

**Annual Report to Congress
on Federal Government
Energy Management and
Conservation Programs
Fiscal Year 2003**

August 9, 2005

**U.S. Department of Energy
Assistant Secretary, Energy Efficiency and Renewable Energy
Federal Energy Management Program
Washington, DC 20585**

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I. OVERVIEW OF FEDERAL ENERGY CONSUMPTION AND COSTS

This report on Federal Energy Management for fiscal year (FY) 2003 provides information on energy consumption in Federal buildings, operations, and vehicles and documents activities conducted by Federal agencies to meet the statutory requirements of Title V, Part 3, of the National Energy Conservation Policy Act (NECPA), as amended, 42 U.S.C. §§ 8251-8259, 8262, 8262b-k and Title VIII of NECPA, 42 U.S.C. § 8287-8287c. Activities undertaken during FY 2003 by the Federal agencies under the Energy Policy Act of 1992 (EPACT) are also discussed in this report.

Based on reports submitted to the Department of Energy (DOE) by 29 Federal agencies, the total primary energy consumption of the Government of the United States, including energy consumed to produce, process, and transport energy, was 1.6 quadrillion British Thermal Units (quads) during FY 2003. (Table 1-A)¹ These 1.6 quads consumed by the Government in buildings and operations to provide essential services to its citizens, including the defense of the Nation, represent approximately 1.6 percent of the total 98.16 quads² used in the United States. In total, the Federal Government is the single largest energy consumer in the Nation, although its pattern of consumption is widely dispersed geographically.

The Government consumed 1.1 quadrillion British Thermal Units (quads) during FY 2003 when measured in terms of energy delivered to the point of use (site-delivered energy consumption) (Table 1-B). Unless otherwise noted, this report uses the site-measured conversion factors to convert common units for electricity and steam to British Thermal Units (Btu). The total site-delivered energy consumption in FY 2003 was 22.7 percent less than the FY 1985 base year. This reduction of 328.2 trillion Btu, which reflects both a drop in Government activity and the success of energy management efforts, could have satisfied the calendar year 2000 energy needs of the State of New Hampshire for more than one year.³

The total cost of the 1.1 quads was \$9.6 billion in FY 2003 and represented approximately 0.4 percent of the total Federal expenditures of \$2.163 trillion⁴ for all purposes in FY 2003.⁵ This is \$861.9 million less than the \$10.5 billion reported in FY 1985, an 8.2 percent decrease in

¹Primary energy consumption considers all energy resources used to generate and transport electricity and steam. Tables 1-A, 4-A, and 6-B show primary energy consumption for comparison with site-delivered consumption shown in Tables 1-B, 4-B, and 6-A respectively. Conversion factors of 11,850 Btu per kilowatt hour for electricity and 1,390 Btu per pound of steam are used to calculate gross energy consumption.

²DOE/EIA-0384(2003), *Annual Energy Review 2003*, September 2004, Table 1.3. Data for calendar year 2003.

³Based on site-delivered energy consumption estimates for 2000 in the residential, commercial, industrial, and transportation sectors (328.1 trillion Btu). Source: DOE/EIA-0214(00), *State Energy Consumption Data, 2000*, Table R1.

⁴*Analytical Perspectives, Budget of the United States Government, Fiscal Year 2003*

⁵Unless otherwise noted, all costs cited in this report are in constant 2003 dollars, calculated using Gross Domestic Product implicit price deflators. See DOE/EIA-0384(2003), *Annual Energy Review 2003*, Table D1; September 2004. Costs noted as nominal dollars reflect the price paid at the time of the transaction and have not been adjusted to remove the effect of changes in the spending power of the dollar.

nominal costs. In constant 2003 dollars, this equates to a decrease of 46.6 percent from \$18.0 billion in FY 1985 to \$9.6 billion in FY 2003. (Table 13) The reductions in energy costs from 1985 are attributable primarily to reduced energy prices and reduced Government activity, although they also reflect the effects of agency energy management efforts. Many other variables also contribute to fluctuations in annual energy consumption and costs, including changes in building square footage, building stock, weather, tempo of operations, fuel mix, and vehicle, naval, and aircraft fleet composition.

The Federal energy bill for FY 2003 decreased 3.8 percent compared to the previous year. Overall, the unit cost of all fuel types used decreased 10.3 percent, from \$9.58 per million Btu to \$8.59 per million Btu. Contributing to the overall decrease in unit costs were decreases in the prices paid by the Government for:

- Jet Fuel (18.6 percent decrease)
- Fuel Oil (9.3 percent decrease)
- Electricity (3.4 percent decrease)
- Diesel Fuel (15.9 percent decrease)

In addition to prices and Federal energy management activities, many other variables contribute to changes in annual energy use and costs, including changes in square footage, building stock, weather, tempo of operations, fuel mix, and vehicle, naval, and aircraft fleet composition.

In FY 2003, the Department of Defense (DOD) spent \$6.9 billion for energy out of the total Federal energy expenditure of \$9.6 billion. Overall, DOD used 27.7 percent less site-delivered energy in FY 2003 than in FY 1985—a reflection of reduced Defense-related activity and successful energy management efforts.

FY 2003 was the first year for reporting by the Department of Homeland Security. Significant declines in energy use were evident across the sectors for agencies such as the Departments of Transportation and the Treasury which transferred functions to the new Department.

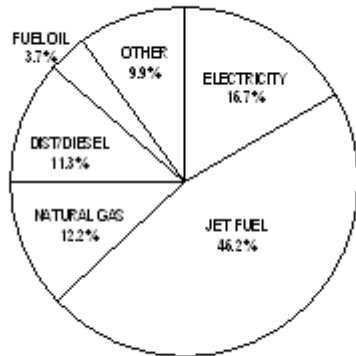
Figures 1 and 2 depict the percentage of total energy used by the Federal Government in FY 2003 and its cost. As illustrated, jet fuel and electricity account for approximately 62.9 percent of the total energy consumption represented in Figure 1 and approximately 70.5 percent of the total energy costs in Figure 2.

In FY 2003, petroleum-based fuels accounted for 0.76 quads (758,721.7 billion Btu) of the total 1.1 quads consumed by the Federal Government (Table 2). Of that, approximately 0.70 quads (696,160.9 billion Btu) were used by DOD primarily for jet fuel and distillate/diesel for vehicles and equipment energy. Only 0.04 quads (37,712.7 billion Btu) of petroleum-based fuels were used for Federal standard buildings energy.

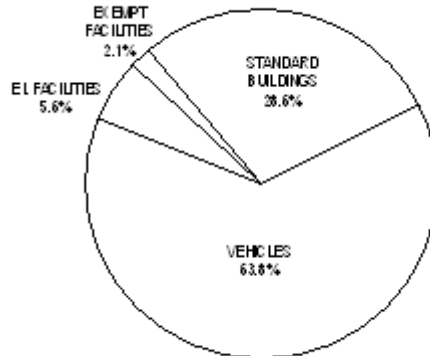
Federal agencies report energy consumption under four categories: 1) standard buildings; 2) industrial, laboratory and other energy intensive facilities; 3) exempt facilities; and 4) vehicles and equipment.

FIGURE 1
Federal Energy Consumption, FY 2003

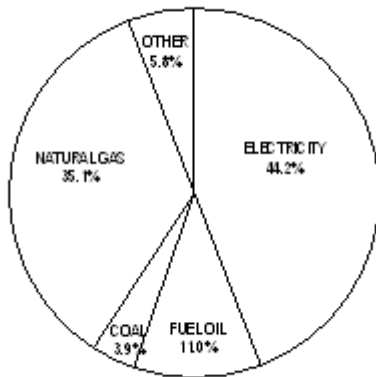
Total by Energy Type: 1.12 quads



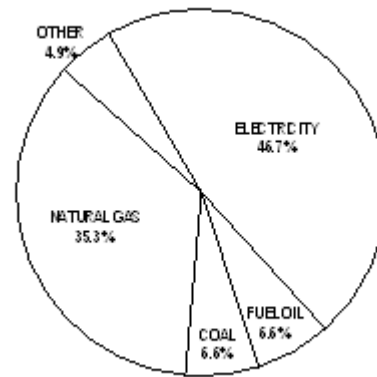
Total by Sector: 1.12 quads



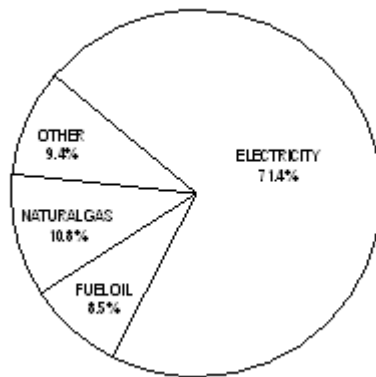
Standard Buildings: 0.32 quads



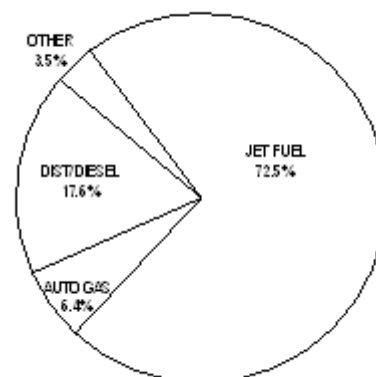
Energy Intensive Facilities: 0.06 quads



Exempt Facilities: 0.02 quads



Vehicles & Equipment: 0.71 quads



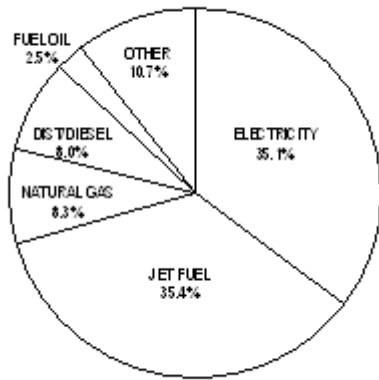
Data as of 12/01/04

Source: Federal Agency Annual Energy Management Data Reports

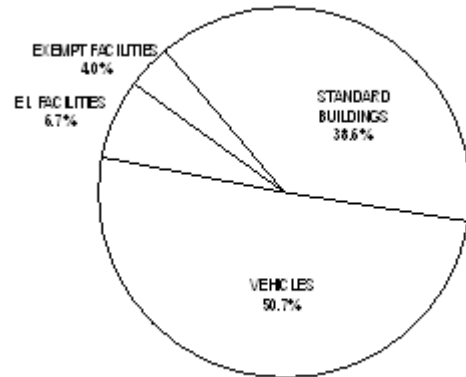
Note: Sum of components may not equal 100 percent due to independent rounding.

FIGURE 2
Federal Energy Costs, FY 2003

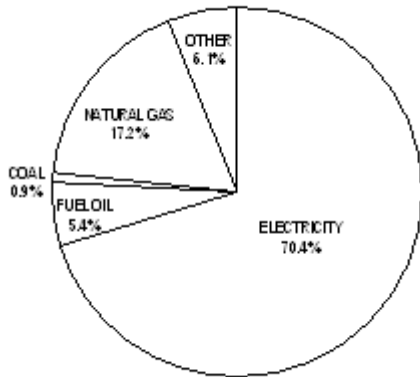
Total by Energy Type: \$9.61 Billion



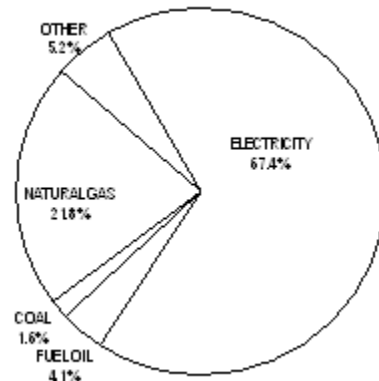
Total by Sector: \$9.61 Billion



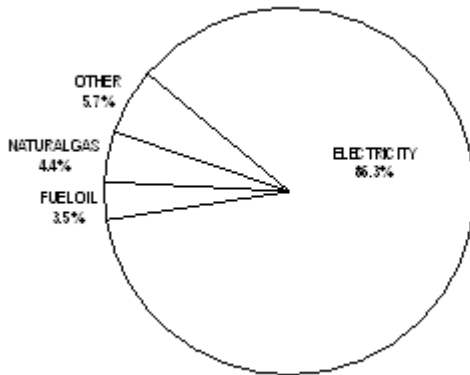
Standard Buildings: \$3.71 Billion



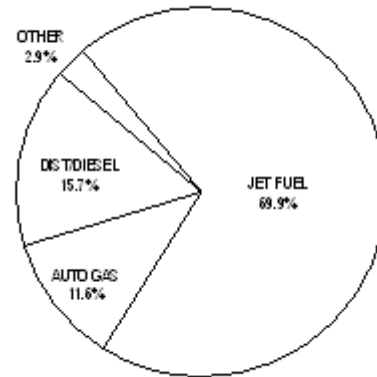
Energy Intensive Facilities: \$0.65 Billion



Exempt Facilities: \$0.39 Billion



Vehicles & Equipment: \$4.86 Billion



Data as of 12/01/04

Source: Federal Agency Annual Energy Management Data Reports

Note: Sum of components may not equal 100 percent due to independent rounding.

A. Standard Buildings

In FY 2003, the Federal Government used 320.2 trillion Btu to provide energy to 3.0 billion square feet of standard buildings space (Table 4-B). This consumption represents a 22.9 percent decrease compared to FY 1985 and a 0.9 percent increase relative to FY 2002. The significant drop from FY 1985 reflects the success of Federal energy management efforts in reducing fossil fuel use in Federal facilities. The cost of energy for buildings and facilities in FY 2003 was \$3.7 billion, a decrease of approximately \$79.5 million from FY 2002 expenditures, and a decrease of 38.8 percent from the FY 1985 expenditure of \$6.1 billion (Table 5).⁶ Of the \$3.7 billion spent for energy used in standard buildings, \$2,158.8 million was spent by DOD with the remaining \$1,553.1 million spent by the civilian agencies.

B. Industrial, Laboratory and Other Energy Intensive Facilities

In FY 2003, the Federal Government used 62.4 trillion Btu of energy in energy intensive operations, approximately 5.6 percent of the total 1.1 quads consumed. Total energy consumption in this category decreased 10.3 percent relative to FY 1990 and increased 2.0 percent relative to FY 2002 (Table 7). These changes resulted from both changes in agency activity levels and energy management efforts.

