

# GREENING THE GOVERNMENT



*A Report to the President  
on Federal Leadership and Progress*

April 22, 2000



April 22, 2000

William Jefferson Clinton  
President of the United States  
Washington, DC 20510

Dear Mr. President:

I am pleased to send you the first biennial report on Greening the Government. The activities and accomplishments identified in this report demonstrate the Federal Government's commitment to hard work and high achievement in energy efficiency, recycling, pollution prevention, and affirmative procurement.

Over the last eight years we have seen major changes and accomplishments in sustainable procurement, energy efficiency, and other greening practices, that demonstrate the significant impact and leadership the Federal Government can make. Some of these achievements include:

- Federal agencies and Government contractors now buy more than 50 types of recycled content products daily, which range from office supplies, to building materials, to re-refined oil, and retread tires. Government purchases in 1997 for certain Environmental Protection Agency (EPA) designated recycled content products exceeded \$350 million, an increase of \$112 million or 30 percent over the 1992 level.
- With significant commitment from all Federal agencies, our FY 1999 preliminary energy consumption figures in Government buildings have shown a decrease of 20.5 percent since 1985. That is a \$2.2 billion savings in energy costs to the taxpayer in real dollars by comparing the government's 1985 bill with its 1999 energy bill.
- Federal agencies have been purchasing Alternative Fueled Vehicles in record numbers. Of the 20,000 Energy Policy Act vehicles purchased by the Government in 1998, almost 15,500 were capable of operating on fuels other than gasoline or diesel.
- The military services have aggressively reduced the use and releases of Ozone Depleting Substances (ODS) through the establishment of a Department of Defense-wide reserve. To date, the military has recovered and saved approximately six (6) million pounds of ODS products for reclamation. This represents millions of tons of building air conditioning and process refrigeration being converted to environmentally friendly and energy efficient systems.
- After implementation of thousands of new pollution prevention initiatives Government-wide, Federal facilities have reported an almost 60 percent decrease in

releases of toxic chemicals since 1994. This is a total reduction of 6.2 million pounds as reported in the 1997 Toxics Release Inventory, a national database of chemical releases into the environment.

- In 1999, a new and aggressive national recycling goal of 35 percent waste diversion by 2005 was unveiled for the Federal Government. All Federal agencies are expected to advance toward this national goal with their respective waste diversion programs.
- The Federal Government is encouraging private sector investment in greening technologies and is developing these markets by using Federal procurement to purchase new and more green products and services.

It is in the true spirit of American progress that the Federal Government is committed, now more than ever, to promote a more sustainable future for America by conserving and protecting the environment and being good stewards of our natural resources for the generations of tomorrow. I am confident that the Federal agencies will continue the Greening of the Government with the same dedication that all of us have come to expect.

Sincerely,

A handwritten signature in green ink that reads "Fran McPoland". The signature is written in a cursive, flowing style.

Fran McPoland  
Federal Environmental Executive

# Preface

This report was prepared by the White House Task Force on Recycling to consolidate information in regard to the Greening the Government and other environmental or energy related Executive Orders. Section 302(a)(2) of Executive Order (E.O.) 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," requires a biennial report to the President by the Federal Environmental Executive, working through the Task Force, on the actions taken by Federal agencies to fulfill the requirements of all the Orders. This is the first Greening the Government report to the President.

In addition, Section 306 of Executive Order 13123, "Greening the Government Through Efficient Energy Management," requires the Deputy Director for Management of the Office of Management and Budget (OMB), in consultation with the Department of Energy, to evaluate agencies' energy scorecards and report to the President on their progress in implementing this Order. The energy efficiency and renewable energy section of this report fulfills that requirement.

This report covers implementation of the following Executive Orders:

<b>E.O. 13134</b>	<b>Developing and Promoting Biobased Products and Bioenergy</b>	<b>August 12, 1999</b>
<b>E.O. 13123</b>	<b>Greening the Government Through Efficient Energy Management</b>	<b>June 3, 1999</b>
<b>E.O. 13101</b>	<b>Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition</b>	<b>September 14, 1998</b>
<b>E.O. 13031</b>	<b>Federal Alternative Fueled Vehicle Leadership</b>	<b>December 13, 1996</b>
<b>E.O. 12856</b>	<b>Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements</b>	<b>August 3, 1993</b>
<b>E.O. 12843</b>	<b>Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances</b>	<b>April 21, 1993</b>

Additional information on Greening the Government can be found at the following web sites:

<b>Alternative Fuels</b>	<b><a href="http://www.afdc.doe.gov">http://www.afdc.doe.gov</a></b>
<b>Biobased Products and Bioenergy</b>	<b><a href="http://www.bioproducts-bioenergy.gov">http://www.bioproducts-bioenergy.gov</a></b>
<b>Comprehensive Procurement Guidelines</b>	<b><a href="http://www.epa.gov/cpg">http://www.epa.gov/cpg</a></b>
<b>Energy Management</b>	<b><a href="http://www.eren.doe.gov/femp">http://www.eren.doe.gov/femp</a></b>
<b>Environmentally Preferable Purchasing</b>	<b><a href="http://www.epa.gov/oppt/epp">http://www.epa.gov/oppt/epp</a></b>
<b>Executive Orders</b>	<b><a href="http://www.whitehouse.gov">http://www.whitehouse.gov</a></b>
<b>Ozone Depletion</b>	<b><a href="http://www.epa.gov/docs/ozone/index.html">http://www.epa.gov/docs/ozone/index.html</a></b>
<b>Pollution Prevention</b>	<b><a href="http://es.epa.gov/oeca/main/compdata/ppre.html">http://es.epa.gov/oeca/main/compdata/ppre.html</a></b>
<b>Right-To-Know</b>	<b><a href="http://www.epa.gov/opptint/tri">http://www.epa.gov/opptint/tri</a></b>
<b>Recycling, Waste Prevention and Federal Acquisition</b>	<b><a href="http://www.ofee.gov">http://www.ofee.gov</a></b>

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# Introduction

President Clinton signed a series of energy and environmental Executive Orders to guide the Federal Government in a greener direction. These Executive Orders were designed to expand and strengthen the Federal Government's commitment to protect the ozone layer and reduce global warming; increase recycling and waste prevention; and ensure a legacy of a better and cleaner environment for future generations. The President wanted to re-invigorate the Government's energy and environmental policies and empower its workforce to be the architects of a greener environment while exercising fiscal responsibility in an economically and environmentally sound manner.



The Federal Government has realized the significant economic and environmental benefits of pollution prevention practices by taking progressive steps in the management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies. Federal agencies now conduct their facility management and acquisition activities so that the quantity of toxic chemicals entering any wastestream, including any releases to the environment, is reduced as efficiently as possible through source reduction. Materials previously disposed of as wastes are recycled to the maximum extent practicable. Remaining wastes are stored, treated or disposed of in a manner protective of public health and the environment.

The Federal Government plays a critical role in supporting waste diversion by promoting the use of recycled content products. Recovered materials such as steel, aluminum, plastic, glass bottles, and office paper, are purchased by the Government in the form of recycled content products. Items such as concrete and cement containing fly ash, re-refined oil, retread tires, recycled content building insulation, and recycled content paper are widely used by the Federal agencies on a daily basis. This not only preserves land for uses other than landfills; but also conserves resources, reduces water and air pollution, conserves energy, and generates new jobs.

Americans consume approximately 94 quadrillion British Thermal Units (quads) of primary energy every year in order to power the country. The Federal Government alone uses close to 1.6 percent of that amount in its buildings operations and fleets to provide essential services to its citizens, including national defense. Remarkable progress has been made in increasing Federal energy

efficiency through aggressive energy management programs in buildings and facilities, energy intensive activities such as industrial and laboratory operations, as well as in vehicle and equipment use.

Whether it's recycling or "buy-recycled" activities, energy efficient practices, or pollution prevention efforts, Federal agencies are developing new and innovative cost-saving strategies to achieve their missions while creating a more sustainable America and conserving the environment. The Government is truly committed to leading the country in pollution free, energy efficient operations in Federal facilities. To maintain that leadership, Federal agencies are determined to improve operations continually to maximize energy efficiency and strive towards minimum waste generation and emissions.

The following sections discuss the progress of a decade of Federal programs and policies, including key accomplishments and recommendations, addressing the purchase of green products and services, and improving energy efficiency, ozone protection, pollution prevention, recycling, and waste prevention practices. These activities are aimed at fulfilling the requirements of the Greening of the Government as the President has asked and can lead the way to expanded green markets in the 21st Century.

# Acquisition/Sustainable Procurement

**GOAL** ✓ Protect the environment and promote economic growth through the purchase of recycled content items, environmentally preferable products, including biobased, energy efficient products and services, and the use of alternative fuels and ozone-friendly substances.

