 54 percent, respectively.
- Data reported by the six largest procurement agencies - currently DOD, DOE, National Aeronautics and Space Administration (NASA), General Services Administration (GSA), Department of Veterans Affairs (VA), and the Department of Health and Human Services (HHS) - indicate that almost 90 percent of the offices in these agencies had recycling programs in place during FY 2001.

## Accomplishments

The Naval Air Station on Whidbey Island, Washington expanded its award-winning recycling program, boosting its recycling rates from 4 percent a decade ago to 64 percent in 2001. Navy Whidbey's new composting facility saves thousands of dollars annually in disposal costs by composting boxes, shredded paper, and consumer food scraps. The composting facility is expected to increase the waste diversion efforts to more than 75 percent.

GSA's Federal Recycling Program serves more than 650,000 Federal employees at 1,000 Federal agency locations. In FY 2000, the program recycled 43,400 tons from Federal offices and generated more than \$900,000 of income. GSA sells recycled materials where markets exist and returns the revenue to the agencies that generated the recyclables. GSA also realized cost avoidance of approximately \$3.7 million in eliminated landfill charges. From the program's start in 1990 to the year 2000, it has recycled almost 400,000 tons, generated \$6.2 million in income, and avoided landfill costs of almost \$26 million.

The Federal Network for Sustainability (FNS), an alliance of 160,000 Federal employees, works to reduce waste, pollution, and energy consumption. The goal of the FNS is to use the Federal government's buying power to promote sustainable practices. Its current focuses are advancing demand for greener copier paper; influencing the market for more sustainable electronic products; purchasing alternative and renewable energy; and implementing environmental management system.

# Energy Efficiency and Renewable Energy

**What this means:** New technology is increasing the efficiency of our energy usage, developing new energy sources, and harnessing the power of renewable energy sources such as wind, water, and the sun.

**Goals:** To convert more of our energy consumption processes to run on renewable sources of energy and to consume energy as efficiently as possible.

**Simply said:** The Federal government should more efficiently consume energy and use more renewable energy.

As the Nation's largest energy consumer, the Federal government should become a leader in clean, efficient

## Quick Facts

- In FY 2001, agencies invested more than \$130 million in water conservation, energy efficiency and renewable energy projects. The estimated life cycle cost savings are almost \$400 million.
- Eleven agencies implemented renewable energy projects during FY 2001, including 60 solar projects, seven wind projects, and nine geothermal projects.
- According to a recent market assessment conducted by FEMP, as much as 1.5 gigawatts could be generated by combined heat and power (CHP) systems at Federal facilities, possibly saving the government almost \$170 million annually in energy costs.

energy consumption. In 2001, the Federal government spent almost \$9.6 billion on energy for its buildings, vehicles, and operations. In May 2001, President Bush asked Federal agencies to lower their energy use, especially during peak hours, and to report on their progress within 30 days. The Secretary of Energy's report to the President noted that energy management plans were updated and that Federal agencies in California lowered their energy demands 10 percent in August 2001 alone.

President Bush's National Energy Policy calls for diversification of the nation's energy resources and enhanced use of renewable energy. Alternative financing mechanisms, including energy savings performance contracts (ESPC) and utility energy service contracts (UESC), allow agencies to implement energy efficiency and renewable energy improvements. With these tools, agencies use private financing to pay for energy and water improvements and then pay back the energy service company through utility bill savings in the future. From FY 1988 through FY 2001, private

sector companies invested almost \$1.7 billion in Federal facilities, making these facilities more energy efficient at no net cost to taxpayers. Estimated savings from these privately-financed projects supplied almost 15 percent to the reductions in standard building energy use since 1985. DOE offers ESPCs to help agencies implement featured technologies, including geothermal heat pumps, solar hot water, and biomass technologies. DOE's Federal Energy Management Program (FEMP), the Army Corps of Engineers, the Air Force, and GSA's Energy Center of Expertise assist agencies in using these tools. Approximately 15 percent of the reductions seen in standard building energy use since 1985 are attributed to privately financed ESPCs and UESCs.