The Federal Government spent \$648.4 million on energy intensive operations in FY 2003 (Table 8), \$40.1 million less than the FY 2002 expenditure of \$608.3 million in constant dollars. Of the \$648.4 million spent for energy used in energy intensive operations, \$260.0 million was spent by the Department of Defense with the remaining \$388.4 million spent by the civilian agencies.

The industrial, laboratory, and other energy intensive facilities reported by the agencies under this category are listed at www.eere.energy.gov/femp/pdfs/eifacilities03.pdf.

C. Exempt Facilities

Nine agencies, the Departments of Defense, Energy, Health and Human Services, State, and Transportation, the National Archives and Records Administration (NARA), the National Aeronautics and Space Administration (NASA), the General Services Administration (GSA), and the Tennessee Valley Authority have chosen to exempt facilities from energy management requirements. These facilities are listed at www.eere.energy.gov/femp/pdfs/exemptfac03.pdf and include:

- Structures such as outside parking garages which consume essentially only lighting energy, yet are classed as buildings.
- Buildings where energy usage is skewed significantly due to reasons such as: buildings entering or leaving the inventory during the year, buildings down-scaled operationally to prepare for decontamination, decommissioning and disposal, and buildings undergoing major renovation and/or major asbestos removal.

⁶Cost and consumption figures for FY 1985 may be different from those published in last year's Annual Report since Federal agencies update their files and provide revisions to their data.

- Federal ships that consume “Cold Iron Energy,” (energy used to supply power and heat to ships docked in port) and airplanes or other vehicles that are supplied with utility-provided energy.
- Buildings and facilities in which it is technically infeasible to implement energy efficiency measures or where conventional performance measures are rendered meaningless by an overwhelming proportion of process-dedicated energy.

In addition, the U.S. Postal Service has reported electricity consumption used in mail processing automation under the exempt category without reporting associated facility square footage.

Energy used in exempt facilities totaled 23.3 trillion Btu in FY 2003 (Table 9), approximately 2.1 percent of the total 1.1 quads used by the Federal Government. Electricity constitutes 71.4 percent of the energy used in exempt facilities, 10.8 percent is accounted for by natural gas, and 8.5 percent by fuel oil. Small amounts of purchased steam, liquefied petroleum gas (LPG)/propane, and “other” energy account for the remaining 9.4 percent.

The energy used in exempt facilities in FY 2003 accounted for approximately 4.0 percent of the total Federal energy bill. The Federal Government spent approximately \$386.2 million for this category’s energy during the fiscal year (Table 10).

D. Vehicles and Equipment

Vehicles and equipment energy includes aircraft and naval fuels, automotive gasoline, diesel fuel consumed by Federally-owned and leased vehicles and privately-owned vehicles used for official business, and the energy used in Federal construction.

In FY 2003, the Federal Government used approximately 714.6 trillion Btu of energy in vehicles and equipment, 63.8 percent of the total 1.1 quads consumed (Table 11). Total energy consumption in vehicles and equipment decreased 23.5 percent relative to FY 1985 and was 11.3 percent greater than the FY 2002 consumption of 642.0 trillion Btu. Most of this increase is attributable to increased use of jet fuel by DOD. DOD consumed 662.1 trillion Btu or 92.7 percent of all vehicles and equipment energy used by the Federal Government.

The Federal Government spent \$4.9 billion on vehicles and equipment energy in FY 2003, \$304.0 million less than the FY 2002 expenditure, a 5.9 percent decrease in constant dollars. For all fuels, the cost per million Btu decreased from \$8.07 in FY 2002 to \$6.82 in FY 2003. The unit costs of the two most-used fuels, jet fuel and diesel/distillate fuel oil, decreased 18.6 percent and 15.9 percent respectively. Gasoline prices paid by the Government increased 13.4 percent from the previous year.

II. REQUIREMENTS OF THE NATIONAL ENERGY CONSERVATION POLICY ACT (NECPA) AND ENERGY POLICY ACT OF 1992 (EPACT)

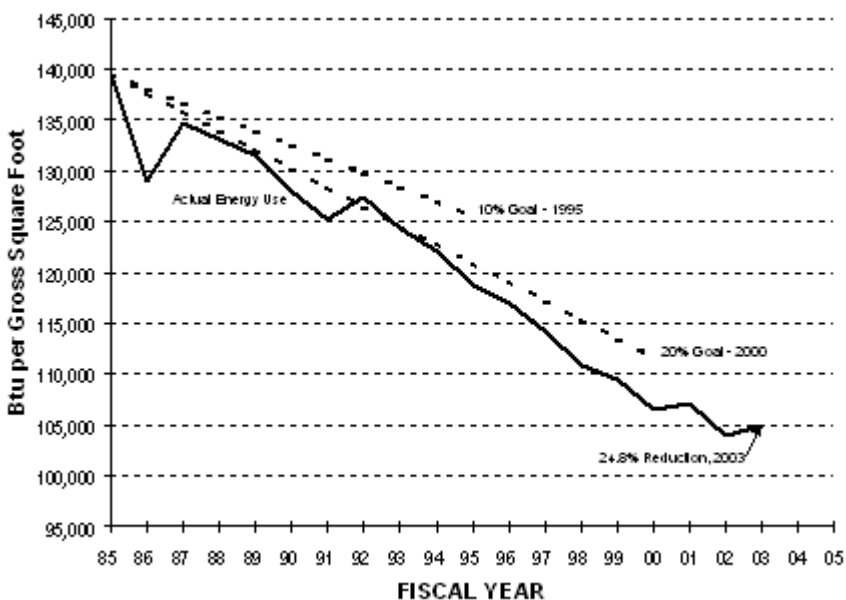
KEY REQUIREMENTS OF STATUTORY AUTHORITIES AND FY 2003 FINDINGS

Statute/Directive	Requirement	FY 2003 Findings
Section 543, NECPA, 42 U.S.C., § 8253(a)(1)	20 percent reduction (Btu/GSF) in Federal buildings by 2000 from 1985.	Federal agencies reported a 24.8 percent decrease in energy intensity of standard buildings in FY 2003, compared to FY 1985.
Section 544, NECPA, 42 U.S.C., § 8254	DOE to establish life-cycle cost methods to determine cost-effectiveness of proposed energy efficiency projects.	The 2003 edition of the energy price indices and discount factors for life-cycle cost analysis was published and distributed to Federal energy managers.
Section 545, NECPA, 42 U.S.C., § 8255	Transmit to Congress the amount of appropriations requested in each agency budget for electric and energy costs incurred in operating and maintaining facilities and for compliance with applicable statutes and directives.	Approximately \$168.9 million was appropriated and spent on energy efficiency projects in Federal facilities.
Section 546, NECPA, 42 U.S.C., § 8256(a)	Establishment of a program of incentives within Federal agencies to expedite ESPCs.	In FY 2003, 62 ESPC contracts and delivery orders were awarded under DOE Super ESPCs and other agency contracts.
Section 546, NECPA, 42 U.S.C., § 8256(b)	DOE to establish a Federal Energy Efficiency Fund to provide grants to agencies.	There have been no appropriations for the Fund since FY 1995.
Section 157, EPACT, 42 U.S.C., § 8262(c)	Federal agencies to establish and maintain programs to train energy managers and to increase the number of trained energy managers within each agency.	Federal agencies reported spending \$2.3 million to train 6,391 Federal personnel in energy efficiency, renewable energy, and water conservation subjects.

A. Agency Progress in Meeting Energy Reduction Goals

During FY 2003 agencies provided data to DOE that indicated a decrease in energy consumption per gross square foot of 24.8 percent relative to FY 1985 (Table 6-A). The Government's performance for each year since FY 1985 is illustrated in Figure 3. This reduction was the result of significant decreases in the consumption of fuel oil, natural gas, and coal. The use of non-electric fuels in Federal buildings has declined 37.8 percent since 1985, while the consumption of electricity has increased by 10.8 percent. The installation and increased use of electricity-driven electronic equipment contributed to increases in electricity through the years. Electricity now represents about 70.4 percent of the total energy costs of Federal buildings and accounts for 44.2 percent of total site-delivered energy consumption in buildings. This is compared to 30.7 percent of the total site-delivered energy consumption in buildings in FY 1985.

Figure 3
Decrease in Btu per Gross Square Foot
in Federal Standard Buildings from FY 1985



Seven agencies, the Departments of Commerce, Defense, Energy, Justice, Transportation, NASA, and the Tennessee Valley Authority have reduced energy use per gross square foot in standard buildings by more than 25 percent from 1985.

Measured in terms of primary energy, the Federal Government shows a reduction of 10.1 percent in FY 2003 compared to FY 1985 (Table 6-B). Primary energy represents the average amount of energy required at the source of generation and includes energy resources used to generate, process, and transport electricity and steam. The large difference from the site-delivered Btu/GSF reduction of 24.8 percent reflects the significant declines in direct use of fossil fuels and the offsetting increases in the share of the fuel mix contributed by electricity.

Agency efforts undertaken in FY 2003 to improve energy efficiency in buildings included:

- improvement of operations and maintenance procedures;
- implementation of no-cost, low-cost efficiency measures;
- energy-efficient building retrofits and capital improvements;
- energy awareness activities and employee training programs; and
- procurement of energy-efficient goods and products.

B. Investments in Energy Efficiency

During FY 2003, Federal agencies had three primary options for financing energy efficiency, water conservation, and renewable energy projects in buildings and facilities: direct appropriated funding, energy savings performance contracts (ESPCs), and utility energy service contracts (UESCs). Known funding from the three sources totaled approximately \$737 million in FY 2003. Direct appropriations accounted for approximately \$168.9 million. ESPC contracts awarded in FY 2003 resulted in approximately \$446.1 million in estimated contractor investment (\$251.8 million from DOE Super ESPC delivery orders and \$194.3 million from other agency ESPCs), and approximately \$121.9 million in private sector investment came from utility energy service contracts. While these three categories of funding are not entirely comparable, they do indicate that ESPCs and UESCs have become the dominant source of support for efficiency investments throughout the Federal Government. In FY 2003, direct funding identified by agencies for energy conservation retrofits and capital equipment increased 35.3 percent to \$168.9 million from \$124.8 million dollars in FY 2002.

Since 1985, The Government has invested approximately \$6.2 billion in energy efficiency, almost \$3.3 billion of which was direct appropriations and \$2.8 billion from alternative financing mechanisms (\$1.8 billion from ESPCs and \$1.0 billion from UESCs).

1. Direct Appropriations

NECPA requires each agency, in support of the President's annual budget request to Congress, to specifically set forth and identify funds requested for energy conservation measures. Table 3-A presents agency funding (in nominal dollars) reported from FY 1985 through FY 2003 for energy conservation retrofits and capital equipment. Table 3-B presents the same information in constant 2003 dollars. Reports from Federal agencies indicated that \$168.9 million was spent on retrofit expenditures in FY 2003, compared with \$124.8 million in FY 2002. In some cases, the data provided by the agencies include funding from operation and maintenance accounts that was specifically identified as contributing to energy efficiency.

DOD funded \$103.5 million for energy efficiency projects in FY 2003, an increase of 65.7 percent from the previous year (Table 3-B).

2. Energy Savings Performance Contracting

During FY 2003, 62 ESPC contracts or delivery orders were awarded at 11 agencies. These include delivery orders awarded through the DOE/FEMP Super ESPC programs as well as projects awarded by the DOD and other agencies. Contractor investment from these projects totaled approximately \$446.1 million, providing the Government with an opportunity to save more than 4.8 trillion Btu each year. These ESPCs include 34 by DOD; nine by GSA; seven by the Department of Veterans Affairs; three by the Department of Transportation (DOT); two each by the Department of Labor and NASA; and one each by the Departments of Agriculture, Commerce, Health and Human Services, Justice, and NARA.

**Energy Savings Performance Contracts and Delivery Orders Awarded
by Federal Agencies in FY 2003**

Agency	Number of Delivery Orders/ Contracts	Project Investment (Thou. \$)	Allocation of Project Cost Savings (Thousand \$)			Annual Energy Savings (MMBtu)
			Total Guaranteed Cost Savings	Payment to Contractor	Government Share of Guaranteed Cost Savings	
Defense	34	\$309,500	\$604,200	\$549,900	\$54,300	3,422,658
GSA	9	\$38,547	\$76,311	\$76,280	\$31	569,724
HHS	1	\$7,970	\$12,712	\$12,610	\$102	71,728
Labor	2	\$4,126	\$8,150	\$8,117	\$33	29,026
Commerce	1	\$5,085	\$8,690	\$8,690	\$0	45,767
Archives	1	\$6,082	\$11,735	\$11,664	\$71	18,769
NASA	2	\$1,895	\$4,362	\$4,362	\$0	20,189
DOT	3	\$6,879	\$28,018	\$27,492	\$527	61,912
VA	7	\$51,764	\$87,000	\$82,567	\$4,432	438,586
Justice	1	\$5,460	\$10,696	\$10,683	\$13	21,967
Agriculture	1	\$8,805	\$25,133	\$23,001	\$2,132	138,452
Total	62	\$446,113	\$877,007	\$815,537	\$61,640	4,838,778

Through a decentralized approach, DOD awarded the largest number of contracts/delivery orders with 34 ESPC projects in FY 2003. These contracts include many infrastructure upgrades and new equipment to help DOD installations reduce energy and water consumption. Examples include new thermal storage systems, chillers, boilers, lights, motors, energy management control systems (EMCS), and water reducing devices. Normally, cost savings are used to first pay the contractor, and then are used to offset other base operating support expenses. In some cases, however, installations decided to seek a shorter contract term and defer all Government cost savings until contract completion. In these cases, the savings generated by ESPCs help to reduce the energy consumption, but do not reduce the total cost of operation until the contracts expire. After contract expiration and the retrofits are paid for, DOD will be able to obtain full cost savings.

Thirty-nine DOE/FEMP Super ESPC delivery orders were awarded during FY 2003. Super ESPCs are broad area indefinite delivery, indefinite quantity (IDIQ) contracts that allow agencies to negotiate site-specific delivery orders with an energy service company (ESCO) under the umbrella contracts. Contractor investment totaled \$251.8 million, providing annual savings of more than 2.6 trillion Btu to the Government. These delivery orders include 13 by DOD, nine by the GSA, seven by the Department of Veterans Affairs, three by DOT, two by the Department of Labor, and one each by the Departments of Agriculture, Commerce, Health and Human Services, Justice, and NARA.