**The process of integrating energy and environmental factors into purchasing decisions has come to be known as "Sustainable Procurement." As one of the largest purchasers of goods and services in the world, the U.S. Government has an obligation to set a positive example by reducing unnecessary waste, conserving energy, recycling, and buying recycled content products.**

In September 1998, President Clinton signed Executive Order (E.O.) 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," to strengthen Federal efforts to protect the environment and promote economic growth through the purchase of recycled content and other environmentally preferable products. Section 6002 of the Resource Conservation and Recovery Act (RCRA) and E.O. 13101 require Federal agencies to give preference in their procurement programs to the purchase of specific recycled content products identified in the Environmental Protection Agency (EPA) Comprehensive Procurement Guideline (CPG)—also



known as Affirmative Procurement Program. In the guidelines, EPA designates items that are or can be made with recovered materials and also recommends purchasing practices. Today all “major procuring agencies”—that is any Executive agency that procures more than \$50 million worth of goods and services per year—have an Affirmative Procurement Program in place.

Sustainable procurement efforts have also expanded into other green practices. E.O. 13123 on energy efficiency, signed in June 1999, requires Federal agencies to select, where life-cycle cost-effective, ENERGY STAR® and other energy efficient products when acquiring energy-using products. For product groups where ENERGY STAR® labels are not yet available, agencies shall select products that are in the upper 25 percent of energy efficiency as designated by the Federal Energy Management Program (FEMP).

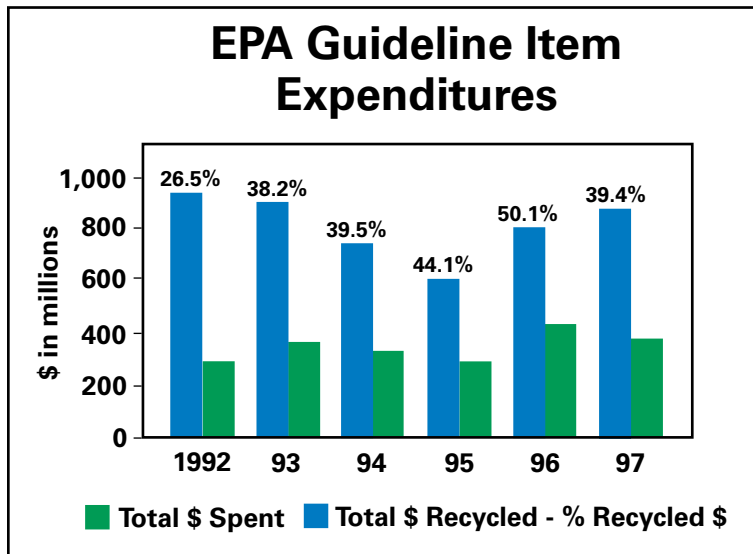
Executive Order 13123 directed that Federal agencies meet ENERGY STAR® Building criteria for energy performance and indoor environmental quality in their eligible facilities to the maximum extent possible by the end of 2002. Agencies are further required to integrate the ENERGY STAR® Building rating tool into their general facility audits. Energy Savings Performance Contracts, utility energy efficiency service contracts, or other means to conduct evaluations and make improvements to buildings may be used to meet the building criteria. In Federal real property leasing activities, the agencies are instructed to include a preference for buildings having the ENERGY STAR® Building label in their selection criteria for acquiring leased buildings, as well as to encourage lessors to apply for the ENERGY STAR® Building label.

E.O. 13134 on biobased products and bioenergy, signed August 12, 1999, significantly extends Federal procurement activities related to biobased products and services. Biobased products are made from renewable agricultural, animal, or forestry materials—such as vegetable-based lubricants, biofuels, compost, and construction materials. The President set a goal of tripling the U.S. use of bioenergy and bioproducts by 2010. This goal has the potential of generating new high-tech jobs, new economic opportunities, stronger income for farmers, and redevelopment in many rural communities.

E.O. 13134 furthers the development of a comprehensive national strategy that includes research, development, and private sector incentives to stimulate the creation and early adoption of technologies needed to make biobased products cost competitive in national and international markets. The E.O. also establishes an Interagency Council on Biobased Products and Bioenergy. The Council’s assignment focuses on a Federal Strategic Plan to bring biobased products and bioenergy into common use across the Government with guidance by the environmental community and industry input.

## ACCOMPLISHMENTS

**CPG Items.** More than a decade ago, EPA issued the first set of guidelines for the Federal Government to procure five (5) specific items containing recovered materials: retread tires, paper and paper products, re-refined lubricating oil, cement and concrete containing fly ash, and build-



ing insulation. As of January 2000, the initial five item list has been expanded to 54 designated products ranging from carpeting and insulation used in office buildings, to the reams of copier paper purchased each day, and plastic lumber for landscaping timbers and posts. This effort has translated into Government purchases totaling more than \$350 million annually for designated products—an increase of \$112 million over the 1992 level.

The top six procuring agencies are the Department of Defense (DOD), Department of Energy (DOE), National Aeronautics and Space Administration (NASA), General Services Administration (GSA), Department of Transportation (DOT), and the Department of Veterans Affairs (VA). They account for about 89 percent of annual Federal expenditures. From 1992 to 1997 these agencies spent almost \$2 billion on selected recycled content products.

Agency compliance with Section 6002 and E.O. 13101 steadily increased between 1992 to 1996. A slight decrease in recycled content purchases was reported for 1997, which was in part due to difficulties some agencies had in collecting and reporting data and in part due to increased use of the Federal purchase card, which decentralizes purchasing decisions.

Electronic purchasing transactions play an increasingly important role in Government purchasing. The biggest challenge is to ensure that Government employees are considering RCRA mandated recycled content products, energy efficient and other environmentally preferred items when using the purchase card. Some agencies have begun to include buy green requirements in their training for purchase card holders. The U.S. Postal Service (USPS), for example, is placing messages highlighting the importance of buying recycled content products on the cardholder's bill.

There is no system currently set up to track purchases of recycled content products made with the Federal purchase card, but a White House Working Group on Reporting has been established to help resolve this and other difficulties encountered by the agencies. Also needed is a streamlined reporting method to lessen the administrative reporting burden placed on the Federal agencies.

Federal agencies are using a variety of policies and contracting techniques to purchase recycled content, energy efficient, and environmentally preferable products and services. For example, using substitution policies, agencies request that sources of supply such as GSA or the Defense Logistics Agency (DLA) supply a recycled content product whenever a virgin product is ordered. Other techniques include requiring service and maintenance contractors to supply green products and requiring architect, engineering, and construction contractors to specify green products.

Agencies are also revising the Federal Acquisition Regulation (FAR) to expand the provisions governing purchasing of recycled content, energy efficient, and environmentally preferable products and services. When completed, these revisions will greatly strengthen and institutionalize the concept of buying green from initial acquisition planning and project design through contractor selection, project management, and contract administration.

The principal sources of supply—GSA, DLA, the Government Printing Office, UNICOR and the Javits-Wagner-O'Day program for the blind and the severely disabled—have been increasing the types of recycled content, energy efficient, and environmentally preferable products available to Federal agencies and making it easier for agencies to find these products through print and electronic catalogs. GSA also has increased the quantity of green products available from vendors through its Multiple Award Schedule contracts.

Recycled content products are purchased directly by agencies and as part of contracts for construction, janitorial services, facilities operations, and other services. A White House Task Force on Recycling workgroup on contracts and specifications is gathering examples of solicitation, contract, and specification language that have been used successfully to purchase recycled content products. These examples will be made available electronically for other agencies.

The RCRA buy-recycled requirements also apply to State and local Government agencies that use Federal funds to purchase EPA-designated products. Data are not reported on purchases by these agencies. The “common rule” that governs Federal assistance agreements currently does not include the RCRA requirements and, as a result, some Federal agencies administering assistance agreements do not require recipients to purchase the EPA-designated recycled content products.

**ENERGY STAR®.** The Federal Government purchases about \$10-20 billion annually of energy using products. It is estimated that 10 percent of the Government's energy use reduction goal set forth in Executive Order 13123 (35 percent reduction by 2010) could be achieved through the purchase of energy efficient products.

To assist agencies in making cost-effective, energy efficient purchasing decisions, FEMP has developed a series of Product Energy Efficiency Recommendations that has been delivered to more than 4,000 Federal energy managers, procurement officials, and product specifiers. These recommendations identify the upper 25 percent efficiency level for 30 product types, provide information about additional purchasing criteria and considerations, and present cost-effectiveness examples. Purchasers are directed to look for products with the ENERGY STAR® label, which is currently mirrored by FEMP's recommendations in 17 product categories. Federal purchasers can easily access additional information via direct links between the ENERGY STAR® and FEMP web sites.



The USPS specified and purchased 30,000 ENERGY STAR<sup>®</sup> exit signs, resulting in savings of more than \$600,000. Also, FEMP has worked with several agencies to assist them in changing its guide specifications for various products. The guide specifications are used by architects and engineers to develop project specifications and have a significant influence on the products selected for a project. For example, the Army Corps of Engineers has modified their guide specification for large water-cooled electric chillers. The Federal Government estimates it will save \$41 million on installations of new chillers between 2000 and 2010. The Corps has changed several other specifications, as has the Naval Facilities Engineering Command - Atlantic Division, and GSA has worked with its contract guide specification authors, ARCOM Master Systems, to change its MASTER-SPEC<sup>®</sup>, the largest commercial guide specification used in the United States. FEMP's recommended levels are, therefore, not only influencing the Federal Government's purchasing behavior, but also the private sector's.