Numerous opportunities exist for improved Federal energy management. Efforts to improve energy management in the Federal sector will expand markets for renewable technologies, reduce air pollution, and serve as powerful examples to American businesses and consumers. ■

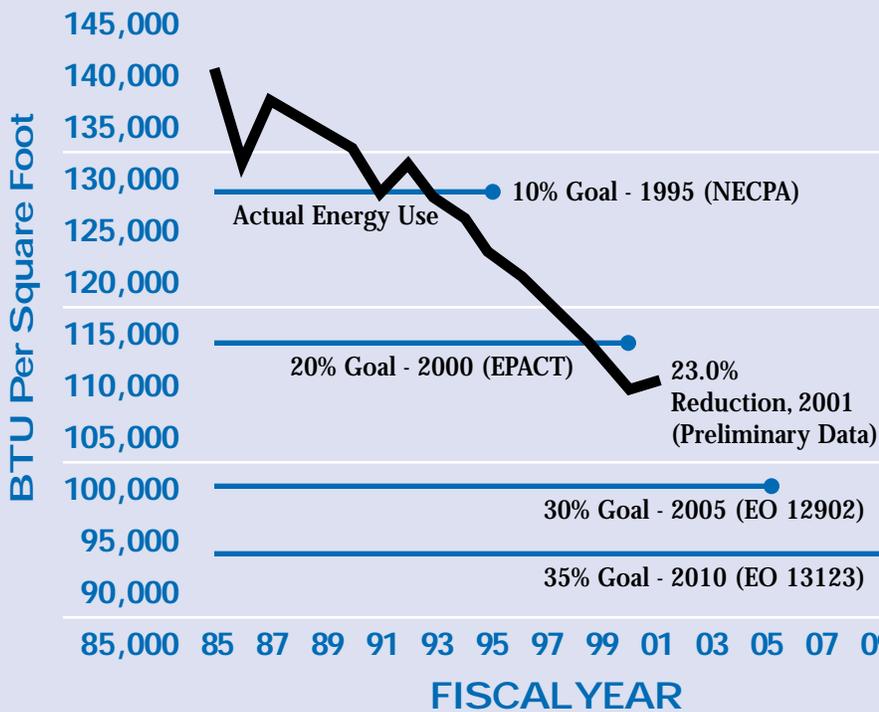
## Accomplishments

To reduce strains on the electrical grid and improve efficiency, Federal agencies are making progress in their use of distributed energy resources (DER), CHP systems, and renewable energy. To date, 70 Federal sites have participated in CHP screenings offered by FEMP. Federal agencies, including the Departments of Defense, Energy, Transportation, the Interior, VA, and EPA, are making use of DER and CHP technologies, including internal combustion engines, fuel cells, microturbines, and photovoltaics. Agencies are also using their purchasing power to install on-site renewable energy projects as well as buying renewable power for their facilities.

Four Federal agency energy management teams received 2001 Presidential Awards for Leadership in Federal Energy Management for promoting and improving Federal energy management at their agencies and facilities. The agencies recognized for their award-winning programs were: NASA; USPS Southeast Area; DOD, U.S. Marine Corps Station, Iwakuni, Japan; and DOD, Department of the Navy, Southwest Region.