3. Utility Energy Service Contracts

In FY 2003, a total of 40 UESCs were implemented by Federal agencies. Private sector investment in the projects totaled approximately \$121.9 million. The estimated annual energy savings from the 40 projects is 763.4 billion Btu.

Projects were undertaken by agencies to accomplish a wide variety of energy efficiency improvements. Of the 40 UESCs awarded in FY 2003, 30 were implemented by the DOD. Contracts were put in place to perform infrastructure upgrades and purchase new equipment to help installations reduce energy and water consumption. Examples of equipment purchased with the UESC financing tool include: new thermal storage systems, chillers, boilers, lights, motors, EMCS systems and water reducing devices.

4. Life-Cycle Costing (LCC)

FEMP publishes updated fuel energy price indices and discount factors for life-cycle cost analyses on April 1 of each year. The most recent *Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis, Annual Supplement to Handbook 135* was published and distributed to Federal energy managers in April 2003.

A set of Building Life-Cycle Cost (BLCC) computer programs have been developed and supported by the National Institute of Standards and Technology (NIST) under FEMP sponsorship. The latest update of the BLCC5 version of the software, which incorporates the 2003 DOE/FEMP discount rate and the latest energy price projections from the Energy Information Administration, was released April 1, 2003. Version BLCC 5.1-02 includes two new modules for evaluating Military Construction (MILCON) projects. BLCC 5.1-02 now contains the following four modules for analyzing energy and water conservation and renewable energy projects:

- Analyses for Federal agency-funded projects;
- Analyses for Federal agency projects financed through energy savings performance contracts or utility energy savings contracts;
- MILCON analyses for DOD-funded projects; and
- MILCON analyses for projects under DOD's Energy Conservation Investment Program.

III. INTERAGENCY EXCHANGE OF INFORMATION

A. Federal Coordination

Federal Interagency Energy Policy Committee

The Federal Interagency Energy Policy Committee (656 Committee) did not meet in 2003. However, a meeting hosted by the Office of the Federal Environmental Executive brought together the Executive Order 13123 Senior Energy Officials in June 2003. For most agencies, the Senior Energy Official is also their 656 Committee member.

Federal Interagency Energy Management Task Force

In FY 2003, meetings of the Federal Interagency Energy Management Task Force were held on January 15, 2003; March 19, 2003; and July 30, 2003. The memoranda of record from these meetings are posted at www.eere.energy.gov/femp/about/fiemtf.cfm. Issues highlighted in the these meetings included the following:

- The importance and ranking of FEMP's various programs by constituent agencies, conducted as a multi-year planning exercise during a Task Force meeting.
- The status of proposed comprehensive energy legislation, including the reauthorization of ESPC authority.
- Agency energy management programs, opportunities, and needs.
- Assessment of Energy and Load Reduction Techniques (ALERT) assessments for managing natural gas resources.
- The Federal Energy and Water Management Awards and the Presidential Awards for Federal Energy Management Success.
- Guidance for completing annual reports and scorecards and goal crediting for source-measured energy savings (particularly in cases where site-measured energy increases).
- FEMP's technical assistance programs, workshops, and conferences related to Federal energy management.

2. Training

Many agencies have their own internal training and recognition programs. Overall, Federal agencies reported spending \$2.3 million to train 6,391 Federal personnel in energy efficiency, renewable energy, and water conservation subjects, including energy efficient product procurement and alternative financing techniques for energy and water projects.

During FY 2003, FEMP conducted 58 training workshops and symposia for more than 3,600 attendees in the efficient use and conservation of energy, water, and renewable energy in Federal facilities. FEMP workshop participation is documented in the table below.

COURSE, DATE, AND LOCATION (IF APPLICABLE)	PARTICIPANTS
Advanced Facility Energy Decision System (FEDS)	
May 22-23, 2003 (Anchorage, AK)	7
Advanced Metering for the Federal Sector	
Sept 25, 2003 (Golden, CO)	61
Building Operator Certification Courses (BOC)	
March 25, 2003; October 21, 2003 (Tacoma, Washington)	33
May 3, 2003 (Ft. Lewis)	23
June 25, 2003; December 17, 2003 (Everett, Washington)	25
Design Strategies for Low-Energy, Sustainable, Secure Buildings	
Jan 16 - Jan 17, 2003 (Washington, DC)	141
Mar 26 - Mar 27, 2003 (San Diego, CA)	29
Jun 18 - Jun 19, 2003 (Chicago, IL)	31
Distributed Generation and Combined Heat and Power for Federal Facilities	
Oct 23-24, 2002 (Boston MA)	218
March 3, 2003 (Albuquerque, NM)	13
May 13 - May 15, 2003 (Newport Beach, CA)	85
Sept 4, 2003 (Albuquerque, NM)	13
Energy Management Telecourse: Part 1a, Life-Cycle Costing - Basic	
March 4, 2003 (Teleconference)	98
Energy Management Telecourse: Part 1b, Buying Energy Efficient Products	
March 4, 2003 (This is a telecourse)	97
Energy Management Telecourse: Part 2a, Operations and Maintenance Management	
March 11, 2003 (Teleconference)	77
Energy Management Telecourse: Part 2b, Water Resource Management	
March 11, 2003 (Teleconference)	73
Energy Management Telecourse: Part 3a, Utility Energy Services Contracting	
March 18, 2003 (Teleconference)	78
Energy Management Telecourse: Part 3b, Energy Savings Performance Contracting	
March 18, 2003 (Teleconference)	75
FEMP Lights Advanced Workshop	
Oct. 21-23, 2002 (Orlando FL)	7
FEMP Lights Lighting and Health Workshop	
Oct 21-22, 2002 (Orlando, FL)	7
April 30, 2003 (Washington, DC)	32
FEMP Lights Online Course	
Fall, 2003 (http://www.femplights.com/)	71
Spring, 2003 (http://www.femplights.com)	85
Implementing Renewable Energy Projects	
Jan 28 - Jan 29, 2003 (Cocoa, FL)	15
May 20 - May 21, 2003 (Boston, MA)	11
Introduction to Facility Energy Decision System (FEDS)	
May 21, 2003 (Anchorage, AK)	7

COURSE, DATE, AND LOCATION (IF APPLICABLE)	PARTICIPANTS
Labs21 High Performance, Low Energy Laboratory Design Course	
Oct 10, 2002 (Durham, NC)	46
Oct 11, 2002 (Atlanta GA)	13
March 4th, 2003 (Chicago IL)	87
March 19, 2003 (Princeton, NJ)	34
April 2, 2003 (Pittsburgh, PA)	50
Apr 22, 2003 (San Antonio, TX)	43
May 6, 2003 (St Louis MO)	43
May 13, 2003 (Cambridge, MA)	40
May 29, 2003 (Seattle, WA)	44
May 30, 2003 (Seattle, WA)	46
Sept 26, 2003 (Whitehouse Station, NJ)	65
Life-Cycle Costing (Combined: Basic & Project-Oriented)	
Feb. 4-5, 2003 (Honolulu, HI)	15
Feb. 6-7, 2003 (Honolulu, HI)	26
Jun 18-19, 2003 (Philadelphia, PA)	21
Measurement & Verification for Super ESPC Projects	
Feb 26, 2003 (San Francisco, CA)	13
May 21, 2003 (Indianapolis, IN)	6
Jul 23, 2003 (Washington, DC)	13
Operations and Maintenance Management	
May 19-20, 2003 (Anchorage, AK)	30
Jun 10-11, 2003 (San Diego, CA)	49
Resource Efficiency Manager (REM)	
October, 2002 (San Diego, California)	51
Super ESPC	
Nov 15-16, 2002 (New Orleans, LA)	14
Feb 25 - Feb 26, 2003 (San Francisco, CA)	16
May 20 - May 21, 2003 (Indianapolis, IN)	27
Jul 22 - Jul 23, 2003 (Washington, DC)	32
Utility Energy Service Contracting	
Oct 22-23, 2002 (San Diego, CA)	17
May 28 - May 29, 2003 (Philadelphia, PA)	28
Sep 16 - Sep 17, 2003 (Chicago, IL)	15
Water Conservation Strategies for Facility Managers	
May 1, 2003 (Boise, Idaho)	22
Water Resource Management	
Apr 15-16, 2003 (Denver, CO)	25

“Energy 2003,” the energy efficiency workshop and exposition sponsored by FEMP, and co-sponsored by DOD and GSA, was held August 17-20, 2003 in Orlando, FL. The conference provided participants with opportunities to explore such topics as strategies for energy projects, selling energy projects, and alternative financing. The conference had panel discussions, an exhibit hall showcasing energy technologies, and opportunities for relationship building. More than 1,300 were in attendance and more than 182 companies exhibited at the event.

FEMP continued to offer its Training Course Locator System to assist Federal agencies in training energy managers and in meeting the requirements of the EPACT and energy-related Executive Orders. The Locator system connects those seeking particular training courses with the organizations sponsoring the courses. Locator is a Web-based application which is readily available through the Internet. During FY 2003, 271 unique visitors to Locator logged on to the Locator Web site.

3. Awards and Recognition

Outstanding accomplishments in energy efficiency and water conservation in the Federal sector were recognized with the presentation of the 2003 Federal Energy and Water Management Awards on October 29, 2003, in Washington, DC. The Awards Program is sponsored by the 656 Committee and DOE. Awards were selected from outstanding Federal energy managers and contributors who:

- Implemented proven energy efficiency, energy, and water conservation techniques;
- Developed and implemented energy-related training programs and employee energy awareness programs;
- Succeeded in receiving utility incentives, or awarding ESPC and other Federal-approved performance-based energy and water contracts;
- Made successful efforts to fulfill compliance with energy and water reduction mandates;
- Improved energy efficiency or reduction in energy costs for Federal mobile equipment including aircrafts, ships, and vehicles;
- Provided leadership in purchasing or supplying energy-efficient, renewable energy, or water-conserving products to one or more Federal agencies; and
- Demonstrated cost-beneficial landscape practices which utilize techniques that seek to minimize the adverse effects of landscaping.

Recipients of the 2003 awards were selected from 107 nominees submitted by 13 Federal agencies. There were 37 awardees representing 11 different Federal agencies. Distribution of awards among the Federal agencies for accomplishments in the previous fiscal year is indicated in the following table.

2003 Federal Energy and Water Management Awards by Group and Type

Agency	Individual	Small Group	Organization	Total	Energy Efficiency	Alternative Financing	Renewable Energy	Mobility	Water Mgmt.	Innovative Tech.	Program Imp.	Exceptional Service
Army	2		3	5	3					1		1
DOC		1		1		1						
DOE		1	2	3	2			1				
DOI		3	1	4			4					
DOT	1			1								1
GSA		2		2	1	1						
HHS			1	1							1	
Navy		2	5	7	1	2	1	3				
USAF	3	2	1	6	1	1	1		3			
USMC		1	3	4	1	2			1			
USPS	3			3		1				1	1	
TOTAL	9	12	16	37	9	8	6	4	4	2	2	2

4. Public Education Programs

DOE's Energy Efficiency and Renewable Energy Clearinghouse (EREC) provides basic, technical, and financial information on various energy efficiency and renewable energy technologies and programs. EREC's telephone number is 800-DOE-EREC (800-363-3732) and its Web site is at www.eere.energy.gov/consumerinfo. During FY 2003, the EREC staff responded to 30,372 inquiries and disseminated 311,147 publications.

DOE's Office of Energy Efficiency and Renewable Energy (EERE) hosts a Web site at www.eere.energy.gov and offers free subscriptions to the EERE Network News e-mail newsletter.

FEMP provides a Help Desk to Federal energy managers. The telephone number is 800-DOE-3732. FEMP's Web site is www.eere.energy.gov/femp.

The Energy Information Administration's National Energy Information Center (NEIC) responds to public and private sector questions on energy production, consumption, prices, resource availability, and projections of supply and demand. NEIC provides information to Federal employees and the public at www.eia.doe.gov. Electronic inquiries may be sent to infoctr@eia.doe.gov. During FY 2003, NEIC staff responded to 32,700 inquiries. The EIA web site recorded 12.2 million user sessions during FY 2003.

The Office of Scientific and Technical Information (OSTI), as part of the Office of Science, provides leadership and coordination for the DOE-wide Scientific and Technical Information Program (STIP). In this capacity, OSTI assures access by DOE, the scientific research community, academia, U.S. industry, and the public to DOE research results in support of the DOE mission. Key collections developed and maintained by OSTI on behalf of DOE include *Energy Citations Database (ECD)*, the *DOE Information Bridge*, the *E-print Network*, *Research and Development (R&D) Project Summaries*, and *EnergyFiles*. In FY 2003, approximately 11.4 million user transactions were accommodated via systems residing on OSTI servers.

The DOE public information mechanisms include several direct service programs designed to provide technical assistance to specific target groups. Two of these programs are the State Energy Program (SEP) and the Industrial Assessment Center.

SEP provides funding to States to design and implement their own energy efficiency and renewable energy programs. Formula grants are given to states using Congressionally-appropriated funds and are distributed according to a formula that depends on criteria such as the state's size and population. Special Projects grants are the second type of SEP grant. Unlike formula grants, Special Projects are funded entirely by EERE technology programs and are awarded on a competitive basis. Additional information is provided on the program Web site at www.eere.energy.gov/buildings/state_energy. In FY 2003, FEMP awarded \$485,000 in Special Project grants to six States:

- North Carolina—Renewable energy implementation and training at Federal and State park facilities.

- New York—Establish a composite value for distributed generation which would help State and Federal policy makers establish appropriate standby rates.
- Hawaii—Provide technical assistance to the Navy to conduct a combined heat and power assessment for the Pacific Missile Range Facilities, Barking Sands, Kauai, Hawaii.
- Colorado—Conduct a retro-commissioning project in three facilities of the Colorado Department of Military and Veterans Affairs.
- Virginia—Determine the technical and economic feasibility and environmental impact of a large wind turbine or turbine array at NASA’s Wallops Island facility.
- Minnesota—Continuous indoor air quality monitoring in Federal buildings for energy efficiency and homeland security.