The Foley Square Building in New York City, the first federally occupied building to be awarded an ENERGY STAR<sup>®</sup> Label, was among the first 20 benchmarked and labeled buildings nationwide. In addition, through successful partnerships between EPA and GSA, the Federal sector comprised one fourth of the first 100 office buildings nationwide that achieved the ENERGY STAR<sup>®</sup> Building Label. Federal agencies may now obtain ENERGY STAR<sup>®</sup> benchmarking and labeling services through a GSA Schedule contractor.



**Biobased Products.** Last year, the US Department of Agriculture (USDA) published proposed criteria for developing the first list of biobased products. Following its publication, the Government has begun to include biobased products in its purchasing decisions. By the end of FY 2000, USDA will publish, via the Internet, a complete list of biobased products and categories. Of the categories currently under consideration, USDA will initially post the detailed technical information on biolubricants, biofuels, and functional fluids derived from oil seeds or animal fats on its web site.

The President's FY 2001 budget request includes funds to accelerate the development and use of biobased technologies. The initiative provides an increase of more than \$240 million over the amounts available for FY 2000, with \$49 million directed towards DOE and \$194 million for stepped up efforts at USDA. These efforts will increase the viability of alternative energy sources, help meet environmental challenges such as global warming, support farm incomes, and diversify and strengthen the rural economy.

## RECOMMENDATIONS

### CPG Items:

- Automated mechanisms and other streamlined methods for data collection of CPG item purchasing should be developed and tested to ease the burden of manual collection and reporting by Federal agencies. The White House Task Force on Recycling and the Office of Federal Procurement Policy (OFPP) are leading efforts to identify the issues that burden data collection and reporting.
- Data collection and tracking of CPG items purchased using Federal purchase cards should be pursued. A pilot project with a major credit card company to quantify the extent of these purchases is under consideration.
- The Task Force on Recycling should complete identification of sample solicitation and contract clauses and specifications. The Task Force should also create, if feasible, an electronic repository of clauses and specifications to assist agencies in purchasing recycled content and energy efficient products and services.
- Agencies should identify recycled content products for which substitution policies are appropriate and request that sources of supply consistently substitute recycled content products when orders for virgin products are received.
- The Office of Management and Budget (OMB) should revise the Circular A-102 grants "common rule" to require recipients of Federal assistance monies to comply with the RCRA buy- recycled requirements. Federal agencies administering assistance agreements should educate State and local Government recipients about the buy- recycled requirements.

### ENERGY STAR®:

- Data collection and tracking of ENERGY STAR®-labeled and other energy efficient products purchased using Federal purchase cards should be investigated.
- Federal agencies should identify the rates of enabling of ENERGY STAR® compliant computers. All agencies should strive for 100 percent rate of enabling of the "sleep mode" feature in computers in order to obtain the maximum energy savings.
- Designations of ENERGY STAR® and energy efficient products should be highlighted on catalogs and on-line schedules, and Federal purchasers should be educated about their representation and requirements.
- Agencies and their energy service providers should include ENERGY STAR® benchmarking and the goal of attaining the ENERGY STAR® Building Label, in contractor-identified initial proposals where applicable; initial proposals in response to a Request for Proposal (RFP); in the collection of data during the detailed energy sur-

vey, audit, or site assessment; in the revised proposal as part of the bench marking of energy performance; and for on-going performance measurement. Agencies should also include the requirement of an ENERGY STAR<sup>®</sup> Statement of Energy Performance in Solicitations for Offers and give preference to ENERGY STAR<sup>®</sup> Buildings when leasing and purchasing Federal buildings.

**Biobased Products:**

- The Interagency Council on Biobased Products and Bioenergy should complete its Government-wide strategic plan to triple the use of biobased products, including bioenergy, at the earliest opportunity. Agencies should then address the goals stated in the plan in their affirmative acquisition plans.





# Energy Efficiency and Renewable Energy

## GOALS

- ✓ Reduce building energy use per square foot by 20% by 2000, by 30% by 2005, and by 35% by 2010 compared to 1985.
- ✓ Cost-effectively reduce greenhouse gas emissions in facilities by 30% by 2010 compared to 1990.
- ✓ Reduce energy consumption of industrial and lab facilities by 20% by 2005 and by 25% by 2010, relative to 1990.
- ✓ Expand the use of renewable energy by purchasing renewable power and installing renewable energy technology.

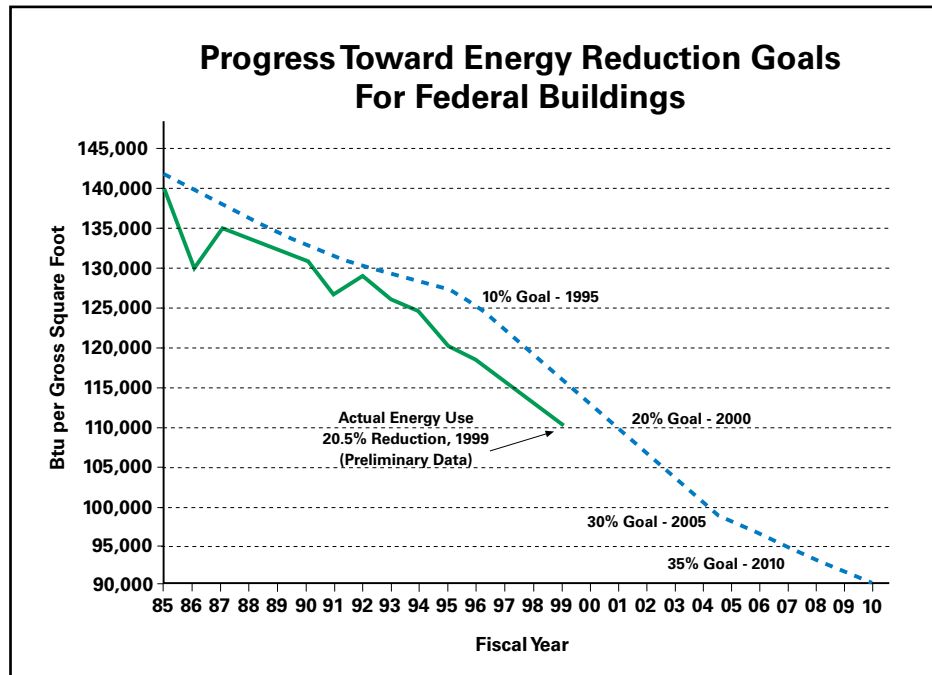
**The Energy Policy Act of 1992 (EPACT) directed Federal agencies to reduce building energy use by 20 percent by 2000 compared to the 1985 base year. In addition, EPACT provided alternative financing tools for agencies to implement energy savings projects with private sector funding. Executive Order 13123 greatly expands goals and opportunities for Federal energy management. Agencies are directed to reduce their energy use by 35 percent by 2010. For the first time, agencies are required to reduce greenhouse gas emissions by 30 percent by 2010. For the first time, agencies are tasked with goals to reduce energy use in industrial and laboratory facilities. When the Executive Order is fully implemented, agencies will have target goals for water conservation and the use of renewable energy.**

In issuing E.O. 13123, the President asked Federal agencies to accelerate and increase their efforts to use alternative financing to make efficiency improvements, and to use new tools to achieve the ambitious goals. Tools, such as the purchase of green products, ENERGY STAR® procurement, off grid renewable technology, ENERGY STAR® building label achievement and more, are all designed to assist Federal energy managers in increasing energy efficiency in their buildings and facilities. The President tasked several Federal agencies to provide assistance to the Federal Government by issuing guidance to empower agencies to reach the aggressive goals.

In January 2000, DOE issued guidance to agencies for implementing E.O. 13123. The guidance includes criteria for exempt buildings, for measuring energy in energy-intensive facilities, and for determining a water consumption baseline. GSA, assisted by DOD, published sustainable design principles and lifecycle cost guidance for building construction. GSA also issued draft guidance on model lease provisions for energy efficiency and sustainable design. DOE and members of the Interagency Federal Energy Management Task Force are developing additional guidance on renewable energy, estimating greenhouse gas emissions attributable to facility energy use, and site and source energy calculations. DOE and the Task Force are also developing Federal goals for water conservation and for the use of renewable energy.

## ACCOMPLISHMENTS

Agencies are making excellent progress. Initial FY 1999 agency energy data indicate the Federal Government has reduced its energy use in buildings by 20.5 percent compared to the 1985 baseline. This means the Federal Government has met the 20 percent energy reduction goal required by EPACT a year early. This translates into real dollars saved for the American taxpayer. In 1999, the Federal Government's utility bill for facilities was \$3.41 billion. The 1985 utility bill in 1999 constant dollars was \$5.6 billion. Our energy savings in facilities translate to a \$2.2 billion savings to the taxpayer.