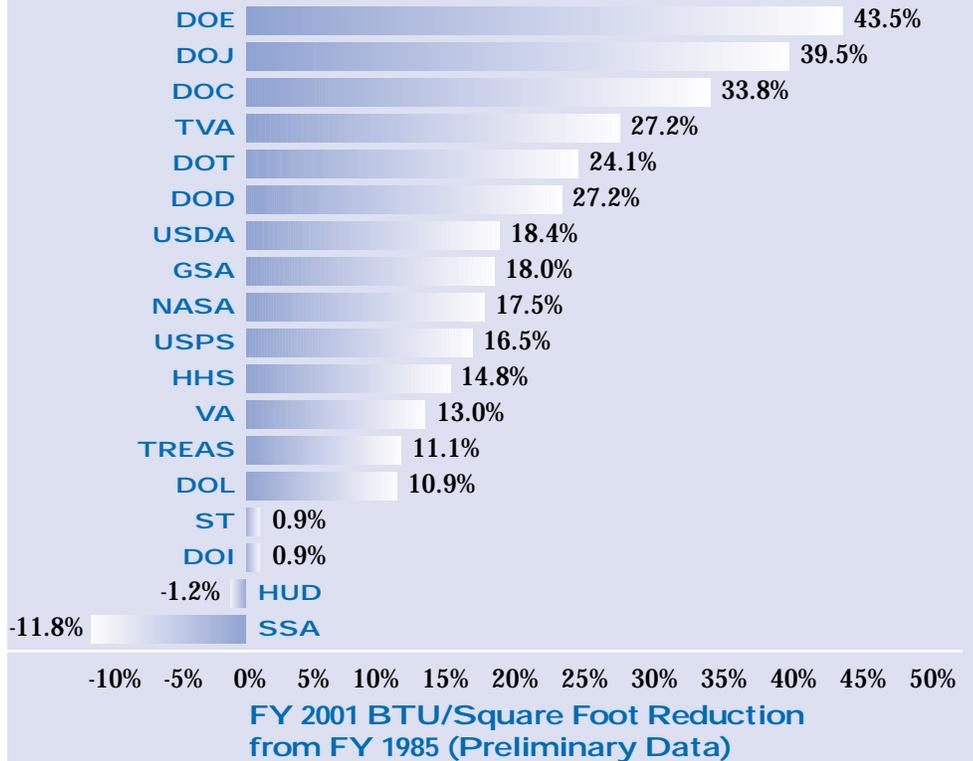
In April 2002, Energy Secretary Abraham announced that DOE would purchase renewable electricity to cover approximately 17 percent of its electricity needs at DOE facilities in Washington, DC and Germantown, Maryland. The contract calls for an annual purchase of 6 million kilowatt hours, roughly the amount of electricity needed to power 600 homes each year.

## Progress Toward Energy Reduction Goals for Federal Buildings



*The Federal government reduced its energy intensity in standard Federal office buildings 23 percent from baseline year 1985 to 2001 and is in line to meet the 2010 goal of a 35 percent reduction in energy consumption.*

## Individual Agency Progress Toward Energy Reduction Goals for Standard Buildings



*Individual Agency Progress Toward Energy Reduction Goals for Standard Buildings*

# Sustainable Buildings

**What this means:** New technology is increasing the efficiency of our energy usage, developing new energy sources, and harnessing the power of renewable energy sources such as wind, water, and the sun.

**Goals:** To convert more of our energy consumption processes to run on renewable sources of energy and to consume energy as efficiently as possible.

**Simply said:** The Federal government should more efficiently consume energy and use more renewable energy.

**B**uilding Energy Consumption: EPACT directed Federal agencies to reduce building energy use by 20 percent by 2000, compared to the 1985 baseline rates of consumption. In continuation of EPACT's guidelines, E.O. 13123 requires Federal agencies to reduce their energy intensity by 35 percent by 2010 compared to baseline year 1985. Already, FY 2001 agency energy data indicate the Federal government has reduced its energy intensity (BTUs per square foot) in standard buildings, such as office buildings, schools, and warehouses, by 23 percent compared to the 1985 baseline, surpassing the EPACT goal of 20 percent.

President Bush's National Energy Policy recommended expanding the ENERGY STAR® program beyond office buildings to include schools, retail buildings, health care facilities, and homes. A number of these buildings, such as schools and new homes, are now included in the program. As additional

building types are covered in the program, a greater number of Federal facilities can assess whether they meet the ENERGY STAR® specifications.