The Office of Industrial Technology’s Industrial Assessment Center (IAC) Program provides no-cost energy, waste, and productivity assessments to help small and mid-sized manufacturers identify measures to maximize energy-efficiency, reduce waste, and improve productivity. The assessments are conducted by local teams of engineering faculty and students from 26 participating universities across the country. Additional information is provided on the program Web site at www.eere.energy.gov/industry.

**APPENDIX A
DATA TABLES**

TABLE 1-A
TOTAL PRIMARY ENERGY CONSUMPTION BY FEDERAL AGENCIES
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

CIVILIAN AGENCY	FY 1985	FY 1990	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 85-03	%Change 02-03
USPS	51,668.1	59,961.0	72,178.0	74,083.1	78,333.1	78,883.0	80,083.3	89,381.4	86,142.5	85,320.9	83,069.4	60.8	-2.6
DOE	99,122.1	91,037.3	88,949.0	89,098.0	87,044.7	71,610.4	58,006.8	72,063.0	72,277.6	72,749.9	73,761.8	-25.6	1.4
VA	43,456.9	44,918.6	47,827.9	49,377.1	50,286.4	50,957.9	51,217.7	50,557.0	52,945.1	53,074.2	55,014.6	26.6	3.7
GSA	47,962.7	38,789.3	36,830.7	37,643.8	37,873.6	37,646.5	38,637.6	42,548.1	43,216.3	42,692.2	43,628.4	-9.0	2.2
DOJ	11,112.5	11,610.3	17,366.9	21,075.6	20,527.4	25,167.3	25,138.3	30,609.8	30,476.6	28,611.5	29,810.5	168.3	4.2
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24,737.0	NA	NA
NASA	23,974.4	28,864.2	29,663.1	27,414.9	29,033.2	28,196.7	27,489.1	26,260.9	25,402.1	24,979.1	24,354.0	1.6	-2.5
HHS	10,501.4	13,337.2	12,189.6	12,825.4	14,965.7	14,954.9	14,470.5	15,980.1	16,651.8	16,499.0	17,345.9	65.2	5.1
DOT	28,959.2	28,666.3	28,971.2	32,612.7	30,842.9	32,001.4	41,881.8	41,018.6	32,503.7	30,707.3	13,522.5	-53.3	-56.0
USDA	12,266.6	14,724.3	14,359.9	14,476.2	12,639.6	13,344.7	13,022.5	12,599.8	12,198.4	11,797.3	13,383.5	9.1	13.4
DOI	11,596.7	10,969.3	10,552.2	7,622.1	10,255.0	10,213.7	11,292.7	12,041.4	14,497.5	12,999.8	12,222.4	5.4	-6.0
TRSY	4,195.5	7,372.5	8,103.5	7,548.1	9,706.7	9,220.4	9,471.3	9,976.9	9,951.4	10,257.2	8,295.7	97.7	-19.1
TVA	8,425.5	7,824.5	7,633.8	7,313.6	7,125.7	6,893.9	7,654.3	8,030.2	8,127.2	7,945.1	7,517.8	-10.8	-5.4
DOL	3,966.3	4,155.2	4,336.2	4,438.2	4,473.4	4,517.7	3,614.8	4,761.1	5,024.8	5,177.0	5,466.3	37.8	5.6
DOC	4,085.5	6,447.6	5,667.2	5,370.1	5,328.8	5,008.6	5,227.3	4,117.5	5,489.0	4,760.0	4,918.2	20.4	3.3
EPA ¹	1,776.4	1,643.0	2,311.1	2,265.3	2,306.9	2,299.6	2,545.9	2,144.7	2,477.1	2,258.1	2,480.6	39.6	9.9
ST ²	717.3	868.5	1,267.4	1,800.6	7,340.3	7,338.3	6,881.3	7,615.3	6,480.8	1,489.7	1,888.2	163.2	26.8
HUD	356.2	435.0	347.7	364.7	355.0	339.9	347.5	362.0	370.1	365.8	356.1	0.0	-2.6
OTHER*	2,250.4	5,545.6	8,574.8	11,195.3	11,978.6	9,849.6	9,611.9	9,379.2	9,278.7	11,334.8	10,762.2	378.2	-5.1
Civilian Agencies													
Subtotal	366,393.6	377,169.7	397,130.2	406,524.7	420,416.9	408,444.4	406,594.6	439,446.9	433,510.7	423,019.0	432,535.2	18.1	2.2
DOD	1,504,509.1	1,550,517.8	1,201,122.2	1,169,004.3	1,136,825.3	1,089,320.4	1,061,573.5	1,043,891.3	1,045,080.9	1,098,387.2	1,160,610.4	-22.9	5.7
Total	1,870,902.7	1,927,687.5	1,598,252.4	1,575,529.0	1,557,242.2	1,497,764.8	1,468,168.1	1,483,338.2	1,478,591.7	1,521,406.2	1,593,145.6	-14.8	4.7
MBOE	321.2	330.9	274.4	270.5	267.3	257.1	252.0	254.7	253.8	261.2	273.5		
Petajoules	1,973.7	2,033.6	1,686.1	1,662.1	1,642.8	1,580.1	1,548.9	1,564.9	1,559.9	1,605.0	1,680.7		

DATA AS OF 12/01/04

*Other includes, for certain years, CFTC, CIA, EEOC, FEMA, FTC, NARA, NSF, NRC, OPM, RRB, SSA, USIA/IBB, and FERC.

¹EPA's inventory of reportable facilities has increased from 2.1 million sq. ft. to 3.8 million sq. ft. of laboratory space between FY 1990 and FY 2003, approximately an 80 percent increase over the reporting period. EPA added 600,000 sq. ft. of laboratory space in FY 2003 alone, an 18 percent increase in EPA's laboratory space in FY 2003.

²In 1998, the State Department developed a statistical method for estimating the energy consumption in the large number of foreign buildings it owns and leases. This method was subsequently applied to estimate FY 1991 energy consumption and is now used annually to assess progress. The FY 1991 foreign building estimates were combined with domestic building data for the fiscal years 1985 and 1990, since these are base years for performance goals.

Note: This table uses a conversion factor for electricity of 11,850 Btu per kilowatt hour and 1,390 Btu per pound of steam. Agencies are listed in descending order of consumption for the current year. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 1-B
TOTAL SITE-DELIVERED ENERGY CONSUMPTION BY FEDERAL AGENCIES
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

CIVILIAN AGENCY	FY 1985	FY 1990	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 85-03	%Change 02-03
USPS	27,762.5	30,616.2	36,220.9	36,427.1	40,760.0	39,487.3	39,774.0	43,284.2	43,397.4	41,617.4	42,606.2	53.5	2.4
DOE	52,201.6	43,454.6	47,255.4	44,609.3	43,070.4	31,520.2	26,998.3	30,492.9	31,065.5	30,668.3	30,701.1	-41.2	0.1
VA	25,144.7	24,898.4	25,428.9	26,832.9	27,261.1	27,597.2	27,472.4	27,043.9	27,661.9	27,722.6	29,644.5	17.9	6.9
GSA	19,256.1	15,656.6	13,671.8	14,499.2	14,364.3	14,095.0	14,359.9	17,632.3	18,415.8	17,473.9	18,591.3	-3.5	6.4
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,334.5	NA	NA
DOJ	8,176.0	6,961.6	10,193.3	12,127.7	11,999.9	15,805.1	15,366.2	19,693.0	19,681.9	17,692.4	18,028.3	120.5	1.9
NASA	10,855.1	12,399.0	12,394.7	11,459.7	11,996.1	11,731.4	11,433.4	11,120.8	10,934.5	10,677.0	10,075.5	-7.2	-5.6
HHS	5,953.5	7,119.0	6,129.7	6,628.9	7,852.7	7,400.8	7,131.2	7,952.5	8,541.0	7,999.8	8,659.9	45.5	8.3
DOI	7,816.3	7,391.9	6,378.4	4,326.6	6,612.2	6,427.3	7,456.0	7,845.9	9,504.5	8,224.9	7,559.4	-3.3	-8.1
USDA	8,358.7	9,573.4	9,045.8	9,056.9	7,370.7	7,917.0	7,828.6	7,446.7	7,373.6	7,170.5	7,216.9	-13.7	0.6
DOT	19,568.0	18,965.2	18,688.7	19,564.1	19,125.9	18,509.8	22,570.8	21,215.6	17,810.2	18,256.8	5,618.1	-71.3	-69.2
TRSY	2,868.3	3,643.0	4,132.6	3,764.1	4,597.6	4,816.3	4,899.4	5,337.0	5,355.6	5,506.3	4,144.4	44.5	-24.7
DOL	2,385.2	2,376.0	2,385.7	2,491.5	2,490.2	2,540.4	2,048.1	2,480.7	2,671.4	2,775.1	2,964.3	24.3	6.8
TVA	2,851.9	2,605.4	2,607.3	2,547.8	2,396.9	2,295.9	2,510.1	2,921.5	2,929.4	2,824.0	2,838.2	-0.5	0.5
DOC	2,489.1	4,476.3	2,882.8	2,883.1	2,721.4	2,470.3	2,684.3	1,907.1	2,521.9	2,197.3	2,333.9	-6.2	6.2
EPA ¹	904.5	747.0	1,120.5	1,100.0	1,149.3	1,120.4	1,290.8	1,038.1	1,228.3	1,094.5	1,388.4	53.5	26.9
ST ²	246.9	302.7	437.3	653.3	2,938.8	2,934.2	3,053.1	3,379.1	2,700.7	626.6	1,033.3	318.5	64.9
HUD	116.9	140.3	131.3	140.8	137.6	126.4	129.6	144.1	149.0	148.0	144.3	23.4	-2.5
OTHER*	1,156.1	3,072.0	4,108.4	4,814.5	5,040.5	3,889.4	3,865.9	3,731.3	3,727.1	4,606.6	4,293.7	271.4	-6.8
Civilian Agencies													
Subtotal	198,111.6	194,398.5	203,213.5	203,927.7	211,885.5	200,684.4	200,872.3	214,667.0	215,669.7	207,281.9	216,176.3	9.1	4.3
DOD	1,250,613.8	1,241,655.8	926,022.9	904,456.2	880,007.7	837,115.8	810,663.0	779,055.2	787,216.4	837,525.4	904,356.1	-27.7	8.0
Total	1,448,725.4	1,436,054.3	1,129,236.4	1,108,383.9	1,091,893.2	1,037,800.2	1,011,535.3	993,722.1	1,002,886.1	1,044,807.3	1,120,532.3	-22.7	7.2
MBOE	248.7	246.5	193.9	190.3	187.4	178.2	173.7	170.6	172.2	179.4	192.4		
Petajoules	1,528.4	1,515.0	1,191.3	1,169.3	1,151.9	1,094.8	1,067.1	1,048.3	1,058.0	1,102.2	1,182.1		

DATA AS OF 12/01/04

*Other includes, for certain years, CFTC, CIA, EEOC, FEMA, FTC, NARA, NSF, NRC, OPM, RRB, SSA, USIA/IBB, and FERC.

¹EPA's inventory of reportable facilities has increased from 2.1 million sq. ft. to 3.8 million sq. ft. of laboratory space between FY 1990 and FY 2003, approximately an 80 percent increase over the reporting period. EPA added 600,000 sq. ft. of laboratory space in FY 2003 alone, an 18 percent increase in EPA's laboratory space in FY 2003.

²In 1998, the State Department developed a statistical method for estimating the energy consumption in the large number of foreign buildings it owns and leases. This method was subsequently applied to estimate FY 1991 energy consumption and is now used annually to assess progress. The FY 1991 foreign building estimates were combined with domestic building data for the fiscal years 1985 and 1990, since these are base years for performance goals.

Note: This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour and 1,000 Btu per pound of steam. Agencies are listed in descending order of consumption for the current year. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 2
FEDERAL PETROLEUM USAGE IN FY 2003
(in Thousands of Gallons, Billions of Btu,
and Petajoules [Joule x 10¹⁵])

	Unit Total (KGal)	BBTU* DOD	BBTU* Civilian	BBTU* Total	Petajoules* Total
Standard Buildings					
Fuel Oil	254,602.6	29,184.2	6,129.2	35,313.4	37.3
LPG/Propane	25,123.1	1,312.5	1,086.7	2,399.3	2.5
Energy Intensive Operations					
Fuel Oil	29,577.6	1,816.9	2,285.6	4,102.4	4.3
LPG/Propane	2,880.0	96.7	178.3	275.0	0.3
Exempt Buildings					
Fuel Oil	14,213.9	1,634.4	337.0	1,971.5	2.1
LPG/Propane	225.5	0.0	21.5	21.5	0.0
Vehicles & Equipment					
Motor Gas	366,142.7	16,466.6	29,301.2	45,767.8	48.3
Dist-Diesel & Petrol.	908,920.4	111,778.9	14,288.3	126,067.3	133.0
Aviation Gas	2,063.1	25.5	232.4	257.9	0.3
Jet Fuel	3,983,596.8	509,885.4	7,982.2	517,867.6	546.3
Navy Special	153,727.9	21,321.5	0.5	21,322.1	22.5
LPG/Propane	318.7	7.2	23.3	30.4	0.0
Other	3,325.5	2,631.0	694.5	3,325.5	3.5
Total		696,160.9	62,560.7	758,721.7	800.4

DATA AS OF 12/01/04

*Uses a conversion factor of:

95,500 Btu/gallon for LPG/propane
138,700 Btu/gallon for fuel oil, distillate-diesel & petroleum, and navy special
125,000 Btu/gallon for motor gasoline and aviation gasoline
130,000 Btu/gallon for jet fuel
947.9 Billion Btu/Petajoule