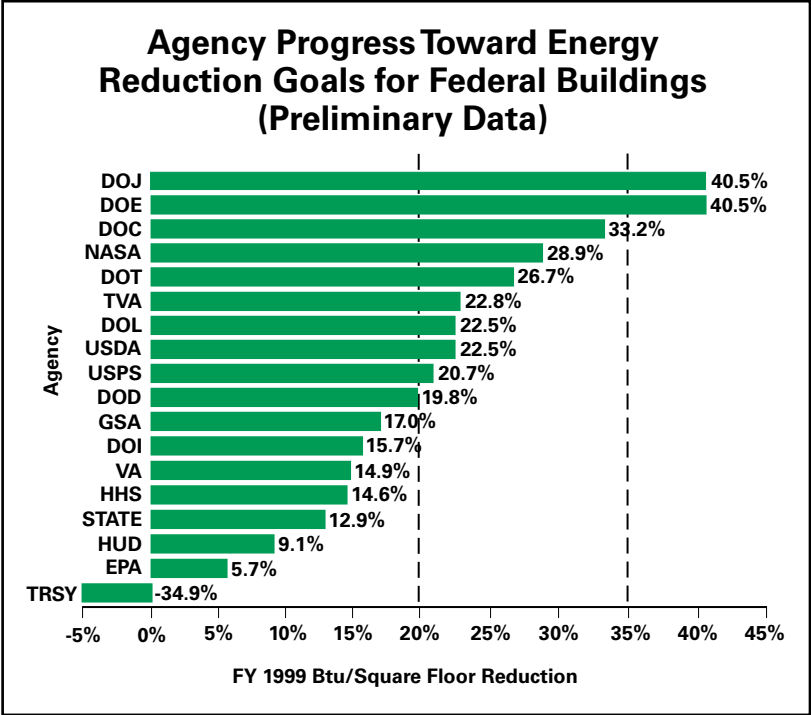
Agencies are helping create a market for renewable energy. In July 1999, EPA, assisted by GSA and DOE, pioneered a green power purchase by buying 100 percent renewable power for its lab in Richmond, California. GSA and DOE are including green power options in their competitive purchase contracts. In addition to buying green, agencies are installing renewable technologies and generating power at their sites. For example, agencies have committed to install 20,000 solar roofs by 2010 in support of the President's Million Solar Roofs Initiative; the 2,000th solar roof will be installed in calendar year 2000.

Agencies are implementing energy efficiency improvements with alternative financing contracting mechanisms, including Energy Savings Performance Contracts (ESPC) and utility energy service contracts (UESC). From 1988 through 1999, private sector companies invested \$846.4 million in Federal facilities, providing significant opportunities for making them more energy efficient at no net cost to taxpayers. Private sector companies are planning to invest an estimated \$439 million of additional energy improvements in Federal facilities this fiscal year.



Agencies documented their programs' progress to date in scorecards submitted to OMB in March 2000. Agencies reported on their progress in meeting the E.O. 13123 requirements, such as designating senior agency officials to be responsible for meeting the goals of E.O. 13123 and establishing technical support teams. Agencies reported on their use of the tools promoted in the E.O. and summarized their energy and cost reduction successes. DOD, VA, GSA, DOE, and the USPS are the largest energy users. DOD, GSA, and DOE have excellent programs, which means they have achieved or are close to achieving the statutory goals by implementing comprehensive energy management programs and

are maximizing their efforts to use many of the E.O. 13123 tools. VA and USPS have good programs and are in the process of implementing comprehensive energy management programs that will more fully use the E.O. 13123 tools. NASA and USDA, while energy users smaller than "the big 5" also have excellent programs. The Departments of Commerce, Justice, Labor, and Transportation have good programs. Other agencies have begun to implement comprehensive energy management programs and expect to see improvement in the coming years. The chart shows the energy savings between 1985 and 1999 for the 18 largest Federal agencies. Clearly significant progress is being made, but much more can be done.



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## RECOMMENDATIONS

The importance the President is placing on implementing E.O. 13123 has energized the agencies' energy management programs. OMB has made Federal energy management a Priority Management Objective, guaranteeing attention to these Government-wide efforts and focusing on the management and money-saving benefits of the Executive Order. Senior agency officials are interested and concerned about their agency's performance and are lending support to their energy managers, Agency Energy Teams, and their efforts. To continue progress, the following steps should be taken:

- OMB, with assistance from DOE, should develop the FY 2000 energy-use scorecard to emphasize comprehensive E.O. implementation.

- OMB should provide guidance on agencies' statutory authority to retain savings.
- Senior agency officials should accelerate use of green product and green power purchasing at their facilities, when cost effective.
- Agencies should include funding requests for E.O. implementation in their budget submissions to OMB.

## Alternative Fuels

### GOAL

- ✓ For 1996, alternative-fueled vehicles should comprise 25% of Federal agency fleet covered vehicle acquisitions. For 1997, the percentage should be 33%, 50% for 1998, and 75% for 1999 and each year thereafter.

**The Energy Policy Act of 1992 (EPACT) and Executive Order 13031 set forth the statutory requirements for the acquisition of alternative fueled vehicles (AFVs) by Federal agencies. Acquisitions include both purchases and leases of AFVs as well as the conversion of conventionally-fueled vehicles to AFV. Signed by President Clinton on December 13, 1996, Executive Order 13031, "Federal Alternative Fueled Vehicle Leadership" established reporting requirements to ensure that Federal agencies comply with the requirements set forth in EPACT.**

In both the Fall of 1998 and 1999, OMB issued guidance to agencies on reporting alternative-fueled vehicle acquisitions. This guidance requested that agencies' vehicle acquisition data be reported for the prior, current, and budget fiscal years.

In general, the EPACT requirements apply to agency fleets of 20 or more light-duty vehicles (vehicles under 8,500 pounds) that are "centrally fueled or capable of being centrally fueled" and are primarily operated in Metropolitan Statistical Areas (MSAs) or Consolidated Metropolitan Statistical Areas (CMSAs) with populations of 250,000 or more according to 1980 Census data. Vehicles that do not meet these requirements are considered geographically exempt from the EPACT requirements. Certain exemptions are also made for law enforcement, emergency, and national security vehicles.

### ACCOMPLISHMENTS

The data available to date are only estimates of vehicle acquisitions that have been provided by the agencies. The information has not been independently confirmed by OMB or other external reviews.

Federal agency performance in meeting the EPACT requirements has been mixed. In FY 1997, the agencies reported 15 percent of their EPACT covered fleet vehicles were AFVs, falling short of the 33 percent target. In FY 1998, agencies' performance significantly improved; the reported overall AFV acquisition rate of 77 percent easily surpassed the 50 percent target. The projected data for FY 1999 and FY 2000 indicate that agencies will again exceed the 75 percent EPACT target with acquisition rates of 100 percent and 94 percent respectively. This success is largely a result of the United States Postal Service's acquisition of more than 21,000 AFVs in these fiscal years.

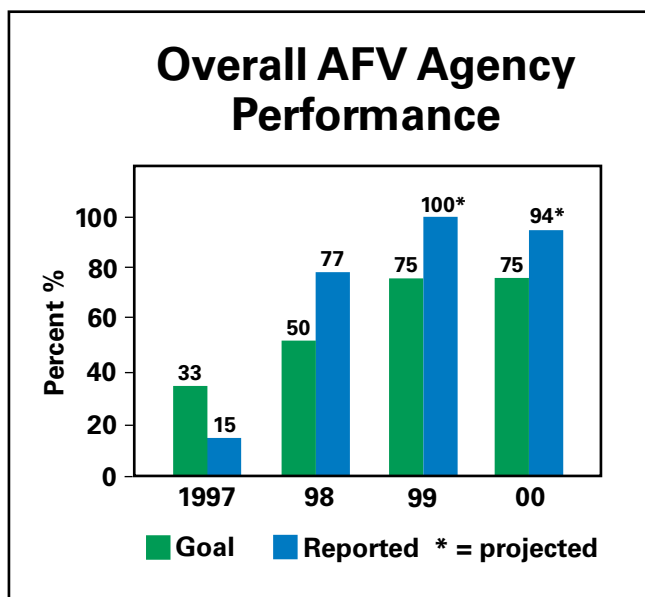
Not only was the FY 1998 target met, but the FY 1999 projections clearly indicate a considerable improvement over 1998 in terms of the number of AFVs acquired. By the end of FY 1999, Federal agencies will have acquired more than 57,000 AFVs. To reach this procurement level, agencies

have also placed increased reliance on E85—a blended mixture of 85 percent ethanol, 15 percent unleaded gasoline—flex-fuel vehicles. These vehicles represented a full 86 percent of AFV acquisitions in FY 1998 and 83 percent in the FY 1999 projections. This is up from 29 percent of AFV acquisitions in FY 1997 and largely accounts for the dramatic jump in EPACT covered AFV fleet acquisitions from FY 1997 to FY 1998.

Acquisition of E85 flex-fuel vehicles gives agencies certain advantages. For example, agencies incur no incremental costs for the vehicles, vehicle performance is comparable to a conventionally-fueled vehicle, and these vehicles can be run on gasoline. Unfortunately, E85 fuel is not readily available and these vehicles are run almost exclusively on gasoline. Interagency coordination and communication with fuel suppliers could facilitate an increased demand for E85 and help in establishing more refueling sites.

Most agencies either lease or purchase their commercial fleet vehicles through GSA. Many agencies—including the DOE program office responsible for managing AFV programs—have stressed the importance of better information and support regarding the vehicles ordered or leased.