The Federal government has a mandate to lead by example with smart energy management, including energy

retrofits in existing buildings, incorporating energy considerations in the design of new facilities, procurement of energy efficient and renewable energy products, improved operations and maintenance, and more effective utility load management. ■



*NASA's Space Experiment Research and Processing Laboratory at Kennedy Space Center*

## Accomplishments

**E**PA's new Research Triangle Park, North Carolina facility is, at 1.1 million square feet, one of the largest green buildings ever completed. Bio-retention areas for storm water, recycling during construction, recycled content construction materials, and indoor air quality initiatives reduce the building's environmental impact. It is sited to natural contours, reducing the need for grading and limiting disruption to existing woodlands and wetlands. Surface paving is minimal, and the use of native plants allows all storm water to be treated naturally before flowing into local streams. The atrium uses natural light, conserving energy and reducing the amount of material that would otherwise be needed for exterior walls.

**T**o date, more than 100 Federal buildings have earned the ENERGY STAR "label." In FY 2001, FEMP awarded GSA the first "Energy Star Building Award for Superior Performance" for eight Federal buildings ranked among the top five percent nationwide in energy performance.

**N**ASA's Space Experiment Research and Processing Laboratory at Kennedy Space Center will incorporate a central light well to bring natural light into open office space, lighting with occupancy sensors, variable frequency drives on air handlers and other heating, ventilation, and air conditioning (HVAC) components, high efficiency chillers, and passive solar thermal mass principles. It features a storm water retention area, 100 percent native plants with low water requirements, and low volatile organic compound paints and coatings.

### **Sustainable Building Design:**

Sustainable design incorporates a wide range of recycled content, energy and water efficient, and environmentally preferable materials, helping to promote markets for these products. EPA's efforts in promoting sustainable design in its own buildings are widely recognized for the use of recycled content materials, natural lighting, energy efficient lighting and mechanical systems, water conserving plumbing fixtures, indoor air quality measures, and sustainable material selections. Some examples of these features include: the Chelmsford, MA laboratory's prototype motorized photovoltaic solar shade/light shelves; the Kansas City Lab's roof rainwater recapture system (the captured water is used to flush the toilets); and the Research Triangle Park facility's 75 kilowatt photovoltaic array.

**Sustainable Building Resources:** E.O. 13123 directs Federal agencies to incorporate the sustainable design principles of energy efficiency, reduced consumption of land and other non-renewable resources, waste materials and water use minimization, and creation of a healthy, livable, and productive work setting into the siting, design, and construction of new facilities.

The Whole Building Design Guide (WBDG) is a complete Internet resource that includes a wide range of building-related design guidance, criteria, and technology for incorporating sustainable

building design principles in design decisions. The WBDG is up-to-date, knowledge-based, and creatively linked to information across disciplines and traditional professional boundaries. It is intended to encourage the "whole building approach" to design and construction and is used by Federal, military, and private sector architects, engineers, and project managers. Several agencies have implemented elements of the WBDG principles into their facility design standards and master planning process.

**LEED Certification:** Federal agencies also use the U.S. Green Building Council's (USGBC) Leadership in Energy and Environment Design (LEED) program. LEED is a comprehensive system for designing and constructing sustainable buildings. LEED integrates today's accepted building practices with newly emerging energy and environmental information. The certification process helps participants maximize building efficiencies and achieve optimal economic and environmental performance. In addition, LEED encourages creative use of the building site and materials and sensitivity to the natural environment in landscaping, recycling efforts, and more. At present, 50 Federal buildings have declared their intent to seek LEED Certification by registering with the USGBC. Both GSA and the U.S. Naval Facilities Command have set policies that require all future

design projects to at least meet the equivalent of LEED certification (with GSA seeking at least "Silver" level). LEED standards are currently available for new construction and renovation projects (LEED 2.0/2.1), existing building operations (LEED-EB, Pilot version), and commercial interiors projects (LEED-CI, Pilot version).