Note: FY 2003 contains estimated data for the following agencies: EEOC and FCC.
Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 3-A
 AGENCY DIRECT APPROPRIATIONS FOR ENERGY CONSERVATION RETROFITS AND CAPITAL EQUIPMENT,
 FY 1985 THROUGH FY 2003 (THOUSANDS OF NOMINAL DOLLARS)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
DOD	136,100	120,000	5,550	5,280	1,500	1,020	10,000	49,669	14,444	109,000	189,600	112,487	118,970	191,446	91,243	44,442	57,113	60,600	103,490
DOI	3,198	5,535	0	0	4,338	0	1,272	9,800	4,859	1,662	779	891	0	160	1,730	23,999	3,220	22,800	26,134
NASA	11,800	12,100	1,700	1,400	4,499	2,943	7,556	7,086	25,072	24,658	20,666	30,266	15,919	13,813	18,509	11,731	6,045	9,389	8,501
TRSY	0	0	2,977	2,393	2,823	1,134	836	0	1,344	4,826	2,810	170	2,990	1,400	1,495	2,152	4,670	8,678	7,854
GSA	6,700	6,100	2,900	9,400	4,868	11,125	30,123	37,000	30,000	37,000	7,242	7,400	20,000	0	25,000	17,000	5,000	4,500	4,800
HHS	0	0	0	427	427	427	427	0	1,813	1,915	1,271	2,676	2,879	2,200	4,793	8,440	8,640	1,771	3,700
CIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,600	0	2,770	
EPA	0	0	0	0	0	0	0	0	500	0	1,720	1,600	1,600	0	0	0	1,963	1,684	2,439
USDA	2,500	0	0	500	500	1,547	1,752	7,300	7,045	7,277	2,894	5,983	3,891	1,765	994	1,954	2,100	3,818	2,000
DHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,700
DOE	14,800	14,500	16,500	18,900	19,400	19,500	20,400	20,650	20,950	24,850	30,200	0	0	0	0	0	2,000	1,400	1,500
DOT	13,650	15,000	12,104	12,700	2,908	0	460	143	593	5,970	3,793	2,585	3,176	3,000	9,005	2,664	4,321	2,085	1,243
STATE	0	0	0	0	0	0	0	0	0	67	0	0	1,902	51	1,238	0	260	4	847
VA	13,000	11,500	9,500	9,860	5,500	11,200	9,970	10,000	12,100	9,050	11,960	3,700	7,400	13,000	10,500	0	15,000	898	686
DOC	0	0	0	0	0	0	0	872	0	51	0	0	0	330	0	257	257	1,883	621
DOJ	0	0	0	195	484	6,100	26,400	0	0	1,284	994	1,559	2,091	1,500	1,615	1,170	489	968	223
SSA	0	0	0	0	0	0	0	0	0	0	0	0	0	2,776	1,000	1,000	1,000	500	175
NARA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	68	140
HUD	0	0	0	0	0	0	0	0	43	30	43	0	2,418	0	0	0	55	22	68
RRB	0	0	0	0	0	0	0	0	16	13	33	0	38	23	0	0	35	10	15
TVA	0	0	0	0	0	0	0	0	475	844	4,277	522	1,158	1,466	1,022	284	300	0	0
NRC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	0	0
DOL	238	31	106	142	584	17	35	16	0	0	0	366	0	0	40	0	0	0	0
PCC	1,274	73	1,174	600	378	361	807	249	500	608	14	23	3	104	0	0	0	0	0
USPS	55,300	9,300	5,100	3,800	4,000	4,000	4,000	2,293	1,116	1,123	10,050	9,000	16,000	31,000	38,000	6,000	0	0	0
Total	258,560	194,139	57,611	65,597	52,209	59,374	114,038	145,078	120,870	230,228	288,346	179,228	200,435	264,034	206,184	121,093	131,302	121,077	168,906

Notes: **Bold** indicates top five primary energy users in buildings and facilities (DOD, DOE, VA, USPS, GSA). In past years, DOE also included funds for energy surveys. Does not include energy savings performance contracts and utility demand side management incentives. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 3-B
 AGENCY DIRECT APPROPRIATIONS FOR ENERGY CONSERVATION RETROFITS AND CAPITAL EQUIPMENT,
 FY 1985 THROUGH FY 2003 (THOUSANDS OF CONSTANT 2003 DOLLARS)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
DOD	233,849	199,336	8,909	8,148	2,235	1,491	14,641	70,353	19,950	144,562	245,596	140,433	142,139	219,548	100,157	47,078	60,182	62,474	103,490
DOI	5,495	9,194	0	0	6,465	0	1,862	13,881	6,712	2,204	1,009	1,112	0	183	1,899	25,423	3,393	23,505	26,134
NASA	20,275	20,100	2,729	2,160	6,705	4,303	11,063	10,037	34,630	32,703	26,769	37,785	19,019	15,841	20,317	12,427	6,370	9,679	8,501
TRSY	0	0	4,778	3,693	4,207	1,658	1,224	0	1,856	6,401	3,640	212	3,572	1,606	1,641	2,280	4,921	8,946	7,854
GSA	11,512	10,133	4,655	14,506	7,255	16,265	44,104	52,408	41,436	49,072	9,381	9,238	23,895	0	27,442	18,008	5,269	4,639	4,800
HHS	0	0	0	659	636	624	625	0	2,504	2,540	1,646	3,341	3,440	2,523	5,261	8,941	9,104	1,826	3,700
CIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,600	0	2,770
EPA	0	0	0	0	0	0	0	0	691	0	2,228	1,998	1,912	0	0	0	2,068	1,736	2,439
USDA	4,296	0	0	772	745	2,262	2,565	10,340	9,731	9,651	3,749	7,469	4,649	2,024	1,091	2,070	2,213	3,936	2,000
DHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,700
DOE	25,430	24,086	26,485	29,167	28,912	28,509	29,868	29,249	28,936	32,958	39,119	0	0	0	0	0	2,107	1,443	1,500
DOT	23,454	24,917	19,429	19,599	4,334	0	673	203	819	7,918	4,913	3,227	3,795	3,440	9,885	2,822	4,553	2,149	1,243
STATE	0	0	0	0	0	0	0	0	0	89	0	0	2,272	58	1,359	0	274	4	847
VA	22,337	19,103	15,249	15,216	8,197	16,374	14,597	14,164	16,713	12,003	15,492	4,619	8,841	14,908	11,526	0	15,806	926	686
DOC	0	0	0	0	0	0	0	1,235	0	68	0	0	0	378	0	272	271	1,941	621
DOJ	0	0	0	301	721	8,918	38,653	0	0	1,703	1,288	1,946	2,498	1,720	1,773	1,239	515	997	223
SSA	0	0	0	0	0	0	0	0	0	0	0	0	0	3,183	1,098	1,059	1,054	515	175
NARA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	70	140
HUD	0	0	0	0	0	0	0	0	59	40	56	0	2,889	0	0	0	58	23	68
RRB	0	0	0	0	0	0	0	0	23	17	43	0	45	26	0	0	37	10	15
TVA	0	0	0	0	0	0	0	0	656	1,119	5,540	652	1,384	1,681	1,122	301	316	0	0
NRC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	238	0	0
DOL	409	51	170	219	870	25	51	23	0	0	0	457	0	0	44	0	0	0	0
PCC	2,189	121	1,884	926	563	528	1,182	353	690	806	18	29	4	119	0	0	0	0	0
USPS	95,017	15,449	8,186	5,864	5,961	5,848	5,857	3,248	1,542	1,489	13,018	11,236	19,116	35,550	41,712	6,356	0	0	0
Total	444,261	322,490	92,474	101,230	77,808	86,804	166,966	205,493	166,948	305,342	373,505	223,755	239,468	302,791	226,327	128,277	138,358	124,821	168,906

Notes: **Bold** indicates top five primary energy users in buildings and facilities (DOD, DOE, VA, USPS, GSA). In past years, DOE also included funds for energy surveys. Does not include energy savings performance contracts and utility demand side management incentives. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 4-A
PRIMARY ENERGY CONSUMPTION IN FEDERAL STANDARD BUILDINGS
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

CIVILIAN AGENCY	FY 1985	FY 1990	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 85-03	%Change 02-03
USPS	40,143.9	47,824.8	57,606.8	59,866.0	54,696.6	57,068.7	58,333.5	66,217.4	62,202.1	62,145.5	60,810.9	51.5	-2.1
VA	42,864.1	44,400.3	47,474.3	48,716.5	49,087.3	49,577.6	49,880.1	49,633.7	52,031.5	52,217.8	53,840.6	25.6	3.1
DOE	48,300.5	47,636.0	44,231.2	44,087.6	41,373.4	40,680.7	39,588.4	37,938.9	39,238.3	36,880.6	37,300.2	-22.8	1.1
GSA	40,198.6	32,099.4	33,523.9	34,903.9	35,121.4	35,106.2	35,413.0	31,717.6	31,683.3	31,076.1	31,500.2	-21.6	1.4
DOJ	9,048.5	9,512.4	12,004.2	14,600.8	14,881.7	15,488.4	16,117.8	18,612.5	18,967.3	18,806.1	20,676.7	128.5	9.9
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,845.1	NA	NA
NASA	8,899.9	10,764.0	11,435.9	11,671.5	11,524.9	11,532.2	11,174.5	10,970.3	11,259.8	10,838.8	10,650.5	19.7	-1.7
DOI	8,542.8	7,616.8	7,770.1	6,274.6	7,311.3	7,533.8	7,631.3	8,202.1	9,685.2	9,690.9	9,071.2	6.2	-6.4
USDA	4,156.4	5,203.3	5,210.4	5,369.7	4,782.6	5,054.8	4,501.0	4,919.6	4,902.2	5,182.3	6,286.0	51.2	21.3
DOL	3,734.1	3,916.2	3,979.2	4,100.5	4,137.2	4,167.4	3,264.6	4,392.2	4,666.0	4,813.7	5,068.9	35.7	5.3
DOT	8,746.5	7,217.0	8,472.5	9,647.7	10,021.9	9,062.4	8,996.8	8,810.5	8,849.0	9,326.2	1,979.3	-77.4	-78.8
TVA	1,349.0	1,440.3	2,517.7	2,438.5	2,298.7	2,267.9	2,243.5	2,131.2	2,161.6	1,949.3	1,956.4	45.0	0.4
DOC	1,208.3	953.1	1,387.8	1,338.3	1,328.8	1,231.2	1,268.2	1,232.5	1,379.3	1,331.9	1,415.2	17.1	6.3
ST ¹	702.6	833.6	260.3	795.4	299.9	301.7	306.3	389.6	324.4	738.6	840.9	19.7	13.8
TRSY	1,094.9	719.9	3,822.9	3,670.7	4,890.2	4,638.7	4,680.0	1,456.8	1,504.6	1,398.9	824.6	-24.7	-41.1
HHS	677.7	734.4	593.9	586.8	573.9	538.6	524.5	582.7	590.1	576.1	614.9	-9.3	6.7
HUD	356.2	435.0	322.3	339.2	326.7	316.5	324.2	324.2	336.7	327.8	324.8	-8.8	-0.9
OTHER*	1,087.7	1,703.8	3,261.6	5,266.4	5,542.7	5,172.1	5,446.6	5,309.5	5,283.5	6,900.6	6,432.4	491.4	-6.8
Civilian Agencies													
Subtotal	221,111.6	223,010.6	243,875.0	253,674.1	248,199.0	249,738.9	249,694.1	252,841.2	255,064.7	254,201.2	260,438.7	17.8	2.5
DOD	512,581.0	587,974.8	483,052.7	459,175.5	443,225.4	434,713.1	433,321.6	426,630.8	425,948.7	423,330.2	414,841.3	-19.1	-2.0
Total	733,692.6	810,985.4	726,927.7	712,849.6	691,424.4	684,451.9	683,015.6	679,472.0	681,013.4	677,531.4	675,280.0	-8.0	-0.3
MBOE	126.0	139.2	124.8	122.4	118.7	117.5	117.3	116.6	116.9	116.3	115.9		
Petajoules	774.0	855.6	766.9	752.0	729.4	722.1	720.6	716.8	718.4	714.8	712.4		

DATA AS OF 12/01/04

*Other includes for certain years the CFTC, CIA, EEOC, FEMA, FTC, NARA, NSF, NRC, OPM, RRB, SSA, USIA/IBB, and FERC.

Note: This table uses a conversion factor for electricity of 11,850 Btu per kilowatt hour and 1,390 Btu per pound of steam. Contains estimated data for the following agencies:

FEMA (1997, 1998), FCC (1997, 1998, 1999, 2000, 2001, 2002), FTC (1997, 1998, 1999, 2000, 2001, 2002), and OPM. (1997, 1998, 1999, 2000, 2001, 2002).

Sum of components may not equal total due to independent rounding.