The lack of a fueling infrastructure has also limited the Federal agencies' ability to meet the EPACT requirements. Agencies need to develop the demand for alternative fuels to promote their use and establish a refueling infrastructure. For this reason, only large fleets located in MSAs are covered under EPACT.



## RECOMMENDATIONS

The agencies need to take a number of steps in order to improve compliance with the EPACT requirements and to realize the goals of both EPACT and E.O. 13031:

- Agencies should reduce their entire vehicle fleet's annual petroleum consumption.
- Agencies should work with DOE and GSA to resolve alternative fuel use tracking issues with fuel providers.
- Agency fleet managers operating in the same MSAs should actively coordinate the purchase of alternative fuels to encourage local fuel providers to establish alternative refueling sites.
- All Federal agencies need to strive to reach the AFV goals of EPACT and E.O. 13031, which are to acquire AFVs and operate them on their intended alternative fuels.

New Government-wide policy initiatives on the use of alternative fuels in Government vehicles will call for improving the efforts under E.O. 13031, including the recommendations provided above.

## Ozone Depletion

### GOALS

- ✓ Revise Federal procurement practices to address stratospheric ozone protection.
- ✓ Maximize use of alternatives to ozone-depleting substances (ODS).
- ✓ Evaluate ODS uses and identify opportunities for recycling.
- ✓ Modify procurement specifications and practices to substitute non-ODS for ODS.
- ✓ Exercise leadership and disseminate information on successful efforts in phasing out ODS.

**Executive Order 12843, "Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances," signed by President Clinton on April 21, 1993, recognizes the importance of addressing the current depletion of the protective ozone layer caused by the worldwide use of various ozone-depleting substances. The Montreal Protocol calls for a phase out of the production and consumption of these substances, and as a signatory, the United States is using E.O. 12843 as one tool in achieving this important goal.**

In 1993, EPA promulgated stratospheric ozone protection regulations required under the Clean Air Act Amendments of 1990 and E.O. 12843. The aim of these regulations is to establish affirmative procurement programs in Federal agencies to maximize the substitution of safe alternatives to ozone-depleting substances. The FAR was to be revised to comply with the new ozone protection requirements and policies and to direct the purchasing of safe substitutes for ozone-depleting substances. In March 1994, EPA also published regulations to establish a program to identify alternatives to Class I (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, methyl chloroform, methyl bromide, and Hydrobromofluorocarbons [HBFCs]) and Class II Hydrochlorofluorocarbons (HCFCs) ozone-depleting substances and list acceptable and unacceptable substitutes.

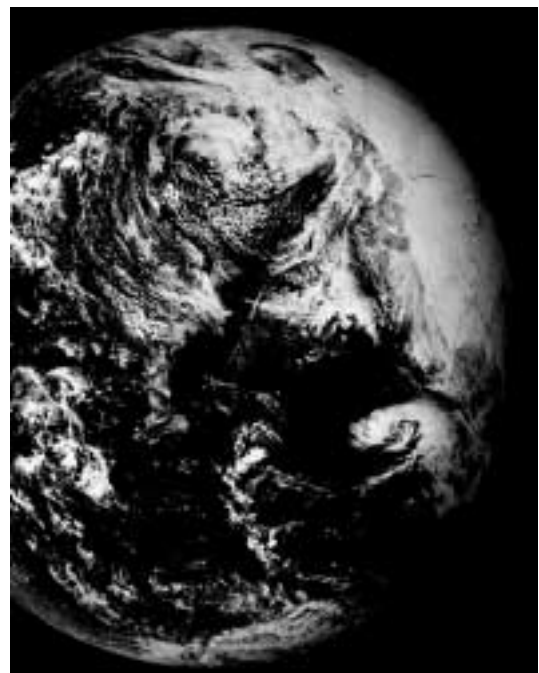
## ACCOMPLISHMENTS

To date, no data have been collected that summarize the Government-wide efforts to fulfill the goals of E.O. 12843. The fact that a regulatory mechanism is in place and Federal facilities are documenting ongoing management practices, provide evidence that agencies are minimizing the procurement of materials and substances that contribute to the depletion of stratospheric ozone, giving preference to the procurement of non-ODS, and revising specifications and purchase descriptions to substitute safe alternatives to ozone-depleting substances.

In 1996, new FAR revisions set forth policies and procedures for the acquisition of items that contain, use, or are manufactured with ozone-depleting substances. Most Federal agencies now have procurement practices in place to minimize or eliminate the purchase of ODS based on the FAR rules.

DOD supports the Federal Government CFC reduction program through management of an ODS Reserve, the only available source of inventory within DOD for ozone depleting refrigerants and halons. To date, the military services have recovered approximately six (6) million pounds of product for reclamation. This represents hundreds of thousands of tons of building air conditioning and process refrigeration being converted to environmentally friendly and energy efficient systems. This program has successfully reduced DOD production and import of Halon 1301 and Halon 1211 by 99 percent since 1989.

The ODS Reserve has actively promoted Federal Government-wide recovery and recycling of ODS by initiating agreements with the Postal Service, DOE, Central Intelligence Agency, U.S. Customs Service and other Federal agencies for the recovery and reclamation of excess ODS stocks. For exam-



ple, the agreement with the Customs Service allows seized illegal imports to be transferred to the Reserve, producing savings of \$5-10 million. The ODS Reserve has become the model for reserve-type operations for foreign Governments and domestic and foreign commercial activities.

Since 1996, Basic Ordering Agreements (BOA) allow Federal agencies to purchase large, energy efficient, CFC-free replacement chillers through the GSA BOA by adopting a series of general specifications while permitting other important features to be individually specified. The DOE Rocky Flats facility was the first site to use the BOA. The streamlined procurement takes 45 to 60 days, allowing customers to avoid the cumbersome bidding process previously required for chiller purchases. Cumulative energy cost savings are estimated at \$1.4 billion over the 20-year life of replacement chillers to be installed in Federal facilities. Agencies will also realize an estimated \$600 million savings in administrative costs and associated operation/maintenance services. The BOA will help "pull" the entire chiller market toward greater efficiency and the future phase-out of ODS.

To make progress in meeting Clean Air Act and E.O. 12843 requirements, DOE established a Secretarial goal in 1998 to replace by 2005 all DOE chillers using Class I ozone-depleting refrigerants that are greater than 150 tons of cooling capacity and were manufactured prior to 1984. The goal will reduce DOE's in-chiller use of Class I ODS by nearly 300,000 pounds, reduce ODS emissions, reduce energy costs by \$6 million every year and also reduce electric utility air pollution emissions—including global warming gases by over 100,000 tons per year.



DOD has also undertaken major efforts in eliminating the use of toxic chemicals and extremely hazardous substances through the revision of its military-unique specifications (MIL-SPECs), standards and testing procedures. Efforts by DLA demonstrate the extent of this initiative. DLA determined that acid-based solvents could be used as a replacement for ozone-damaging CFCs in many testing procedures. DLA then revised the testing procedures set forth in close to 4,000 standards and specifications to elim-

inate requirements to use CFCs. As a result, approximately 800 defense manufacturers have eliminated more than 600,000 pounds of CFCs used each year in testing procedures.

In 1990, EPA established the Stratospheric Ozone Protection Awards, an annual program to recognize exceptional leadership, personal dedication, and technical achievements in eliminating ozone-depleting substances. This award has been presented to 398 individuals and organizations from 29 countries, including many recipients from Federal agencies.



## RECOMMENDATIONS

- A one-time report on agencies' E.O. 12843 implementation efforts is recommended, to the extent practicable, to better define the Federal Government's overall performance.
- Agencies should prepare plans to ensure continued efforts to reduce the procurement and, where appropriate, the use of ODS. New Government-wide environmental management initiatives, currently under development, will address this recommendation.

# Pollution Prevention and Right-to-Know

## GOALS

- ✓ Report releases of toxic chemicals to the EPA's Toxic Release Inventory (TRI).
- ✓ Reduce toxic chemical releases by 50 percent by 1999.
- ✓ Develop Agency-wide pollution prevention strategies.
- ✓ Develop facility-level pollution prevention plans.
- ✓ Recognize outstanding environmental Federal facility management performance.
- ✓ Review standardized documents to identify opportunities to reduce unnecessary use of toxic chemicals.

**On Earth Day in 1993, President Clinton called for the creation of an Executive Order directing Federal Government compliance with Right-to-Know laws and establishing goals and procedures for reducing toxic releases from Federal facilities. Executive Order 12856 was signed by the President on August 3, 1993.**

In 1994, approximately 190 Federal facilities, most of which had not previously reported under TRI, publicly reported releases and transfers of more than 10 million pounds of toxic chemicals. For the first time, many Federal facilities began to track the use, management, and release of toxic and hazardous substances. Internal awareness of toxic chemical use by the facilities, as well as the requirement to publicly report releases of toxic chemicals, prompted many facility directors to manage those chemicals better, resulting in safer, healthier facilities, and reduced emissions. In addition, a much larger number of facilities joined States and local communities in response planning for emergency release of hazardous and toxic substances and chemicals.