**Labs for the 21st Century:** Labs and other high-tech buildings may present the greatest challenge for delivering energy efficient and environmentally responsible buildings. By the very nature of the work done in these buildings, the need for diversity, flexibility, safety and many other concerns must be balanced with Federal environmental and energy objectives. This dictates engineering and architectural solutions beyond those typically confronted in more typical buildings such as offices, classrooms, and warehouses. To address this unique challenge, EPA and DOE co-sponsor the Laboratories for the 21st Century program. In this program, EPA and DOE partner with private and Federal sector laboratory owners to better understand and assist in the partner's efforts to plan, budget, design and engineer its laboratory. The program also is developing guidelines and a variety of technical tools, offering workshops, and sponsoring annual conferences on the design and engineering of high performance laboratories, clean-rooms and data centers. ■

## **Accomplishments**

**T**he \$1.1 billion renovation of the Pentagon was five days from completion when American Airlines Flight 77 crashed into the renovated section on September 11, 2001. The renovations had focused on an energy management control system and energy efficient windows. Because of this, facility managers were able to shut down the air handlers immediately following the attack, preventing personnel from being exposed to toxic conditions. Pressurized air barriers were set up to prevent fumes from spreading. In addition, the new windows were installed for safety and were shatterproof and permanently closed. Following the attack, it was reported that the new windows remained intact while older windows as far away as 200 feet had shattered.

**T**he Alfred A. Arraj U.S. Courthouse in Denver, Colorado, was developed to showcase GSA's commitment to sustainable design. Dedicated in October 2002, the courthouse measures 346,000 square feet and is expected to consume about 43 percent less energy than a baseline building using minimum requirements of the Federal Energy Code. A high-performance curtain wall system provides natural lighting for adjacent courtroom and conference areas, maximum reduction of lighting loads during daylight hours, and a strong sense of connection to the outdoors. Displacement ventilation in the courtrooms features low-velocity air introduced at the floor level to efficiently condition the space and remove indoor air pollutants. Energy-efficient lighting, an evaporative cooling system, variable-speed air handling fans, photovoltaic panels, and other sustainable design features, together provide a healthful, productive, high-performance work environment.

# Market Development through Acquisition

**What this means:** The Federal government can use its immense buying power to help develop and expand the market for green products by purchasing those products and encouraging the development of new green products.

**Goals:** To purchase recycled content, biobased, energy efficient and environmentally preferable products and services, and to develop programs to expand markets for these products.

**Simply said:** The government should create a market for green products and services by purchasing them.

## Quick Facts

- In FY 2001, agencies purchased almost 632 gigawatt hours of green power and thermal energy, enough energy to service more than 60,000 average households for a year.
- From 1992 to 2001, the six largest Federal procuring agencies, currently DOD, DOE, NASA, GSA, VA, and Health and Human Services, and the USPS spent a total of \$3.6 billion on EPA-designated recycled content products.
- E.O. 13134, Developing and Promoting Biobased Products and Energy, set a goal of tripling the U.S. use of bioenergy and bioproducts by 2010.
- In February 2002, several Federal agencies, assisted by Argonne National Laboratory, began the Buy Bio Program, an effort to increase the purchase and use of biobased products in the government.

The Federal government is the single largest consumer in the nation, purchasing \$240 billion worth of goods and services annually. By giving full weight to environmental and energy factors in its purchasing decisions, the Federal government can significantly influence its suppliers, their product design, and pricing policies, as well as the thousands of companies providing support services to Federal facilities. Federal green purchasing programs focus on creating markets for recycled content and biobased products, alternative fuel vehicles and alternative fuels, Energy Star® and other energy efficient products, renewable energy, and environmentally preferable products.

More than a decade ago, EPA issued the first procurement guidelines directing Federal agencies to purchase five specific recycled content products or categories of products: cement and concrete containing coal fly ash, paper and paper products, re-refined lubricating oil, retread tires, and building insulation products. EPA now

has designated 54 products and proposed to designate an additional 11 products.

