

**GSA**  
**FY2002**  
**Energy Management**  
**Implementation Plan**

# Introduction:

Section 101 of Executive Order 13123, *Greening the Government through Efficient Energy Management*, charges the Federal Government, as the Nation's largest energy consumer, to significantly improve its energy management in order to save taxpayer dollars and reduce emissions that contribute to air pollution and global climate change.

The Order not only requires a reduction in emissions and improvement in energy management, it also instructs the Federal Government to provide leadership to promote energy efficiency, water conservation, the use of renewable energy products, and to help foster markets for emerging technologies.

The General Services Administration is in a unique position to meet and exceed the goals of this Order. Not only is GSA the government's largest landlord, but it also provides established programs designed to help other Federal agencies achieve their energy efficiency goals. GSA's vision is to manage utility costs by promoting optimal energy use while protecting the environment and ensuring a quality workspace for its clients.

GSA's long-term strategic goals in energy management are as follows:

- Promote responsible asset management through energy and water conservation projects and by purchasing cost-effective utilities.
- Compete effectively for the Federal market by becoming the provider of choice for utilities, utility services, and energy efficient products.
- Provide leadership by promoting energy efficiency and renewable energy in GSA buildings and products.
- Meet all of these strategic goals while excelling at customer service.

In accordance with Executive Order 13123, all Federal agencies will prepare an Annual Implementation Plan. This plan has been prepared to provide guidance to GSA facility managers, energy managers, and other decision makers on the requirements of the order and strategies to adopt and actions to take to meet these requirements.

# Goals of the Order:

*Greening the Government Through Efficient Energy Management* sets forth seven goals for the Federal Government to meet to significantly improve its energy management to save taxpayer dollars and reduce emissions that contribute to air pollution and global climate change.

These goals are:

- **Greenhouse Gases Reduction** - Through life-cycle cost-effective measures, each agency shall reduce its greenhouse gas emissions attributed to facility energy use by 30 percent by 2010 compared to such emissions levels in 1990. (Sec. 201)
- **Energy Efficiency Improvement** - Through life-cycle cost-effective measures, each agency shall reduce energy consumption per gross square foot of its facilities, excluding facilities covered in section 203 of the order, by 30 percent by 2005 and 35 percent by 2010 relative to 1985. (Sec. 202)
- **Industrial and Laboratory Facilities** - Through life-cycle cost-effective measures, each agency shall reduce energy consumption in Industrial and Laboratory Facilities per gross square foot, per unit of production, or per other unit as applicable by 20 percent by 2005 and by 25 percent by 2010 relative to 1990. (Sec. 203)
- **Renewable Energy** - Each agency shall strive to expand the use of renewable energy within its facilities and in its activities by implementing renewable energy projects and by purchasing electricity from renewable energy sources. In support of the Million Solar Roofs initiative, the Federal Government shall strive to install 2,000 solar energy systems at Federal facilities by the end of 2000, and 20,000 solar energy systems at Federal facilities by 2010. (Sec. 204)
- **Petroleum** - Through life-cycle cost-effective measures, each agency shall reduce the use of petroleum within its facilities. Agencies may accomplish this reduction by switching to a less greenhouse gas-intensive, nonpetroleum energy source, such as natural gas or renewable energy sources; by eliminating unnecessary fuel use; or by other appropriate methods. (Sec. 205)
- **Source Energy** - The Federal Government shall strive to reduce total energy use and associated greenhouse gas and other air emissions, as measured at the source. To that end, agencies shall undertake life-cycle cost-effective projects in which source energy decreases, even if site energy use increases. (Sec. 206)
- **Water Conservation** - Through life-cycle cost-effective measures, agencies shall reduce water consumption and associated energy use in their facilities to reach the goals set under Sec. 503(f) of this order. Where possible, water cost savings and associated energy cost savings shall be included in Energy-Savings Performance Contracts and other financing mechanisms. (Sec. 207)

This Implementation Plan sets forth how GSA will meet these broad energy and water management goals in its own facilities, and as a leader providing support for other agencies in FY 2002. Each energy management strategy found in Section 400 of the order is addressed.