## ACCOMPLISHMENTS

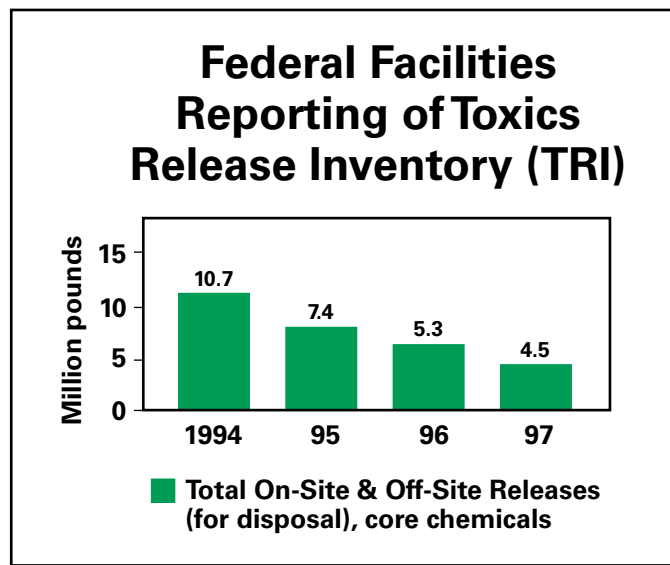
Using a baseline of TRI data for reporting year 1994, the Federal sector achieved the 50 percent reduction goal in only two years and exceeded the goal in 1997 (the latest data available) with a net total reduction of almost 60 percent. The chart shows total reductions for eleven of the major Federal agencies (Defense, Energy, Interior, Justice, Transportation, Treasury, EPA, Health and Human Services, NASA, Tennessee Valley Authority and US Enrichment Corporation).

The need to track chemical use and release and the efforts to fulfill the reduction goal led to unanticipated innovation at Federal facilities. Facilities, particularly those with considerable "industrial" processes such as aircraft or ship repair and maintenance, began to actively manage and control supplies of toxic and hazardous materials. Known as the "pharmacy concept," this hazardous substances tracking and management tool uses exact quantity product distribution procedures, centralized procurement systems, and materials tracking methods that result in fewer materials exceeding shelf life, and therefore having

to be disposed of as hazardous waste. The pharmacies also allow facilities to increase efficient in-line processes because materials use can be tracked. The pharmacies result in a cleaner environment and workplace through fewer releases of toxic chemicals and reduced production of hazardous wastes. These systems also save taxpayer dollars by better managing the amount of materials brought onto facilities and reducing the amount and costs of removing and treating wastes from the facilities.

Sixteen Federal agencies, including agencies not formally covered by the Executive Order (Postal Service, Tennessee Valley Authority, and Smithsonian Institution) prepared pollution prevention strategies that committed those agencies to pollution prevention through source reduction in facility management and acquisition. The strategies formed the framework for agency policies and procedures that addressed implementation of E.O. 12856 and were ultimately incorporated in other Executive Orders addressing recycling and energy conservation.

Approximately 2,000 non-defense facilities prepared pollution prevention plans. Additionally, the DOD elected to prepare plans for each of its approximately 5,400 facilities, including those for which a plan was not specifically required by E.O. 12856. The plans allowed facilities to establish both a baseline and goals for future improvement and review opportunities for pollution prevention. The plans covered a variety of facility operational aspects, ranging from chemical use and management to energy conservation and recycling. Frequently, the range of issues addressed by the plans served to provide an overview of the facilities' environmental status and served as a tool for improving envi-





ronmental performance facility-wide. Ultimately, the plans were also used as a catalog of projects to help facilities exceed environmental regulatory requirements. In some situations, and as a sign of things to come, facility pollution prevention plans served as a template for development of environmental management systems that addressed management practices, rather than specific activities.

In 1994, DOE initiated a pilot project called the High Return-on-Investment program. The program solicited site proposals for implementation funds for activities or projects that reduce operational costs in the short-term (less than three-year payback). The program was modeled after the Dow Chemical Company's Louisiana program, and the concept is to obtain operational and waste management cost savings by investing funds in pollution prevention. On September 8, 1998, DOE's Office of Environmental Management distributed the results of the return-on-investment projects funded by the field from 1994 to 1998. The results showed an estimated life-cycle savings of \$311 million from a total of 262 projects with implementation cost of \$19 million.

With the assistance of other Federal agencies, EPA developed the Code of Environmental Management Principles (CEMP), a collection of five broad principles and underlying performance objectives that provide a basis for responsible environmental management at Federal facilities. Developed in 1995, the CEMP preceded but is similar to ISO 14001 and other Environmental Management System frameworks. In September 1995, at the first White House Closing the Circle Awards ceremony, the CEMP was endorsed in writing by 18 Federal agencies. The CEMP principles have served as one of the primary drivers that led to the adoption of environmental management systems at Federal facilities.



Federal agencies, primarily DOD, attempted to review standard documents for specifications using the TRI chemicals. The task proved unmanageable given the extraordinary number and broad distribution of specifications. Additionally, the effort conflicted with acquisition reform efforts that called for performance-based specifications. To provide a more manageable and focused number of chemicals that could be targeted by facilities and agencies for reduction, EPA reviewed TRI reports to determine the 15 chemicals released in the largest quantity by the Federal Government. EPA then reviewed the primary uses for those chemicals and identified known, less harmful, substitute chemicals or processes capable of achieving the same results. EPA also worked with OMB's OFPP to amend the FAR to ensure that the E.O. is considered in standard Federal acquisition transactions. Finally, EPA worked with other agencies to develop a facility-level primer for applying life cycle and total cost assessment concepts to facility acquisition procedures.

## RECOMMENDATIONS

Based on the success in achieving the program goals, the following is recommended:

- The Federal Government achieved the 50 percent TRI reduction goal three years earlier than the time-frame established by E.O. 12856. The next step should be to seek further reductions by Federal agencies in the release and offsite transfer of toxic chemicals for treatment and disposal. The new target goals and baseline should be based on the success achieved to date under E.O. 12856.
- E.O. 12856's call for reduced acquisition and use of hazardous substances and toxic chemicals has proved difficult to implement due to the large number of chemicals in the TRI list—over 700 listed chemicals and chemical categories. The development of a list of "priority" chemicals based upon applications and use by Federal agencies and facilities will prove to be a very effective tool in helping the efforts to identify substitute chemicals or processes to reduce environmental damage, risk, and future liability.
- Pharmacy programs have been used successfully by the military to implement pollution prevention through source reduction, reduction of TRI chemical releases and decrease in hazardous waste disposal. DOD achieved considerable cost savings by implementing pharmacies. Other agencies should also review the feasibility of this concept in their pollution prevention programs.



# Recycling and Waste Prevention

## GOALS

- ✓ Incorporate recycling and waste prevention practices in Federal agencies' daily operations.
- ✓ Develop Government-wide strategies to further implement recycling and waste prevention practices.

**Executive Order 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," was signed by President Clinton on September 14, 1998. This Executive Order strengthens and expands the Federal Government's commitment to recycling and buying recycled content products by setting forth stricter guidelines and greater responsibilities for the Federal agencies.**

Although the American population is only five percent of the Earth's population, we consume approximately 25 percent of the world's resources. Each of us generates an average of 4.4 pounds of solid waste every day. In a lifetime, the average American will throw away 600 times his or her adult weight in garbage. This means that each adult will leave a legacy of as much as 100,000 pounds of trash for his or her children.

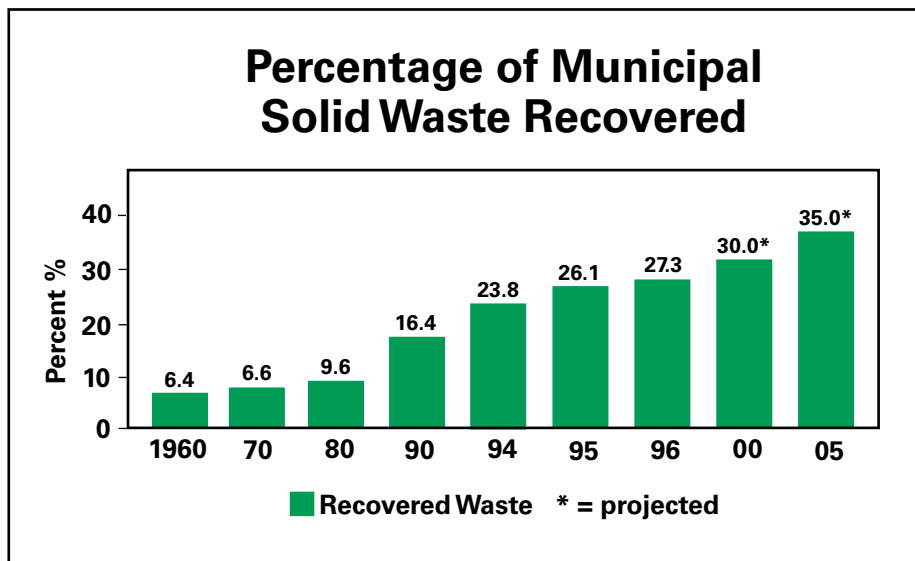
Recycling has been the single most adopted environmental activity that Americans have undertaken to conserve our resources and leave a cleaner planet for future generations. It is clear that we can't afford not to recycle. If we continue to squander our precious resources and burn energy unnecessarily, it is inevitable that we will run out of certain resources.