In addition to recycled content products, Federal market development efforts have focused on energy management. The Federal government spends more than \$10 billion annually on products that use energy and could save about \$220 million in annual energy costs by 2010 just by buying energy efficient products.

On May 13, 2002, President Bush signed into law the "Farm Security and Rural Investment Act of 2002," Public Law 107\_171. This is the first farm legislation containing a separate title devoted to energy, Title IX, which creates a Federal government preferential purchasing program for biobased products in order to help promote emerging markets for these products. The title includes a voluntary biobased product labeling program and affirmative procurement program for biobased products. The law also includes provisions to promote renewable energy. ■

## Accomplishments

Federal agencies have purchased \$3.6 billion worth of recycled content products since 1992. In FY 2001, slightly more than 68 percent of the six largest purchasing agencies' purchases of the EPA designated products contained recycled materials. Actual expenditures may be much higher but cannot be accurately reported due to the limitations in automated Federal data procurement systems.

In FY 2000, Federal purchase card holders used 670,374 purchase cards to make 23.5 million transactions. One of the biggest challenges to increasing the Federal government's use of green products and services is to ensure that these card holders are given preference to recycled content, energy efficient, biobased and other environmentally preferable items when using their purchase cards. To help promote awareness in this area, many agencies now include "buy green" requirements in their purchase card training and guidance manuals. Reminder messages highlighting the importance of buying recycled content products have been added to card holders' monthly transaction reports and payroll stubs by the General Services Administration (GSA) and other agencies.

*continued on page 10*

# Transportation and Fleet Management

**What this means:** New technologies have developed more fuel-efficient vehicles and vehicles that run on alternative fuels.

**Goals:** Reduce fleet petroleum consumption, acquire more AFVs, increase fuel efficiency of non-AFVs one mile per gallon by 2003 and three miles per gallon by 2005, and develop mass transportation benefit programs.

**Simply said:** The Federal government should support renewable energy market development by purchasing alternative fuel vehicles.

The Energy Policy Act of 1992 (EPACT) requires that in FY 2000 and beyond, 75 percent of light-duty vehicle Federal acquisitions in covered fleets are to be alternative fuel vehicles (AFVs). Executive Order 13149, Greening the Government Through Federal Fleet and Transportation Efficiency, directs Federal agencies to fulfill the intent of EPACT to reduce reliance on petroleum products. In FY 2000, fleet gasoline and diesel consumption in the 18 Federal agencies covered by the Order increased by 2 percent compared to the FY 1999 baseline. This is not surprising, because E.O. 13149 was signed in April 2000, and agencies only had a few months to implement measures to reduce petroleum consumption. In addition, FY 2000 was the first year that agencies were asked to report petroleum consumption data, and many agencies experienced difficulties collecting accurate information. As agencies modify operating

procedures to collect the data, the reports will become more accurate. The Departments of Energy, Labor, Justice, and State, EPA, and NASA all reported reductions.

The 1993 Federal Employees Clean Air Incentives Act encouraged Federal employees to commute by means other than single-occupancy vehicles. Each agency can promote alternative commuting methods, such as issuing transit passes and furnishing space, facilities and/or services to bicyclists. Agencies were also encouraged to provide non-monetary incentives, such as alternative work schedules, flextime, telework, flexiplace, and related parking and shuttle arrangements. Similarly, Executive Order 13150, Federal Workforce Transportation, requires Federal agencies to implement mass transportation fringe benefit programs. This reduces Federal employees' contribution to traffic congestion and air pollution and expands their commuting alternatives. ■

## Quick Facts

- By 2005, through AFV acquisitions, increased alternative fuel use in AFVs, improved efficiency of non-AFV acquisitions, reductions in fleet sizes and vehicle miles traveled, and improvements in fleet operating efficiencies, agencies must decrease the annual petroleum consumption of Federal fleets by 20 percent compared to 1999.
- Today, more than 55,000 alternative fuel vehicles are used daily by Federal agencies.
- Fifty-five agencies used incentives to reduce traffic congestion and air pollution in FY 2000-2001. Almost 650,000 employees commute in a way other than a single occupancy vehicle. More than \$226 million was spent on these programs in FY 2000-2001.