## **ATTACHMENT 5**

In general, GSA intends to meet the goals of this order by implementing the following broad strategies, with more specific measures to be taken detailed in the following section:

- Implement cost-effective energy conservation projects with direct appropriations and alternative financing through the GSA Utility Areawide Contracts, Energy Management Services exhibits, and energy savings performance contracts, and by providing schedules to procure energy efficient products and services.
- Implement water conservation best management practices to achieve water efficiency.
- Promote energy renewable technology by purchasing renewable power for GSA and other agencies and by implementing renewable energy projects.
- Integrate energy efficiency and water conservation throughout agency program offices.
- Develop cross-cutting measures to link environment and energy goals to program goals.
- Increase the weight of energy criteria in the Capital Planning Process. Include funds required to meet energy goals in all initial project estimates developed this fiscal year.
- Develop comprehensive plan for emergency energy reduction measures and customize for appropriate facilities across the country.

# I. Management and Administration:

## A. Energy Management Infrastructure

Per section 304 of the Order, GSA created the position of Energy Executive to ensure the effective integration of GSA's various activities and initiatives related to an energy and water conservation program. Paul Lynch, Assistant Commissioner for Business Performance, has been designated GSA's Senior Official responsible for meeting the goals and requirements of the Order.

The primary role of the Energy Executive is that of coordinator and facilitator to ensure that there is a single focal point knowledgeable of the numerous energy conservation programs in place and planned across GSA. The Energy Executive is assisted by a National Energy Coordinator and a technical support team (National Energy Team) consisting of procurement, legal, budget, management, and technical representatives to expedite and encourage the agency's use of appropriations, Energy-Savings Performance Contracts, other alternative financing mechanisms and other initiatives designed to improve performance under the Order.

Specific responsibilities of the Energy Executive include the following:

- Serves as chair of the National Energy Team (NET), coordinating overall agency-wide energy guidance development.
- Through the NET, facilitates the development of the Implementation Plan to meet the goals set by Executive Order 13123.
- Fosters markets for emerging energy technologies.
- Monitors energy program implementation and reports accomplishments and other program management information to the Administrator and senior agency managers.
- Recommends, after consultation with the Services and Staff Offices, any additional representation that may be needed on interagency teams, task groups, and other informal or ad hoc bodies tasked with general energy program objectives.
- Coordinates the development of agency reports required by Executive Order 13123.
- Serves as GSA's Senior Agency Energy Official and is a member of the Interagency Energy Policy Committee responsible for encouraging implementation of energy efficiency policies and practices.
- Represents GSA at various energy functions, such as the White House Energy Conference.

The Energy Executive relies on the NET to develop and implement the various activities and initiatives undertaken by GSA to meet the goals of the Order. The members of this team are listed in the following table.

## ***GSA's National Energy Team***

<b>Team Member</b>	<b>Program</b>	<b>Phone</b>
	Management	(202) 708-9296
Rich Butterworth	Legal	(202) 501-4436
Tom Daily	Federal Supply Service	(703) 305-5149
Wendell Garner	Federal Supply Service	(703) 305-5896
Laura Smith	Procurement	(202) 501-1224
Steve Kulenguski	Budget	(202) 501-4496
Claudia Davis	Federal Technology Service	(703) 306-6110
Mark Ewing	National Coordinator for Energy	(202) 708-9296
Debra Yap	Environmental Management	(202) 501-0376
Hap Connors	Communications	(202) 501-0705
Dave Eakin	Building Construction/Design	(202) 501-1726
Bill Matthews	Portfolio Management	(202) 501-1430
Ken Holstom	Lease Acquisition	(202) 219-1083

## **B. Management Tools**

To reach the goals of the Order, GSA will use a variety of management strategies (Sec. 406), including:

- Awards - employee incentive programs to reward exceptional performance in implementing this order
- Performance Evaluations - include successful implementation of strategies of this order (e.g., energy savings performance contracts, sustainable design, energy efficient procurement, etc.) in the position descriptions and performance evaluations of agency heads, members of the agency energy team, principal program managers, heads of field offices, facility managers, energy managers, and other appropriate employees
- Retention of Savings and Rebates - permit the retention of savings from efficient energy and water management at the facility or site where the savings occur
- Training and Education - ensure that all appropriate personnel receive training for implementing this order
- Showcase Facilities - construct or renovate exemplary facilities to be designated Showcase Facilities

Actions taken to manage and measure government performance are applicable to every goal stated by the order.