¹In 1998, the State Department developed a statistical method for estimating the energy consumption in the large number of foreign buildings it owns and leases. This method was subsequently applied to estimate FY 1991 energy consumption and is now used annually to assess progress. The FY 1991 foreign building estimates were combined with domestic building data for the fiscal years 1985 and 1990, since these are base years for performance goals.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 4-B
SITE-DELIVERED ENERGY CONSUMPTION IN FEDERAL STANDARD BUILDINGS
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

CIVILIAN AGENCY	FY 1985	FY 1990	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 85-03	%Change 02-03
VA	24,552.0	24,380.1	25,075.4	26,172.3	26,062.0	26,216.9	26,134.8	26,120.6	26,748.3	26,866.2	28,470.5	16.0	6.0
USPS	16,238.3	18,480.0	21,649.7	22,210.0	22,006.4	22,683.9	23,127.0	25,238.3	24,974.3	23,671.1	23,968.6	47.6	1.3
DOE	28,603.8	25,610.7	23,740.0	21,456.5	19,818.3	19,363.7	18,533.5	17,350.2	18,356.4	17,021.6	16,991.9	-40.6	-0.2
GSA	15,897.7	11,174.5	12,366.7	13,439.4	13,353.7	13,123.7	13,083.9	11,728.0	12,024.9	11,436.9	11,940.5	-24.9	4.4
DOJ	6,112.0	4,863.8	6,303.9	7,490.6	8,003.7	7,783.0	8,047.1	9,374.6	9,798.9	9,547.8	10,790.6	76.5	13.0
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,616.1	NA	NA
DOI	4,762.4	4,039.4	3,596.3	2,979.1	3,668.5	3,747.4	3,794.6	4,006.6	4,692.2	4,916.0	4,408.3	-7.4	-10.3
NASA	3,760.1	4,381.0	4,381.2	4,436.1	4,350.7	4,404.8	4,303.3	4,263.7	4,418.3	4,231.6	4,153.0	10.4	-1.9
USDA	1,953.6	2,204.9	2,083.1	2,261.3	1,996.0	2,111.1	1,901.8	2,052.5	2,070.8	2,410.8	2,631.2	34.7	9.1
DOL	2,153.0	2,137.1	2,028.8	2,153.9	2,153.9	2,190.2	1,697.9	2,111.8	2,312.5	2,411.8	2,566.9	19.2	6.4
DOT	4,614.5	3,750.4	3,669.1	4,058.0	3,959.6	3,779.5	3,828.1	3,716.4	3,913.8	3,971.4	721.6	-84.4	-81.8
TVA	402.4	427.8	748.5	728.4	665.6	658.4	650.8	617.7	626.2	565.0	565.9	40.6	0.2
DOC	540.3	399.4	494.9	490.1	457.2	429.9	449.4	437.0	471.4	442.0	509.9	-5.6	15.4
ST ¹	232.2	267.8	92.9	289.2	114.0	113.2	114.7	152.9	123.2	245.5	300.8	29.6	22.5
TRSY	426.0	396.0	1,418.3	1,484.9	1,904.4	1,741.2	1,815.0	530.0	573.0	498.0	295.5	-30.6	-40.7
HHS	253.0	273.1	201.7	204.7	200.1	188.8	184.8	212.3	219.6	200.9	236.8	-6.4	17.9
HUD	116.9	140.3	105.9	115.4	109.3	103.1	106.3	106.3	115.6	109.9	112.9	-3.5	2.7
OTHER*	406.8	660.0	1,235.8	1,929.8	2,035.7	1,911.5	1,982.6	1,946.3	1,944.9	2,592.1	2,437.9	499.3	-5.9
Civilian Agencies													
Subtotal	111,025.2	103,586.2	109,191.8	111,899.6	110,859.1	110,550.2	109,755.6	109,965.3	113,384.3	111,138.6	115,718.8	4.2	4.1
DOD	304,190.0	321,101.6	247,166.9	235,994.1	227,070.0	220,567.6	217,958.2	210,965.0	211,528.2	206,315.2	204,435.4	-32.8	-0.9
Total	415,215.2	424,687.7	356,358.8	347,893.7	337,929.1	331,117.8	327,713.8	320,930.3	324,912.5	317,453.7	320,154.2	-22.9	0.9
MBOE	71.3	72.9	61.2	59.7	58.0	56.8	56.3	55.1	55.8	54.5	55.0		
Petajoules	438.0	448.0	375.9	367.0	356.5	349.3	345.7	338.6	342.8	334.9	337.8		

DATA AS OF 12/01/04

*Other includes for certain years the CFTC, CIA, EEOC, FEMA, FTC, NARA, NSF, NRC, OPM, RRB, SSA, USIA/IBB, and FERC.

Note: This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour. Contains estimated data for the following agencies: FEMA (1997, 1998), FCC (1997, 1998, 1999, 2000, 2001, 2002), FTC (1997, 1998, 1999, 2000, 2001, 2002), and OPM. (1997, 1998, 1999, 2000, 2001, 2002).

Sum of components may not equal total due to independent rounding.

¹In 1998, the State Department developed a statistical method for estimating the energy consumption in the large number of foreign buildings it owns and leases. This method was subsequently applied to estimate FY 1991 energy consumption and is now used annually to assess progress. The FY 1991 foreign building estimates were combined with domestic building data for the fiscal years 1985 and 1990, since these are base years for performance goals.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 5
 CONSUMPTION AND COSTS OF FEDERAL BUILDINGS ENERGY
 BY FUEL TYPE IN FY 2003, FY 2002, AND FY 1985
 (Constant 2003 Dollars)

ENERGY TYPE	BILLIONS OF BTU	COST (IN MILLIONS OF DOLLARS)	COST PER MMBTU	COST PER FAMILIAR UNIT
2003				
ELECTRICITY	141,418.4	\$2,611.837	\$18.47	\$63.02/MWH
FUEL OIL	35,313.4	\$201.008	\$5.69	\$0.79/Gallon
NATURAL GAS	112,316.6	\$639.371	\$5.69	\$5.87/Thou. Cubic. Ft.
LPG/PROPANE	2,399.3	\$23.174	\$9.66	\$0.92/Gallon
COAL	12,503.5	\$32.882	\$2.63	\$64.64/Short Ton
PURCHASED STEAM	13,827.8	\$171.409	\$12.40	\$12.40/MMBtu
OTHER	2,375.2	\$32.264	\$13.58	\$13.58/MMBtu
TOTAL	320,154.2	\$3,711.945		
AVERAGE COST PER MMBTU = \$11.594				
2002				
ELECTRICITY	143,659.6	\$2,714.987	\$18.90	\$64.48/MWH
FUEL OIL	33,579.3	\$222.553	\$6.63	\$0.92/Gallon
NATURAL GAS	109,565.5	\$614.933	\$5.61	\$5.79/Thou. Cubic. Ft.
LPG/PROPANE	2,488.8	\$22.942	\$9.22	\$0.88/Gallon
COAL	13,194.8	\$34.036	\$2.58	\$63.40/Short Ton
PURCHASED STEAM	12,313.6	\$153.868	\$12.50	\$12.50/MMBtu
OTHER	2,652.2	\$28.078	\$10.59	\$10.59/MMBtu
TOTAL	317,453.7	\$3,791.397		
AVERAGE COST PER MMBTU = \$11.943				
1985				
ELECTRICITY	127,649.0	\$3,669.411	\$28.75	\$98.08/MWH
FUEL OIL	92,947.1	\$953.476	\$10.26	\$1.42/Gallon
NATURAL GAS	127,690.3	\$1,012.239	\$7.93	\$8.17/Thou. Cubic. Ft.
LPG/PROPANE	3,162.1	\$37.598	\$11.89	\$1.14/Gallon
COAL	52,380.1	\$209.045	\$3.99	\$98.10/Short Ton
PURCHASED STEAM	7,171.4	\$144.751	\$20.18	\$20.18/MMBtu
OTHER	4,215.1	\$35.208	\$8.35	\$8.35/MMBtu
TOTAL	415,215.2	\$6,061.727		
AVERAGE COST PER MMBTU = \$14.600				

DATA AS OF 12/01/04

Note: FY 2003 and FY 2002 contain estimated data for: FCC and FTC.

This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 6-A
FEDERAL STANDARD BUILDINGS SITE-DELIVERED ENERGY USE
PER GROSS SQUARE FOOT, FY 1985 AND FY 2003

	FISCAL YEAR 1985			FISCAL YEAR 2003			%CHANGE 1985-2003
	GSF (Thousands)	BTU (Billions)	BTU/GSF	GSF (Thousands)	BTU (Billions)	BTU/GSF	
VA	123,650.0	24,552.0	198,560	153,188.0	28,470.5	185,853	-6.4
USPS	189,400.0	16,238.3	85,736	353,090.5	23,968.6	67,882	-20.8
DOE †	60,457.1	28,603.8	473,126	71,264.6	16,866.9	236,681	-50.0
GSA †	189,976.9	15,897.7	83,682	173,212.9	11,880.0	68,586	-18.0
DOJ	20,768.8	6,112.0	294,289	51,981.2	10,782.6	207,433	-29.5
DOI †	54,154.4	4,762.4	87,940	55,230.7	4,405.2	79,759	-9.3
DHS	0.0	0.0	0	38,907.8	4,616.1	118,642	NA
NASA †	14,623.4	3,760.1	257,130	21,950.9	4,153.0	189,195	-26.4
USDA †	24,061.0	1,953.6	81,195	41,018.4	2,601.4	63,420	-21.9
DOL †	18,268.3	2,153.0	117,852	21,612.3	2,558.1	118,362	0.4
DOT †	32,291.1	4,614.5	142,904	7,114.6	697.0	97,972	-31.4
TVA †	4,886.6	402.4	82,357	9,391.3	561.9	59,833	-27.3
DOC †	4,522.6	540.3	119,476	5,649.5	503.0	89,030	-25.5
ST	2,597.0	232.2	89,392	1,882.5	300.8	159,794	78.8
TRSY †	4,225.0	426.0	100,830	3,587.4	290.4	80,945	-19.7
HHS	2,649.8	253.0	95,491	2,706.3	236.8	87,487	-8.4
HUD	1,432.0	116.9	81,668	1,432.0	112.9	78,817	-3.5
OTHER* †	3,172.0	406.8	128,249	14,013.6	2,417.7	172,523	34.5
Civilian Agencies							
Subtotal †	751,136.0	111,025.2	147,810	1,027,234.5	115,422.8	112,363	-24.0
DOD †	2,224,527.3	304,190.0	136,744	2,013,709.5	203,729.0	101,171	-26.0
Total †	2,975,663.3	415,215.2	139,537	3,040,944.0	319,151.8	104,952	-24.8

DATA AS OF 12/01/04

*Other includes the Federal Communications Commission, Federal Trade Commission, Federal Emergency Management Agency, National Archives and Records Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Panama Canal Commission, Railroad Retirement Board, Social Security Administration, the U.S. Information Agency, and the Federal Energy Regulatory Commission.

†Indicates that reductions were made to FY 2003 energy use and Btu/GSF (shown in italics) to reflect purchases of renewable energy. When calculating Btu/GSF, the following amounts were subtracted from agency energy use for FY 2003: DOC, 6.9 BBtu; DOD, 706.5 BBtu; DOE, 125.0 BBtu; DOI, 3.1 BBtu; DOL, 8.8 BBtu; DOT, 24.6 BBtu; GSA, 60.5 BBtu; NASA, 162.0 BBtu; TRSY, 5.1 BBtu; TVA, 4.0 BBtu; USDA, 29.8 BBtu; RRB, 0.2 BBtu; and SSA, 20.0 BBtu. RRB and SSA are included under the Other category because they lack FY 1985 baseline data.

Note: This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour.
Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 6-B
FEDERAL STANDARD BUILDINGS PRIMARY ENERGY USE
PER GROSS SQUARE FOOT, FY 1985 AND FY 2003

	FISCAL YEAR 1985			FISCAL YEAR 2003			%CHANGE 1985-2003
	GSF (Thousands)	BTU (Billions)	BTU/GSF	GSF (Thousands)	BTU (Billions)	BTU/GSF	
USPS	189,400.0	40,143.9	211,953	353,090.5	60,810.9	172,225	-18.7
VA	123,650.0	42,864.1	346,657	153,188.0	53,840.6	351,468	1.4
DOE †	60,457.1	48,300.5	798,922	71,264.6	36,866.2	517,315	-35.2
GSA †	189,976.9	40,198.6	211,597	173,212.9	31,290.0	180,645	-14.6
DOJ	20,768.8	9,048.5	435,679	51,981.2	20,676.7	397,772	-8.7
DHS	0.0	0.0	NA	38,907.8	10,845.1	278,738	NA
NASA †	14,623.4	8,899.9	608,608	21,950.9	10,650.5	485,194	-20.3
DOI †	54,154.4	8,542.8	157,748	55,230.7	9,060.3	164,044	4.0
USDA †	24,061.0	4,156.4	172,746	41,018.4	6,182.5	150,725	-12.7
DOL †	18,268.3	3,734.1	204,404	21,612.3	5,038.2	233,119	14.0
DOT †	32,291.1	8,746.5	270,863	7,114.6	1,894.0	266,210	-1.7
TVA †	4,886.6	1,349.0	276,067	9,391.3	1,942.5	206,844	-25.1
DOC †	4,522.6	1,208.3	267,167	5,649.5	1,391.2	246,244	-7.8
ST	2,597.0	702.6	270,529	1,882.5	840.9	446,694	65.1
TRSY †	4,225.0	1,094.9	259,142	3,587.4	806.8	224,905	-13.2
HHS	2,649.8	677.7	255,759	2,706.3	614.9	227,206	-11.2
HUD	1,432.0	356.2	248,708	1,432.0	324.8	226,783	-8.8
OTHER* †	3,172.0	1,087.7	342,897	15,447.9	6,362.1	411,844	20.1
Civilian Agencies							
Subtotal †	751,136.0	221,111.6	294,370	1,028,668.8	259,438.2	252,208	-14.3
DOD †	2,224,527.3	512,581.0	230,422	2,013,709.5	414,841.3	206,009	-10.6
Total †	2,975,663.3	733,692.6	246,564	3,042,378.3	674,279.5	221,629	-10.1

DATA AS OF 12/01/04

*Other includes the Federal Communications Commission, Federal Trade Commission, Federal Emergency Management Agency, National Archives and Records Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Panama Canal Commission, Railroad Retirement Board, Social Security Administration, the U.S. Information Agency, and the Federal Energy Regulatory Commission.

†Indicates that reductions were made to FY 2003 energy use and Btu/GSF (shown in italics) to reflect purchases of renewable energy. When calculating Btu/GSF, the following amounts were subtracted from agency energy use for FY 2003: DOC, 24.0 BBtu; DOD, 2,453.7 BBtu; DOE, 434.0 BBtu; DOI, 10.9 BBtu; DOL, 30.7 BBtu; DOT, 85.3 BBtu; GSA, 210.2 BBtu; NASA, 562.6 BBtu; TRSY, 17.8 BBtu; TVA, 13.9 BBtu; USDA, 103.5 BBtu; RRB, 0.7 BBtu; and SSA, 69.5 BBtu. RRB and SSA are included under the Other category because they lack FY 1985 baseline data.