## Accomplishments

The United States Postal Service (USPS) leads the Federal government in operating nearly 8,000 compressed natural gas (CNG) vehicles and more than 21,000 ethanol (E-85) flexible-fuel vehicles. Working in partnership with the states of California and New York, DOE, Ford Motor Company, several other state and local agencies, and public utilities, USPS has placed 500 electric vehicles into service delivering mail in California, New York, and Washington, DC.

Federal agencies used more than 1.4 million gasoline gallon equivalents of alternative fuels in FY 2000, replacing gasoline and diesel fuel. Consistent with the number of alternative fuel vehicles they operate, the largest consumers of alternative fuels are the USPS at 60 percent and DOD at 19 percent. The most commonly used alternative fuels are CNG at 63 percent, E-85 (85 percent ethanol, 15 percent gasoline) at 25 percent, and biodiesel at 8 percent. The remaining 4 percent is largely comprised of liquefied petroleum gas (LPG).

The National Park Service has begun replacing gasoline vehicles with neighborhood electric vehicles (NEV). Working with Ford Motor Company's Th!nk Division, 500 NEVs will be placed in national parks throughout California in FY 2002, in addition to the nearly 50 NEVs already placed in service in other national parks across the country.

## Recommendations

### Building Partnerships & Enhancing Education

- Agencies should consider the energy and environmental factors of their purchases. “Green” and “sustainable” purchasing should encompass the variety of sustainable products, including recycled content products, Energy Star® and other energy- and water-efficient products, environmentally preferable products and services, biobased products, and alternative fuels and vehicles.
- By July 1, 2003, DOE and EPA should prepare, through an inter-agency workgroup, consisting at a minimum of OFEE, DOD, GSA, and USDA, a government-wide, comprehensive green purchasing education and outreach plan. The plan should cover the requirements of the Greening the Government Executive Orders and consider the use of e-training courses, the dissemination of case studies, and the identification of key acquisition-related conferences and other educational information.
- Agencies should consider adopting the model of the Federal Network for Sustainability (FNS) in other geographic regions.
- Agencies and facilities should inform

states, local communities, tribes, and private sector entities about their agency/facility EMS actions, and when appropriate, partner with those entities on EMS training, development, and implementation.

- EPA, DOE, and major procuring agencies should convene a green products trade fair for vendors and procurement officials in order to promote Federal purchasing of recycled content products, Energy

Star® and other energy- and water-efficient products, environmentally preferable products and services, biobased products, and alternative fuels and vehicles. The trade fair should highlight small, minority, and women-owned sources of these products and services, as well as products and services available through the National Industries for the Blind and the National Industries for the Severely Handicapped.

### Improving Accountability

- The head of each agency should assure full compliance with statutory and



*The Thoreau Center for Sustainability at Presidio National Park is one of the first Federal buildings to use a photovoltaic system for energy.*

### **ACCOMPLISHMENTS (MARKET DEVELOPMENT THROUGH ACQUISITION) continued from page 8**

In accordance with E.O. 13221, Energy-Efficient Standby Power Devices, the Federal Energy Management Program, General Services Administration, Defense Logistics Agency, and Energy Star® program developed a list of products that use minimal standby power. FEMP worked with office product and consumer electronic manufacturers to influence the design of future electronics. DOE estimates that the Federal government will save an estimated \$25 million in energy costs and U.S. consumers will save more than \$500 million in annual energy costs over the next six years from this program. Major manufacturers in the U.S. and around the world are redesigning their products to reduce standby power.