GSA will take the following actions to implement these management tools:

- Integrate energy efficiency throughout GSA through employee incentive programs. Make energy efficiency decisions made by GSA facility personnel part of the annual performance review process: immediate, gratification, serviceability.
- Implement employee incentive program to reward measurable improvement in energy efficiency of building design, mechanical system design, building repairs/retrofits, building equipment, office

equipment, and telecommunications equipment, as well as reduction in operations and maintenance costs and in connected load (through tenant awareness).

Incentives to include:

- Team Awards
  - Individual Awards
  - Gainsharing
  - “Bonuses” based on cost savings (space upgrades, recognition of key personnel, building celebrations)
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- Implement strategic marketing plan for internal and external customers, including stakeholders within GSA, the White House, and Congress.
  - Conduct five Inter-governmental workshops annually and display GSA Energy Center booth at two nationwide energy conventions.
  - Partner with other Federal agency programs and develop strategic alliances with private sector organizations by participating in Public/Private Advisory Committee established in Executive Order 13123.
  - Participate in all FEMP Executive Order working groups.
  - Provide training in life-cycle cost analysis (discussed under Life-Cycle Cost Analysis strategy).
  - Circulate a brief training presentation, and website on implementing the strategies of Executive Order 13123 and President Bush’s May 3 Memorandum.
  - Pursue design and construction methods that result in GSA facilities achieving external recognition for meeting environmental criteria consistent with Energy Star labels and LEEDS silver ratings.
  - GSA will be nominating the FDA campus at White Oak to be a Showcase facility for FY2002. The original design was based on normal A/E practices, geared more to maximizing space than minimizing operating and life-cycle costs. The National Capital Region is working with a Super ESPC contractor (SEMPRA) to improve the efficiency and cost effectiveness of this multi-use space (offices, labs, animal areas, etc.) while retaining tenant requirements. The GSA will be installing cogeneration equipment, so that the campus will be largely independent of the electric power grid (using it as a back up) while recovering the heat from electricity generation to use for process and heating needs. The costs of improvements beyond the original design will be recovered through the energy savings these improvements generate.

## **II. Implementation Strategies**

Executive Order 13123 provides GSA with a number of strategies to adopt to meet the goals of the order and promote Federal leadership in energy management. In this section, each strategy is summarized, followed by how the particular strategy works to meet the goals of the order, what actions GSA is taking or plans to take to implement the strategy, and how performance and progress towards meeting the strategy will be measured.

### **A. Strategy: Utilize Life-Cycle Cost Analysis in**

## Decision Making

Executive Order 13123 requires GSA to use life-cycle cost analysis in making decisions about its investments in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption.

Where appropriate, GSA will consider the life-cycle costs of combinations of projects, particularly to encourage bundling of energy efficiency projects with renewable energy projects. GSA will also retire inefficient equipment on an accelerated basis where replacement results in lower life-cycle costs.

Actions taken to improve life-cycle cost analysis are applicable to every goal stated by the Order.

GSA will take the following actions to implement this strategy:

- Utilize life-cycle cost analysis in making decisions about investments in products, services, and construction.
- Collaborate with the Department of Energy and National Institute of Standards and Technology to establish guidance and ensure appropriate GSA personnel receive training in life-cycle cost analysis.
- GSA's Energy Center of Expertise will issue a FY 2002 life-cycle cost analysis training schedule offered by Federal Energy Management Program.
- GSA's Energy Center of Expertise will fund travel for selected GSA personnel to attend FEMP life-cycle cost analysis training classes.
- GSA's Energy Center of Expertise will continue to request project submissions from the Regions for funding for energy and water conservation projects. In general for projects to be approved, they must have at least a 10 year Simple Payback. The ECOE maintains a database of unfunded projects for consideration for funding as it becomes available.