The Federal Government is fully committed to implementing recycling practices into the agency missions and in every aspect of its daily operations. Government agencies reduce their waste generation with pollution prevention practices, reuse the items they possibly can, and recycle what cannot be reduced or reused. Practically every Federal Government office has a recycling program in place to collect items such as aluminum cans, glass bottles, and office paper. Other items such as vehicle batteries, computer equipment, corrugated boxes, motor oil, tires, scrap iron, and steel are routinely part of the recycling efforts at many of the Federal facilities across the country.

## ACCOMPLISHMENTS

Data reported by six Federal agencies (DOE, DOT, VA, NASA, GSA, and USPS) indicate that the dollar value of recyclables collected was approximately \$5.8 million in 1996, almost doubling to \$11 million in 1997. Five agencies (DOE, DOT, VA, NASA, and GSA) reported that 100 percent of their offices operated active recycling programs in 1996.

In 1999, the first Government-wide Strategic Plan for waste prevention, recycling, and Federal acquisition was announced to define E.O. 13101 goals and provide a road map to achieve these goals. One of the unique aspects of the Plan is the establishment of a new and aggressive national recycling goal for the Federal Government of 35 percent waste diversion by 2005. All Federal agencies are expected to advance toward this national goal with their respective waste diversion programs. The plan also requires Federal agencies to demonstrate significant increases in the procurement of recycled content products from each preceding year through 2005. DOD was one of the first agencies to step up to the challenge by creating a new Measure of Merit for waste diversion that sets a goal of 40 percent waste diversion. DOE has also taken the challenge and established a waste diversion goal of 45 percent for its facilities nationwide.



The GSA National Capital Region (GSA-NCR) generates revenues through recycling contracts used by more than 100 Federal agencies from the executive, legislative, and judicial branches. GSA recycling contractors pick up paper, corrugated cardboard, cans, glass, and plastic from 135 federally-owned buildings housing 150,000 employees in the Washington, DC area. Last year, GSA-NCR recycling contracts earned more than \$360,000 for the Federal Government. GSA returns this revenue to the agencies that generated the recyclables. The agencies may use the revenue for recycling, waste prevention, or other employee programs. Furthermore, GSA-NCR saved the Federal Government more than \$500,000 in disposal fees by recycling over 7,300 tons of material in 1999, 7,100 tons of which was paper. By recycling 7,100 tons of paper, the Government saved the equivalent of 24,000 cubic yards of landfill space, almost 3 million gallons of oil, 28 million kilowatts hours of energy, and 50 million gallons of water.

Solid waste reduction and recycling programs have helped DOD cut waste, cut costs, and generate income from the sale of recyclables for use in funding environmental projects and morale, welfare, and recreation programs. Every DOD installation in the country currently operates a recy-

cling program. DOD-wide solid waste disposal has declined progressively from about 10 billion pounds in 1992 to 6.7 billion pounds in 1997, or about 33 percent. During the same time, recycling has increased 100 percent, from 1 billion pounds to 2 billion pounds. This trend illustrates the great success of the military services and agencies in reducing waste through reuse and recycling activities.

The Federal Government's growing interest in using partnering options for the delivery of its programs and services has also been successfully incorporated into its recycling efforts. The use of recycling partnerships has evolved to include a wide range of public as well as private collaborative or contracted service agreements. These partnerships are designed to facilitate access to recycling opportunities and enable use of new capabilities and technologies.

For example, a creative and potentially far-reaching recycling partnering program was put in place by the National Security Agency (NSA). NSA warehouses were overloaded with excess automated data processing equipment (ADPE), taking up valuable space, creating a paperwork nightmare, and costing money in storage, transportation and disposal. Despite an extensive reuse process, including various school programs, NSA was unable to recycle or reuse its ADPE because declassification standards require that the equipment be "sanitized" prior to disposal or reuse, a process that renders the equipment virtually unusable as it requires the removal of hard drives and other key components. NSA set up a pilot program to recycle ADPE using a private state-of-the-art electronics recycling company that recycles or reuses 100 percent of the material. The partnership includes profit-sharing, 70/30 in NSA's favor, and since February 1997 has yielded \$500,000 in returns. It also



eliminated all transportation costs, or approximately \$14,600 per year, reduced paperwork requirements by 80 percent, and cut Government processing costs and time in half.

Public-private partnerships also are developing technologies that will improve recycling. Self-stick adhesives used on labels and postage stamps, for example, are a significant contaminant for paper recycling mills. The Postal Service is partnering with adhesives and paper manufacturers, testing laboratories, stamp printers, and converters to develop environmentally-benign adhesives. DOE's partnership with the paper industry, Agenda 2020, also is addressing the development of environmentally-benign adhesives and other paper recycling issues.

## RECOMMENDATIONS

- In order to keep the Federal Government recycling program growing strong, Federal agencies need to continue to strengthen the link between procurement activities (demand) and ongoing collection and recycling efforts (supply). As more and more recycled content items are purchased, Federal agencies will continue to spur growth within the recycling industry.
- Agencies should maintain and expand the use of Research and Development (R&D) Programs, such as the Small Business Innovative Research Program, DOE's Agenda 2020 program with the paper industry or USPS leadership in developing benign adhesives, to invest in recycling technologies.
- Federal facilities should continue to expand the recovery of materials for recycling.

## Market Development

### GOAL

- ✓ Develop and implement Federal agency programs to increase and expand markets for recovered materials, energy efficient, biobased, and environmentally preferable products and services.

**The U.S. Government is the single largest consumer in the nation. Because it takes many resources to operate the Federal Government, agencies work hard to safeguard our natural resources. The Federal Government helps sustain our precious resources by using its \$200 billion purchasing power to enhance and develop markets that support greening practices. Inevitably, Government purchasing decisions have a big impact on the future survival of these markets. By giving full weight to environmental and energy factors in its purchasing decisions, the Government has a significant influence on its suppliers and their product design and pricing policies.**

Ongoing recycling market development efforts by the Government have created new jobs in collection, sorting, and manufacturing and distribution of recovered materials. Many of these jobs are located in America's inner cities, where job creation is particularly critical. For example, recent studies of employment in Northeastern and Southern states indicate that recycling activities employ more than 2.5 percent of manufacturing workers. Applying these studies to the entire nation, recycling and remanufacturing activities account for approximately one million manufacturing jobs

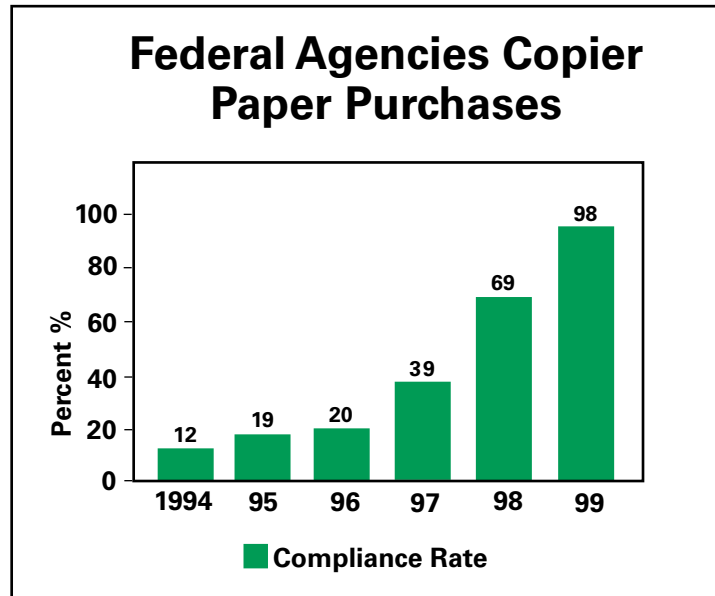


and more than \$100 billion in revenue. It is estimated that incinerating 10,000 tons of waste creates one job, landfilling the same amount creates six jobs, while recycling the same 10,000 tons creates 36 jobs.

## ACCOMPLISHMENTS

One EPA-designated product found in every Federal agency Affirmative Procurement Program is recycled content copier paper. The Federal Government buys 20.9 billion sheets of copier paper a year—equating to 10 million sheets of paper used every work hour of every working day. In E.O. 13101, President Clinton directed Federal agencies to purchase only copier paper and other office papers containing a minimum of 30 percent postconsumer fiber.

Almost 18 months after President Clinton signed his second Executive Order on recycling, the combined recycled content paper purchases from the two largest suppliers of copier paper to the Federal Government—GSA and the Government Printing Office—increased to 98 percent from 12 percent compliance in 1994.



Through this single action, the Government expects to save up to a half million trees a year, reduce air and water pollution, and curb emissions that contribute to global warming. This responsible use of Government purchasing power will not only help the environment, but will also stimulate the growth of the recycled content paper industry in the 21st century.

The progress on paper began when GSA reduced the price of recycled content paper below the price of virgin paper and 10 agencies, led by DOD, asked GSA to substitute recycled content paper for virgin paper orders. Based on the success of the paper substitution policy, DOD, DOJ, DOT recently instituted a new substitution policy for re-refined lubricating oil. DOJ and DOT requested DLA—one of the Government's biggest suppliers of motor oil for the Federal vehicle fleet—to fill all oil orders for their vehicles with re-refined oil. Likewise, DOD asked DLA to fill all the military facility orders for commercial motor oil with re-refined oil.