In addition to buying renewable power from utilities, agencies are installing renewable technologies and generating power at their sites. By the end of 2001, Federal agencies had installed 3,151 solar energy systems. E.O. 13123 sets a goal for the Federal government of installing 20,000 solar energy systems by 2010. The Thoreau Center for Sustainability features photovoltaics cells that generate electricity. At peak capacity, the system generates about 1.3kW of electricity, approximately enough to operate 65 light fixtures.

Executive Order requirements addressed in this report by establishing, by July 1, 2003, goals for meeting each requirement, developing affirmative procurement and/or action plans, and tracking and measuring progress. Building on the scorecards developed under E.O. 13123 and E.O. 13149, OMB and OFEE should develop measurement and tracking tools by July 1, 2003, to score agency progress in meeting each requirement.

## Budgeting for Sustainability

- OMB should ensure that requests for appropriations for new construction and major modernization projects take into account life-cycle costs, including long-term energy, environmental, and operational costs. Also, agency chief financial officers should ensure that their annual budget submissions to OMB allocate funds for implementing the energy and environmental Executive Orders.

## Building Sustainable Infrastructure

- To improve the use of alternative fuels and to increase compliance with EPA's Act and E.O. 13149, agencies should do the following: GSA Fleet Management Centers and agencies should work with area agency fleet managers to encourage local fuel providers to establish alternative

fueling sites and negotiate better alternative fuel prices. By July 1, 2003, agencies' senior transportation officials should establish policies to require drivers to operate alternative fuel vehicles on alternative fuel, to the maximum extent practicable, in areas where alternative fuel infrastructure exists. Also by July 1, 2003, agencies' senior transportation officials should work with DOE and GSA to resolve alternative fuel use tracking issues with fuel providers.

- OMB should issue guidance requiring all new Federal buildings and total renovations of existing buildings strive for a minimum rating of Silver in the Leadership in Energy and Environmental Design (LEED) or similar sustainable building rating system where life-cycle cost-effective.
- To enhance and coordinate green purchasing, OFEE and OMB should work with agencies to ensure that energy and environmental considerations are incorporated into contracting forecasts, service contracts, e-catalogs, and source selection factors, including past performance factors. OFEE and OMB also should encourage agencies to incorporate green purchasing into their environmental management systems.
- July 1, 2003, OFEE and DOE should coordinate their awards programs to

reward Federal agencies for exemplary sustainable operations in waste prevention, recycling, affirmative procurement of green products and services, energy efficiency, environmental management systems, designing and constructing sustainable buildings, alternative fuel usage, and electronics stewardship.

## Continuing Leadership

- Federal agencies should continue participating in such challenge programs as EPA's Resource Conservation Challenge, WasteWise, Waste Minimization, National Environmental Performance Track, and other related programs and partnerships.
- OFEE should work with EPA, other agencies, and leading electronics businesses to pursue a National Electronics Stewardship Challenge, inviting Federal agencies to commit to using their acquisitions to develop an integrated, closed-loop approach to the design, manufacture, de-manufacture, reuse, and recycling of electronic equipment.
- GSA should continue expanding the Federal workforce transportation initiatives, including parking limitations, to further improve air quality and reduce traffic congestion, and better quantify the environmental benefits of this program. ■



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White House Task Force on Waste Prevention and Recycling

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## Important Notice

*This is the last issue of the **Closing the Circle News** that we will mail out. If you would like to continue to subscribe (it's free!), please e-mail us at [task\\_force@ofee.gov](mailto:task_force@ofee.gov) with your e-mail address. For future issues, we will send out an e-mail notifying subscribers that a new issue has been posted on our website, [www.ofee.gov](http://www.ofee.gov). A limited number of hard copies may still be printed for conferences. Thanks for helping us reduce our materials usage!*



Containing a minimum of 30 percent postconsumer fiber.

The White House Task Force on Waste Prevention and Recycling wishes to thank the U.S. General Services Administration for their help and support in producing this newsletter.