## B. Strategy: Perform Facility Energy Audits

GSA will continue to conduct energy and water audits for approximately 10 percent of its facilities each year, either independently or through Energy-Savings Performance Contracts or utility energy-efficiency service contracts. (Sec. 402)

The Facility Energy Audits strategy helps reach the following goals: Greenhouse Gases Reduction, Energy Efficiency Improvement, Industrial and Laboratory Facilities, Water Conservation.

The prioritization criteria for audits in most areas will be high energy usage, coordination with other GSA studies programmed, low scoring facilities for Energy Star Bldg Label, and meeting the audit cycle requirements.

GSA will incorporate identification of load reduction measures appropriate to facility into the scope of the energy audits.

Actions taken to perform facility energy audits are applicable to the Energy Efficiency Improvement goal of this order to reduce energy by 35 percent by 2010, as well as the Water Conservation goal.

GSA will take the following actions to implement this strategy:

- Continue GSA's established procedure of conducting facility energy audits at approximately 10 percent of all GSA facilities each year.
- Promote implementation of cost-effective energy conservation projects with direct appropriations and alternative financing through the GSA Utility Areawide Contracts, Energy Management Services exhibits, and energy savings performance contracts, and by providing schedules to procure energy efficient products and services.
- Continue to expand the number of contractors on the Federal Supply Schedule for Energy Mgmt Services qualified to perform energy audit services.

### **C. Strategy: Financing Mechanisms**

- Maximize use of alternative financing contract mechanisms to reduce energy use and cost by publicizing GSA's established programs and providing guidance on how to use these programs.
- Promote a guide to help GSA and other agency facility managers understand and implement the Authorization to provide Energy Management Services, part of GSA's Utility Areawide Contract. By using the Energy Management Services Authorization, GSA and other agency facility managers can finance their energy and water management projects in a method similar to energy-savings performance contracts. GSA will publish and publicize (in hardcopy and on the Internet) a guide to explain this approach to energy management project financing.
- Through publicity and education, GSA will strive to increase the use of the Energy Management Services Authorization of the Utility Areawide Contract by 25% by the year 2005.
- GSA Energy Center of Expertise will sponsor and provide annual workshops to discuss concerns and guidance on use of financing mechanisms on GSA projects.
- GSA currently plans on awarding 13 ESPC contracts in FY2002 and 1 UESC.

### **D. ENERGY STAR<sup>7</sup> and Other Energy Efficient Products**

- Implement GSA directives that require Program Offices to buy, specify, and install ENERGY STAR<sup>a</sup> and other energy efficient products as designated by EPA and DOE, where life-cycle cost effective.
- Revise GSA guide specifications and project specifications developed for new construction and renovation to require the acquisition of ENERGY STAR<sup>a</sup> and other energy efficient products.
- Revise product specification language for GSA Basic Ordering Agreements, Areawide Contracts, and other procurement approaches to include the requirement to purchase ENERGY STAR<sup>a</sup> and other energy efficient products.
- Clearly identify ENERGY STAR<sup>a</sup> and other energy efficient products offered by GSA in both print and electronic formats.
- Develop a plan for bulk purchases of energy products.

- Undertake a pilot project, with assistance from EPA and DOE, to assess the impact of providing Federal buyers with a “second price tag” that includes the operating and purchase costs for a select group of energy using products.
- Promote the use of the GSA FSS Schedules Program as a primary source for acquiring energy management services, and ENERGY STAR<sup>®</sup> and other energy efficient products.
- Encourage FTS and PBS personnel to use *GSA Advantage!* ([www.gsaadvantage.gov](http://www.gsaadvantage.gov)), the FSS Environmental Programs website ([www.fss.gsa.gov/enviro](http://www.fss.gsa.gov/enviro)), and the Markettips and other relevant FSS publications to locate and purchase ENERGY STAR<sup>®</sup> and other energy efficient products.
- Use Internet-based tools to assist GSA customers with purchasing ENERGY STAR<sup>®</sup> and other energy efficient products.
- Partner with the EPA ENERGY STAR<sup>®</sup> Program and the DOE Federal Energy Management Program to educate and train GSA credit card users on purchasing energy efficient products.