Note: This table uses a conversion factor for electricity of 11,850 Btu per kilowatt hour and 1,390 Btu per pound of steam. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 7
SITE-DELIVERED ENERGY CONSUMPTION IN FEDERAL ENERGY-INTENSIVE FACILITIES
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

CIVILIAN AGENCY	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 90-03	%Change 02-03
HHS	6,845.9	5,998.0	6,578.2	6,824.1	7,170.6	5,822.6	6,405.6	7,217.7	6,764.3	6,498.6	7,138.8	7,597.8	7,612.2	7,842.5	14.6	3.0
DOE	7,507.9	6,810.1	7,445.3	7,063.0	6,878.9	6,939.1	7,262.5	7,429.3	6,415.8	2,431.6	6,663.3	5,090.0	7,242.2	7,403.5	-1.4	2.2
GSA ¹	4,354.0	746.2	677.6	994.6	1,060.2	1,213.8	961.0	890.7	849.2	1,150.8	5,093.8	5,799.4	5,453.3	5,997.6	37.8	10.0
NASA	4,142.9	3,910.8	4,012.9	3,816.2	4,070.7	3,900.6	3,535.9	3,835.6	3,897.9	3,794.5	3,585.5	3,413.9	3,382.0	3,294.7	-20.5	-2.6
USDA	2,416.2	2,133.3	1,966.3	2,166.9	2,119.3	2,141.0	2,140.8	2,221.6	2,416.5	2,589.0	2,368.5	2,826.7	2,216.1	2,209.1	-8.6	-0.3
TRSY	1,773.8	1,026.8	814.1	923.7	771.8	941.0	928.3	1,131.8	996.5	964.2	2,303.7	2,204.8	2,130.1	1,992.7	12.3	-6.4
DOC	976.6	0.0	976.6	770.8	1,110.2	1,627.4	1,823.0	1,335.2	1,332.0	1,400.4	1,315.8	1,454.6	1,395.3	1,464.1	49.9	4.9
EPA ²	747.0	822.4	839.7	894.1	943.3	1,020.9	1,023.5	1,012.1	1,022.7	1,170.2	940.3	1,118.3	979.7	1,255.3	68.1	28.1
IBB	1,406.9	850.6	828.5	796.8	861.1	878.2	936.2	1,092.2	1,020.4	951.4	951.4	951.4	1,229.6	1,033.2	-26.6	-16.0
DOJ	0.0	0.0	0.0	0.0	668.4	707.8	944.1	846.9	850.7	862.8	862.2	845.1	838.7	961.3	NA	14.6
SSA	0.0	0.0	0.0	0.0	0.0	0.0	215.5	204.7	211.4	199.1	237.5	201.9	190.6	186.1	NA	-2.4
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.1	NA	NA
FCC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	6.3	6.3	6.3	NA	0.0
Civilian Agencies Subtotal	30,361.8	22,495.2	24,333.1	24,447.8	25,855.6	25,401.6	26,395.1	27,438.7	25,777.4	22,012.8	31,466.8	31,510.2	32,751.4	33,815.5	11.4	3.2
DOD	39,209.1	56,372.1	67,913.1	41,159.3	39,781.4	37,962.6	37,260.1	35,702.3	36,588.4	32,919.0	32,280.9	28,649.8	28,459.4	28,614.5	-27.0	0.5
Total	69,570.9	78,867.3	92,246.2	65,607.1	65,637.1	63,364.2	63,655.1	63,141.0	62,365.8	54,931.8	63,747.8	60,160.0	61,210.8	62,429.9	-10.3	2.0
MBOE	11.9	13.5	15.8	11.3	11.3	10.9	10.9	10.8	10.7	9.4	10.9	10.3	10.5	10.7		
Petajoules	73.4	83.2	97.3	69.2	69.2	66.8	67.2	66.6	65.8	58.0	67.3	63.5	64.6	65.9		

DATA AS OF 12/01/04

Note: This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour. Sum of components may not equal total due to independent rounding.

¹GSA's large increase in energy reported under this category beginning in FY 2000 is a result of the agency reclassifying buildings from the standard buildings inventory for FY 1990 and FY 2000 forward without adjusting data for the intervening years.

²EPA's inventory of reportable facilities has increased from 2.1 million sq. ft. to 3.8 million sq. ft. of laboratory space between FY 1990 and FY 2003, approximately an 80 percent increase over the reporting period. EPA added 600,000 sq. ft. of laboratory space in FY 2003 alone, an 18 percent increase in EPA's laboratory space in FY 2003.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 8
CONSUMPTION AND COSTS OF FEDERAL ENERGY INTENSIVE FACILITIES ENERGY
BY FUEL TYPE IN FY 2003

ENERGY TYPE	BILLIONS OF BTU	COST (IN MILLIONS OF DOLLARS)	COST PER MMBTU	COST PER FAMILIAR UNIT
ELECTRICITY	29,128.5	\$437.111	\$15.01	\$51.20/MWH
FUEL OIL	4,102.4	\$26.413	\$6.44	\$0.89/Gallon
NATURAL GAS	22,052.7	\$141.167	\$6.40	\$6.60/Thou. Cubic. Ft.
LPG/PROPANE	275.0	\$2.424	\$8.81	\$0.84/Gallon
COAL	4,107.4	\$10.173	\$2.48	\$60.88/Short Ton
PURCHASED STEAM	2,337.7	\$25.349	\$10.84	\$10.84/MMBtu
OTHER	426.2	\$5.760	\$13.52	\$13.52/MMBtu
TOTAL	62,429.9	\$648.397		

AVERAGE COST PER MMBTU = \$10.386

DATA AS OF 12/01/04

Note: FY 2003 contains estimated data for FCC.

This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 9
ENERGY CONSUMPTION, COSTS, AND GROSS SQUARE FOOTAGE OF
FEDERAL EXEMPT FACILITIES, FY 2003

Agency	Energy Consumption		Energy Costs		Facility Gross Square Feet	
	(BBtu)	% of Agency's Total Facility Use	(\$ Million)	% of Agency's Total Facility Costs	(Thou. Sq. Ft.)	% of Agency's Total Facility Space
DOD	9,189.9	3.8%	\$146.073	5.7%	0.0	0.0%
DOE	4,888.6	16.7%	\$64.763	21.5%	10,869.2	10.2%
DOT	3,420.1	82.6%	\$75.268	86.7%	16,436.7	69.8%
GSA	572.8	3.1%	\$11.758	3.9%	13,808.8	6.7%
HHS	8.3	0.1%	\$0.143	0.2%	882.8	3.3%
NARA	578.6	100.0%	\$7.480	100.0%	3,787.6	100.0%
NASA	1,644.9	18.1%	\$21.845	18.9%	4,670.5	12.2%
ST	288.4	48.9%	\$4.982	52.8%	2,598.8	58.0%
TVA	1,253.9	66.1%	\$22.050	66.2%	19,167.9	66.2%
USPS	1,464.2	5.8%	\$31.873	6.9%	0.0	0.0%
Total	23,309.6	NA	\$386.237	NA	72,222.3	NA

DATA AS OF 12/01/04

TABLE 10
CONSUMPTION AND COSTS OF FEDERAL EXEMPT FACILITY ENERGY
BY FUEL TYPE IN FY 2003

ENERGY TYPE	BILLIONS OF BTU	COST (IN MILLIONS OF DOLLARS)	COST PER MMBTU	COST PER FAMILIAR UNIT
ELECTRICITY	16,632.1	\$333.387	\$20.04	\$68.39/MWH
FUEL OIL	1,971.5	\$13.636	\$6.92	\$0.96/Gallon
NATURAL GAS	2,517.3	\$17.093	\$6.79	\$7.00/Thou. Cubic. Ft.
LPG/PROPANE	21.5	\$0.262	\$12.18	\$1.16/Gallon
COAL	261.5	\$0.669	\$2.56	\$62.88/Short Ton
PURCHASED STEAM	1,108.5	\$11.807	\$10.65	\$10.65/MMBtu
OTHER	797.3	\$9.382	\$11.77	\$11.77/MMBtu
TOTAL	23,309.6	\$386.237		

AVERAGE COST PER MMBTU = \$16.570

DATA AS OF 12/01/04

This table uses a conversion factor for electricity of 3,412 Btu per kilowatt hour. Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 11
FEDERAL ENERGY CONSUMPTION IN VEHICLE AND EQUIPMENT OPERATIONS
(In Billions of Btu, with Conversions to Millions of Barrels of Oil Equivalent [MBOE], and Petajoules [Joule x 10¹⁵])

Civilian Agency	FY 1985	FY 1990	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	%Change 85-03	%Change 02-03
USPS	11,524.2	12,136.2	14,571.2	14,217.1	16,779.2	14,777.2	14,583.7	15,976.3	16,192.1	15,831.8	17,173.5	49.0	8.5
DHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13,625.4	NA	NA
DOJ	2,064.0	2,097.9	3,181.6	3,693.0	3,149.3	7,171.4	6,456.3	9,456.3	9,037.9	7,305.9	6,276.4	204.1	-14.1
DOI	3,053.9	3,352.5	2,782.2	1,347.5	2,943.7	2,679.9	3,661.4	3,839.3	4,812.3	3,308.9	3,151.2	3.2	-4.8
USDA	4,319.6	4,952.3	4,821.7	4,654.8	3,153.0	3,389.4	3,337.9	3,025.7	2,476.2	2,543.5	2,376.6	-45.0	-6.6
TRSY	2,155.0	1,473.2	1,773.4	1,350.9	1,561.4	2,078.6	2,120.2	2,503.3	2,577.8	2,878.3	1,856.3	-13.9	-35.5
DOT	11,957.0	12,150.8	12,193.7	12,222.9	12,347.9	10,145.0	10,870.5	11,122.9	8,739.3	10,865.9	1,476.4	-87.7	-86.4
DOE	2,882.0	2,520.4	1,841.9	1,561.0	1,971.0	1,955.6	1,444.6	1,803.4	1,714.4	1,587.0	1,417.1	-50.8	-10.7
VA	592.8	518.3	353.6	660.7	1,199.1	1,380.3	1,337.6	923.4	913.6	856.4	1,174.0	98.1	37.1
NASA	1,972.7	1,736.7	1,750.9	1,539.3	1,622.1	1,428.3	1,412.8	1,490.1	1,455.1	1,372.2	982.8	-50.2	-28.4
TVA	578.5	476.6	541.7	583.8	479.5	429.1	423.3	850.1	822.3	747.9	942.3	62.9	26.0
HHS	373.3	0.0	105.5	18.6	435.0	447.7	447.7	593.2	715.2	178.5	572.4	53.4	220.7
ST	14.8	34.9	0.0	0.0	44.7	40.9	40.9	486.4	37.1	49.4	444.2	NA	798.2
DOL	232.2	239.0	356.9	337.7	336.2	350.2	350.2	368.9	358.9	363.3	397.4	71.1	9.4
DOC	1,010.2	3,100.3	760.6	570.1	929.1	708.4	834.5	154.3	595.8	360.0	360.0	-64.4	0.0
EPA	132.3	0.0	99.6	76.5	137.2	97.7	120.6	97.9	110.0	114.8	133.1	0.6	15.9
GSA	144.1	128.1	91.3	98.8	119.9	122.2	125.2	127.0	112.7	74.9	80.3	-44.3	7.3
HUD	0.0	0.0	25.4	25.4	28.3	23.3	23.3	37.8	33.4	38.0	31.4	NA	-17.4
OTHER*	582.1	732.4	992.9	951.4	914.0	154.2	150.6	45.3	48.8	58.8	51.7	-91.1	-12.1
Civilian Agencies													
Subtotal	43,588.5	45,649.7	46,244.1	43,909.5	48,150.6	47,379.4	47,741.4	52,901.5	50,753.0	48,535.5	52,522.3	20.5	8.2
DOD	890,679.9	881,345.1	640,893.4	631,202.0	617,235.4	579,959.8	559,785.8	526,234.1	537,168.4	593,506.3	662,116.2	-25.7	11.6
Total	934,268.4	926,994.8	687,137.4	675,111.5	665,386.0	627,339.2	607,527.2	579,135.6	587,921.5	642,041.8	714,638.6	-23.5	11.3
MBOE	160.4	159.1	118.0	115.9	114.2	107.7	104.3	99.4	100.9	110.2	122.7		
Petajoules	985.6	977.9	724.9	712.2	702.0	661.8	640.9	611.0	620.2	677.3	753.9		

DATA AS OF 12/01/04

*Other includes for certain years the CFTC, CIA, FEMA, NSF, NRC, OPM, and USIA/IBB.

Note: Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 12
CONSUMPTION AND COSTS OF VEHICLE AND EQUIPMENT
ENERGY BY FUEL TYPE IN FY 2003

ENERGY TYPE	BILLIONS OF BTU	COST (IN MILLIONS OF DOLLARS)	COST PER MMBTU	COST PER FAMILIAR UNIT
AUTO GASOLINE	45,767.8	\$563.621	\$12.31	\$1.54/Gallon
DIST/DIESEL	126,067.3	\$767.107	\$6.08	\$0.84/Gallon
LPG/PROPANE	30.4	\$0.364	\$11.96	\$1.14/Gallon
AVIATION GASOLINE	257.9	\$4.377	\$16.97	\$2.12/Gallon
JET FUEL	517,867.6	\$3,406.163	\$6.58	\$0.86/Gallon
NAVY SPECIAL	21,322.1	\$124.861	\$5.86	\$0.81/Gallon
OTHER	3,325.5	\$9.844	\$2.96	\$2.96/MMBtu
TOTAL	714,638.6	4,876.336		

AVERAGE COST PER MMBTU = \$6.823

DATA AS OF 12/01/04

Note: Sum of components may not equal total due to independent rounding.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 13
FEDERAL ENERGY EXPENDITURES, FY 1985–FY 2003
(CONSTANT 2003 DOLLARS)