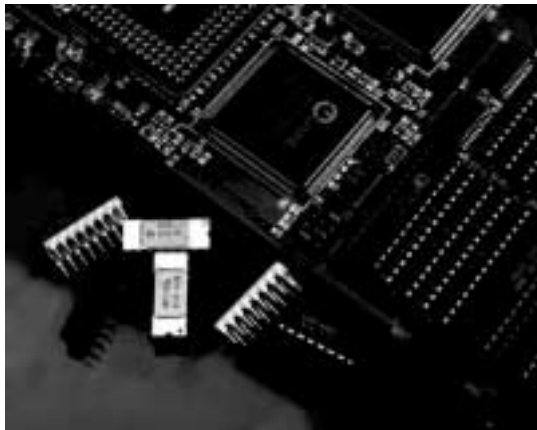
Federal agencies now use innovative contract mechanisms, such as "closed-loop" contracts, that allow them to purchase certain products, such as oil products, tires, or toner cartridges, with the added benefit of having the contractor pick up any resulting waste. This is a great benefit to customers who don't have to deal with cumbersome disposal contracts, additional contract administration, and envi-

ronmental concerns surrounding disposal. Use of closed-loop contracts also provides an opportunity to create markets for materials recovered by the agency that are otherwise difficult to market. USPS is creating markets for undeliverable mail by using closed-loop contracts. The Postal Service established specifications for and purchased 5,000 recycling containers for use in post office lobbies. A private company manufactured the containers using undeliverable mail and other paper recovered by USPS.

Electronic demanufacturing is the process of dismantling computers and other electronic equipment into their constituent components and removing and testing chips, hard drives, CD-ROM drives, circuit boards, etc. Once removed, components are cleaned, sometimes repaired, packaged, cataloged, and then sold as used parts. This process not only represents a viable solution to the waste management problem resulting from obsolete electronic equipment; but it also provides an opportunity for expanding recycling efforts and promoting economic development.

For example, in 1997, Federal Prison Industries, whose trade name is UNICOR, began a pilot operation where excess, obsolete, and scrap computers could be accepted, sorted, collected, and demanufactured. Donors were able to dispose of their equipment at no cost, ridding their closets and

warehouses of outdated, unused, or broken computers and electronic equipment. The resulting systems, components, parts, and commodities were sold for reuse or recycling. School children and education budgets also benefitted from free equipment donated to schools.



UNICOR has filled a much needed and viable outreach, collection, separation and processing site for recycling and demanufacturing computer and electronic equipment. Since UNICOR began its computer and electronics recycling efforts, nearly 1,000 truckloads—over 30 million pounds—of materials

have been processed, saving these materials from non-use or disposal. There are currently three UNICOR sites that provide electronic systems, components, and parts for reuse in the states and overseas. In addition to the many environmental and economic benefits, this program is also helping inmates re-enter society with high-demand electronic skills for future jobs.

The Administration has also made great strides to broaden the environmental perspective on green products and services by initiating a program to encourage the purchase of Environmentally Preferable Products (EPPs). These are products that have less impact on human health and the environment when compared to competing products that serve the same purpose. EPPs can reduce pollution, save energy and materials, and reduce health and disposal costs. In August 1999, EPA published guidance to assist agencies in determining the environmental preferability of products and services. Through pilot projects, agencies are beginning to define key environmental attributes of products, such as recycled content, energy and water efficiency, biobased content, low or no volatile



organic compound content, and reduced or no toxic or hazardous constituents. Ultimately, these efforts will lead to greater use of EPPs by Federal agencies.

Each year, the Federal Government purchases an estimated \$10 to \$20 billion in energy-related products. There is an enormous potential for energy and dollar savings through existing procurement policies emphasizing energy efficiency. Such policies will not only reduce energy costs in the Federal budget, but will expand the market for energy efficient products, create a strong “market pull” for new technologies, and set a clear example for other Government and corporate purchasers. Additionally, energy savings can translate to substantial pollution prevention and reduction in waste generation.

Another example is the recent greening effort by the Javits -Wagner-O'Day (JWOD) program, a Federal initiative that generates employment and training for more than 34,000 people who are blind or who have other significant disabilities. These individuals, working in more than 600 nonprofit agencies associated with the National Industries for the Blind or with NISH ( a national nonprofit agency that serves persons with a wide range of disabilities), furnishes supplies and services to the Federal Government under the JWOD Program. A Presidential Memorandum issued on March 29, 2000 stated a continued commitment to the JWOD Program. The White House Task Force on Recycling and other organizations are partnering with the JWOD Program to promote and market recycled content and environmentally preferable products. The Presidential Memorandum emphasizes purchasing recycled-content, environmentally preferable, and energy efficient products through the JWOD Program. This will continue to green the Government while invigorating the JWOD Program and providing additional employment opportunities for adults with disabilities.

Executive Orders 13101 and 13123 direct Federal agencies to apply the principles of Sustainable Design to the siting, design, and construction of new facilities. Sustainable Design is a design methodology based on ecological principles. For example, a sustainable, environmentally responsible building must be energy efficient, reduce consumption of land and other non-renewable resources, minimize the waste of materials and water, and create a livable, healthy, and productive environment. Sustainable Design incorporates a wide range of recycled content, energy efficient and environmentally preferable materials, helping to promote markets for these products. A new tool is under development to create a single, highly accessible source for all military, Federal and private-sector building criteria. The Whole Building Design Guide (WBDG) is a comprehensive, Internet-based portal to a wide range of Federal and private sector, building-related guidance, criteria, and technology.



In 1995, the heads of 22 Government agencies, representing close to 95 percent of the total Federal buying power, signed the Energy Efficiency and Resource Conservation Challenge (commonly

known as the "Procurement Challenge") committing themselves to purchase energy and water saving products that will reduce their operating costs. The Procurement Challenge, initiated by DOE/FEMP and co-sponsored by the Council on Environmental Quality and OMB/OFPP, will assist participants in meeting the ambitious energy and water conservation goals of EPACT and the E.O. 13123.

In November 1998, Vice President Gore announced the National Recycling Challenge, a major initiative to broaden the commitment to recycling in all sectors of the economy. The Vice President challenged Government agencies at all levels, industry, businesses, universities, and other institutions



to make a commitment in one of six areas to increase the sustainability of recycling in the United States. More than 50 businesses, State and local Governments, universities, and non-profits have stepped up to challenge and made commitments.

Commitments in the area of "Community and Economic Development" focus on starting or expanding recycling-related jobs programs. Nearly 200 jobs have been created to date, with more than 1,500 jobs planned. Most of the jobs employ unskilled workers and provide skills training, including in the highly valued electronics industry. For example, The Sustainable Jobs Fund, a new community development venture capital fund, has raised \$14.5 million from the U.S. Department of the Treasury, banks, charitable trusts, and others. The Sustainable Jobs Fund's goal is the creation of more than 1,500 jobs from

its investments and additional capital leverage in growth enterprises that create quality jobs in economically distressed neighborhoods in the eastern United States. The strategic focus is on recycling, remanufacturing, and environmental industry sectors that are uniquely suited to generating employment for former welfare recipients and low-income individuals. As of November 1999, the Sustainable Jobs Fund had invested in three businesses projected to create more than 20 new jobs.

## RECOMMENDATIONS

- Federal agencies' green practices and market development go hand-in-hand. Continued promotion of the areas highlighted above is extremely important for the future development of green markets.
- Federal agencies should use their purchasing power to energize the development of an integrated total market approach to design, manufacture, demanufacture, reuse, and recycle electronic equipment.
- Federal agencies should continue creating opportunities, such as the National Recycling Challenge, to educate Americans that each of us can make a difference and that recycling is being institutionalized by American businesses.

# Concluding Thoughts

The Greening the Government Report presents a better understanding of the extent of the Federal Government's efforts to create a greener America, full of opportunity and prosperity. The report has presented a snapshot of the many innovative ways that Federal agencies, of all sizes and from all sectors of the Government, are using green products and services to extract greater efficiencies and create new opportunities to improve our environmental legacy for our children. It was also the intent of this report to identify significant links among all the Greening the Government efforts by highlighting past activities, on-going efforts and future initiatives designed to create a more sustainable, environmentally conscious, and energy efficient Federal Government.

The Federal Government will continue to work in partnership with business, industry, academic institutions, organizations, and communities in making the right Government policies and business decisions. Working in unison will ensure that Greening of the Government will reap enormous benefits for both the environment and the American economy. Through partnering and other collaborative efforts, Federal agencies will continue to refine environmental protection to make it more flexible, more effective, more sensible, and more affordable—to achieve the very best environmental results for the least cost.

The environmental vision of this Administration has always been predicated on the premise that the Federal Government must lead by example. As we celebrate Earth Day 2000, we are reminded of our collective responsibility as Americans and citizens of the world to safeguard the well being of our future generations. Continued protection and preservation of our environment is imperative at the dawn of the 21st century. The Federal Government is committed to this cause because it is better for the future generations and the future of the world.



## ACKNOWLEDGEMENTS

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