## **E. Strategy: ENERGY STAR<sup>7</sup> Buildings**

- Strive to meet the ENERGY STAR<sup>®</sup> Building criteria for energy performance and indoor air quality to the maximum extent practicable by the end of 2005.
- Integrate ENERGY STAR<sup>®</sup> Buildings tools into energy and water auditing as a performance measure.
- Achieve Energy Star Building Label for 15 additional facilities in FY2002. This will bring the total number of labeled buildings to 16% of eligible facilities.

## **F. Sustainable Building Design**

- Incorporate sustainable design principles into the planning, design, construction, and operation and maintenance of GSA buildings.
- Incorporate sustainable design criteria into all guide specifications, facilities standards, and other construction requirements for new construction and renovation.
- Promote the Whole Building Design Guide website ([www.wbdg.org](http://www.wbdg.org)) as guidance for Federal agencies in implementing sustainable design, as presented to FEMP.

## **G. Energy Efficiency in Lease Provisions**

- Utilize lease provisions that encourage energy efficiency and sustainable design.
- Continue to incorporate language encouraging sustainable design, energy efficiency, and verification of building performance to lease solicitations involving new construction.

## **H. Industrial Facility Efficiency Improvements**

- Where applicable, apply the strategies set forth in this implementation plan to explore efficiency opportunities in industrial facilities for steam systems, boiler operation, air compressor systems,

industrial processes, and fuel switching, as well as opportunities in cogeneration and other efficiency and renewable energy technologies.

## **I. Highly Efficient Systems**

- Implement district energy systems and other highly efficient systems in new construction or retrofit projects when life-cycle cost effective.
- Advise facility managers to consider combined cooling, heat, and power (when life-cycle cost-effective) when assessing and upgrading facility power needs.
- Survey local natural resources to optimize use of available biomass, bioenergy, geothermal, and other renewable or naturally occurring energy sources.

## **J. Off-Grid Generation**

- Continue Energy Center of Expertise funding of energy projects utilizing off-grid technologies such as solar, fuel cells, geothermal, etc. to encourage the utilization of off-grid generation systems.

## **K. Electrical Load Reduction Measures**

- Continue to establish and implement electricity emergency load reduction plans on an individual building basis.
- Evaluate GSA Energy Center of Expertise Tactical Curtailment plan to determine the effectiveness and appropriateness of a number of specific actions implemented in CA and nationwide to provide convincing leadership in this area.
- Continue to look for opportunities to improve GSA's load management capabilities under deregulation of the electricity industry.
- Evaluate pilot metering programs to determine minimum level of technology capability needed for optimal results.

## **L. Water Conservation**

Executive Order 13123 requires water efficiency improvement goals for Federal agencies, suggesting specific strategies that include development of a water management plan and adoption of at least four of the following FEMP Water Efficiency Improvement Best Management Practices.

The BMPs range from system-related (boiler/steam, cooling tower, faucets and showerheads, etc.) to reuse/recycling and public information and education programs.

GSA will implement these goals in 5 percent of its facilities by 2002 through its existing water management program, which incorporates the following actions:

- Implement the water management best practices as issued by the Federal Energy Management Program water management working group, and as described in the updated *GSA Water Management Guide*.
- Work with agencies to meet the water consumption reduction goal for those facilities for which GSA has delegated operations and maintenance authority.

## **ATTACHMENT 5**

- Include water cost savings in energy savings performance contracts and Utility Areawide Contracts
- Market Utility Areawide contract to local water companies for implementation of financed water conservation projects.
- Continue conducting energy and water audits at approximately 10 percent of GSA facilities annually.
- Implement landscaping practices described in Executive Order 13148, *Greening the Government through Leadership in Environmental Management*.