Year	Annual Energy Use (BBTU)	Annual Energy Cost (\$ MILLION)	Annual Energy Cost (\$/MMBTU)	Change in Energy Costs from 1985 ¹ (\$ MILLION)
<u>Standard Buildings & Facilities</u>				
1985	415,215.2	\$6,061.727	\$14.599	\$0.000
1986	443,667.3	\$6,138.889	\$13.837	\$77.162
1987	465,393.9	\$6,100.896	\$13.109	\$39.169
1988	440,381.3	\$5,521.481	\$12.538	-\$540.245
1989	437,487.3	\$5,138.720	\$11.746	-\$923.007
1990	424,687.7	\$5,602.310	\$13.192	-\$459.417
1991	394,459.0	\$5,371.132	\$13.616	-\$690.595
1992	401,667.6	\$5,048.120	\$12.568	-\$1,013.606
1993	391,492.2	\$5,270.211	\$13.462	-\$791.515
1994	373,532.2	\$4,947.247	\$13.244	-\$1,114.480
1995	356,358.8	\$4,603.218	\$12.917	-\$1,458.509
1996	347,893.7	\$4,423.026	\$12.714	-\$1,638.701
1997	337,929.1	\$4,126.149	\$12.210	-\$1,935.577
1998	331,117.8	\$3,895.772	\$11.766	-\$2,165.955
1999	327,713.8	\$3,645.753	\$11.125	-\$2,415.974
2000	320,930.3	\$3,521.440	\$10.973	-\$2,540.287
2001	324,912.5	\$4,100.929	\$12.622	-\$1,960.797
2002	317,453.7	\$3,791.397	\$11.943	-\$2,270.330
2003	320,154.2	\$3,711.945	\$11.594	-\$2,349.782
<u>Energy Intensive Facilities</u>				
1985	79,024.0	\$1,217.050	\$15.401	\$0.000
1986	20,321.6	\$443.294	\$21.814	-\$773.756
1987	24,827.5	\$412.238	\$16.604	-\$804.812
1988	55,666.3	\$818.577	\$14.705	-\$398.473
1989	52,355.4	\$638.009	\$12.186	-\$579.041
1990	69,570.9	\$948.779	\$13.638	-\$268.271
1991	78,867.3	\$1,031.567	\$13.080	-\$185.483
1992	92,246.2	\$1,153.812	\$12.508	-\$63.238
1993	65,607.1	\$756.419	\$11.530	-\$460.631
1994	65,637.1	\$714.996	\$10.893	-\$502.054
1995	63,364.2	\$650.066	\$10.259	-\$566.984
1996	63,655.1	\$671.732	\$10.553	-\$545.318
1997	63,141.0	\$656.963	\$10.405	-\$560.087
1998	62,365.8	\$575.442	\$9.227	-\$641.608
1999	54,931.8	\$525.917	\$9.574	-\$691.133
2000	63,747.8	\$584.007	\$9.161	-\$633.042
2001	60,160.0	\$665.712	\$11.066	-\$551.337
2002	61,210.8	\$608.315	\$9.938	-\$608.734
2003	62,429.9	\$648.397	\$10.386	-\$568.653

¹Changes in energy costs from 1985 should not be construed as savings resulting from Federal energy management activities. Many variables contribute to fluctuations in annual energy costs, including changes in square footage, building stock, weather, energy efficiency investments, service level, fuel mix, fuel prices, and vehicle, naval, and aircraft fleet composition. This table incorporates revisions to previously published energy consumption and cost data submitted to DOE by Federal agencies.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 13 (Continued)
 FEDERAL ENERGY EXPENDITURES, FY 1985–FY 2003
 (CONSTANT 2003 DOLLARS)

Year	Annual Energy Use (BBTU)	Annual Energy Cost (\$ MILLION)	Annual Energy Cost (\$/MMBTU)	Change in Energy Costs from 1985 ¹ (\$ MILLION)
<u>Exempt Facilities</u>				
1985	20,217.9	\$318.062	\$15.732	\$0.000
1986	17,878.5	\$267.973	\$14.989	-\$50.088
1987	17,195.9	\$252.868	\$14.705	-\$65.193
1988	17,367.6	\$244.801	\$14.095	-\$73.261
1989	14,840.0	\$233.402	\$15.728	-\$84.659
1990	14,800.8	\$255.519	\$17.264	-\$62.543
1991	17,851.3	\$321.871	\$18.031	\$3.809
1992	17,677.5	\$261.337	\$14.784	-\$56.725
1993	16,981.0	\$249.286	\$14.680	-\$68.776
1994	16,172.3	\$256.066	\$15.834	-\$61.996
1995	22,376.0	\$230.867	\$10.318	-\$87.195
1996	21,723.5	\$237.318	\$10.924	-\$80.744
1997	25,437.2	\$329.875	\$12.968	\$11.813
1998	16,977.4	\$281.195	\$16.563	-\$36.867
1999	21,362.5	\$269.783	\$12.629	-\$48.279
2000	29,908.5	\$416.390	\$13.922	\$98.328
2001	29,892.1	\$488.470	\$16.341	\$170.408
2002	24,101.0	\$426.505	\$17.697	\$108.443
2003	23,309.6	\$386.237	\$16.570	\$68.175
<u>Vehicles & Equipment</u>				
1985	934,268.4	\$10,418.368	\$11.151	\$0.000
1986	924,833.7	\$6,241.035	\$6.748	-\$4,177.333
1987	958,904.3	\$6,578.926	\$6.861	-\$3,839.442
1988	846,896.2	\$6,201.235	\$7.322	-\$4,217.133
1989	959,994.6	\$6,987.310	\$7.278	-\$3,431.058
1990	926,994.8	\$7,702.966	\$8.310	-\$2,715.401
1991	970,454.3	\$9,874.085	\$10.175	-\$544.283
1992	783,122.4	\$5,820.409	\$7.432	-\$4,597.958
1993	772,633.8	\$6,118.070	\$7.918	-\$4,300.297
1994	722,790.5	\$4,312.195	\$5.966	-\$6,106.173
1995	687,137.4	\$4,439.109	\$6.460	-\$5,979.259
1996	675,111.5	\$4,280.151	\$6.340	-\$6,138.217
1997	665,386.0	\$4,816.305	\$7.238	-\$5,602.063
1998	627,339.2	\$4,978.981	\$7.937	-\$5,439.387
1999	607,527.2	\$4,288.527	\$7.059	-\$6,129.841
2000	579,135.6	\$3,401.742	\$5.874	-\$7,016.626
2001	587,921.5	\$4,896.527	\$8.329	-\$5,521.841
2002	642,041.8	\$5,180.384	\$8.069	-\$5,237.984
2003	714,638.6	\$4,876.336	\$6.823	-\$5,542.032

¹ Changes in energy costs from 1985 should not be construed as savings resulting from Federal energy management activities. Many variables contribute to fluctuations in annual energy costs, including changes in square footage, building stock, weather, energy efficiency investments, service level, fuel mix, fuel prices, and vehicle, naval, and aircraft fleet composition. This table incorporates revisions to previously published energy consumption and cost data submitted to DOE by Federal agencies.

Source: Federal Agency Annual Energy Management Data Reports

TABLE 13 (Continued)
 FEDERAL ENERGY EXPENDITURES, FY 1985–FY 2003
 (CONSTANT 2003 DOLLARS)

Year	Annual Energy Use (BBTU)	Annual Energy Cost (\$ MILLION)	Annual Energy Cost (\$/MMBTU)	Change in Energy Costs from 1985 ¹ (\$ MILLION)
<u>Total Energy - All End-Use Sectors</u>				
1985	1,448,725.5	\$18,015.206	\$12.435	\$0.000
1986	1,406,701.1	\$13,091.191	\$9.306	-\$4,924.015
1987	1,466,321.6	\$13,344.928	\$9.101	-\$4,670.278
1988	1,360,311.4	\$12,786.094	\$9.399	-\$5,229.112
1989	1,464,677.3	\$12,997.441	\$8.874	-\$5,017.765
1990	1,436,054.2	\$14,509.575	\$10.104	-\$3,505.632
1991	1,461,631.9	\$16,598.654	\$11.356	-\$1,416.552
1992	1,294,713.7	\$12,283.678	\$9.488	-\$5,731.528
1993	1,246,714.1	\$12,393.986	\$9.941	-\$5,621.220
1994	1,178,132.1	\$10,230.504	\$8.684	-\$7,784.702
1995	1,129,236.4	\$9,923.259	\$8.788	-\$8,091.947
1996	1,108,383.8	\$9,612.227	\$8.672	-\$8,402.979
1997	1,091,893.3	\$9,929.292	\$9.094	-\$8,085.915
1998	1,037,800.2	\$9,731.389	\$9.377	-\$8,283.817
1999	1,011,535.3	\$8,729.979	\$8.630	-\$9,285.227
2000	993,722.2	\$7,923.578	\$7.974	-\$10,091.628
2001	1,002,886.1	\$10,151.639	\$10.122	-\$7,863.568
2002	1,044,807.3	\$10,006.601	\$9.577	-\$8,008.605
2003	1,120,532.3	\$9,622.915	\$8.588	-\$8,392.291

¹Changes in energy costs from 1985 should not be construed as savings resulting from Federal energy management activities. Many variables contribute to fluctuations in annual energy costs, including changes in square footage, building stock, weather, energy efficiency investments, service level, fuel mix, fuel prices, and vehicle, naval, and aircraft fleet composition. This table incorporates revisions to previously published energy consumption and cost data submitted to DOE by Federal agencies.

Source: Federal Agency Annual Energy Management Data Reports

APPENDIX B DATA COLLECTION

Standard Buildings and Facilities, Energy Intensive Facilities, and Exempt Facilities

The Federal agencies that own or control buildings are required to report the energy consumption in these buildings to FEMP by January 1 after the end of each fiscal year. The General Services Administration (GSA) reports the energy of buildings it owns and operates, including usage by other Federal agency occupants. For buildings which have been delegated by GSA to other agencies, the individual agencies are responsible for reporting the energy consumption and square footage figures.

The data shown in this report do not include leased space in buildings where the energy costs are a part of the rent and the Federal agency involved has no control over the building's energy management.

The Federal agencies submit their annual reports expressed in the following units: megawatthours of electricity; thousands of gallons of fuel oil; thousands of cubic feet of natural gas; thousands of gallons of liquefied petroleum gas (LPG) and propane; short tons of coal; billions of Btu of purchased steam; and billions of Btu of "other." DOE reviews this data for accuracy and confers with the submitting agency to clarify any apparent anomalies. The data are then entered into a computer database management program.

The tables shown in this Annual Report are expressed in billions of Btu derived from the following conversion factors:

Electricity	-	3,412 Btu/kilowatt hour
Fuel Oil	-	138,700 Btu/gallon
Natural Gas	-	1,031 Btu/cubic foot
LPG/Propane	-	95,500 Btu/gallon
Coal	-	24,580,000 Btu/short ton
Purchased Steam	-	1,000 Btu/pound

The above conversion factors for electricity and purchased steam refer to site-delivered energy (or heat content) and do not account for energy consumed in the production and delivery of energy products. Table 6 of this report accounts for primary energy use, which is the sum of the energy directly consumed by end users (site energy) and the source energy consumed in the production and delivery of energy products. Using 2002 data from EIA, a blended heat rate of 10,191 Btu/kWh was calculated for fossil and nuclear steam-electric plants. In addition to conversion losses, transmission and distribution losses (9 percent) and power plant use (5 percent) are also factored into the delivered heat content, resulting in a total source energy input for electricity of 11,850 Btu/kWh. DOE uses this conversion factor to calculate primary energy use for electricity and 1,390 Btu per pound for purchased steam.

In addition, the Federal agencies annually report to FEMP the gross square footage of their buildings and the cost of their buildings' energy.

Vehicles and Equipment

Federal agencies are required to report the energy consumption of their fleet vehicles through DOE's Federal Automotive Statistical Tool (FAST) no later than November 1 after the end of each fiscal year. Energy consumption in other types of equipment not reported through FAST is required to be reported to FEMP by January 1 after the end of each fiscal year.

The fuels used in vehicles and equipment are automotive gasoline, diesel and petroleum distillate fuels, aviation gasoline, jet fuel, navy special, liquefied petroleum gas/propane, and "other." All the fuels in this category with the exception of "other" are reported in thousands of gallons. "Other" is reported in billions of Btu.

The conversion factors for these fuels are:

Gasoline	-	125,000 Btu/gallon
Diesel-Distillate	-	138,700 Btu/gallon
Aviation Gasoline	-	125,000 Btu/gallon
Jet Fuel	-	130,000 Btu/gallon
Navy Special	-	138,700 Btu/gallon
LPG/Propane	-	95,500 Btu/gallon

This report excludes those agencies that have been unable to provide complete fiscal year consumption data prior to the publication date. All agency omissions, as well as any anomalies in the data, are indicated by footnotes on the tables or in the text of the report.

APPENDIX C ACRONYMS

Agency Acronyms

Commodity Futures Trading Commission	CFTC
Central Intelligence Agency	CIA
Department of Agriculture	USDA
Department of Commerce	DOC
Department of Defense	DOD
Department of Energy	DOE
Department of Health and Human Services	HHS
Department of Housing and Urban Development	HUD
Department of the Interior	DOI
Department of Justice	DOJ
Department of Labor	DOL
Department of State	ST
Department of Transportation	DOT
Department of the Treasury	TRSY
Department of Veterans Affairs	VA
Environmental Protection Agency	EPA
Equal Employment Opportunity Commission	EEOC
Federal Communications Commission	FCC
Federal Emergency Management Agency	FEMA
Federal Energy Regulatory Commission	FERC
Federal Trade Commission	FTC
General Services Administration	GSA
International Broadcasting Bureau	IBB
National Aeronautics and Space Administration	NASA
National Archives and Records Administration	NARA
National Science Foundation	NSF
Nuclear Regulatory Commission	NRC
Office of Personnel Management	OPM
Panama Canal Commission	PCC
Railroad Retirement Board	RRB
Social Security Administration	SSA
Tennessee Valley Authority	TVA
United States Information Agency	USIA
United States Postal Service	USPS

Other Acronyms

Assessment of Load and Energy Reduction Techniques	ALERT
Building Life-Cycle Cost	BLCC
British Thermal Unit(s)	Btu
Energy Citations Database	ECD
Energy Information Administration	EIA
Office of Energy Efficiency and Renewable Energy	EERE
Energy Management Control Systems	EMCS
Energy Policy Act of 1992	EPACT
Energy Efficiency and Renewable Energy Clearinghouse	EREC
Energy Service Company	ESCO
Energy Savings Performance Contract	ESPC
Federal Automotive Statistical Tool	FAST
Federal Energy Management Program	FEMP
Fiscal Year	FY
Gross Square Foot	GSF
Industrial Assessment Center	IAC
Indefinite-Delivery, Indefinite Quantity Contract	IDIQ
Life-Cycle Cost	LCC
Liquefied Petroleum Gas	LPG
Military Construction	MILCON
National Energy Conservation Policy Act	NECPA
National Energy Information Center	NEIC
National Institute of Standards and Technology	NIST
Office of Industrial Technologies	OIT
Office of Scientific and Technical Information	OSTI
Quadrillion British Thermal Units	Quad
Research and Development	R&D
State Energy Program	SEP
Utility Energy Service Contract	UESC
Federal Interagency Energy Policy Committee	656 Committee