strategic energy management plan

General Services Administration
Region 10, Northwest/Arctic Region
Auburn, Washington
the mission of the General Services Administration is to help federal agencies better serve the public by offering, at best value, superior workplaces and expert solutions, acquisition services, and management policies.

our vision as staff of GSA’s Northwest/Arctic Region is to serve as strategic real estate advisors who provide superior, sustainable workspace solutions that exceed customer expectations, enhance worker productivity, and reflect our understanding of client needs while providing environmental leadership within the communities we serve.

our core values are “SAIL ON” which stands for Support, Accountability, Integrity, Loyalty and trust, Ownership/commitment, and Nurture a fun workplace.
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Planners incorporated sustainable features in the Border Crossing Station in Oroville, Washington

About the cover: Photo of Mendenhall Glacier across Gastineau Channel near Juneau, Alaska
(Susan Sczepanski, National Renewable Energy Laboratory, PIX 13447)
Planners incorporated sustainable features in the Border Crossing Station in Oroville, Washington

About the cover: Photo of Mendenhall Glacier across Gastineau Channel near Juneau, Alaska
(Susan Sczepanski, National Renewable Energy Laboratory, PIX 13447)
We are in the business of providing workplace solutions to thousands of federal employees. Because of the large volume of our business, we have the ability to influence markets with our informed decisions regarding the use of energy-efficient practices, sustainable design, renewable power purchases, and other sustainability practices.

To meet the objectives of our Strategic Energy Management Plan, we must consistently integrate the guidance in our plan with our daily operations. In our purchasing decisions, we must consider energy efficiency, renewable energy, recycled products, and other sustainable options. We will give attention to Leadership in Energy and Environmental Design (LEED), sustainability, building commissioning, and other energy and resource conserving practices. These are piers in the foundation of energy efficient building design and operation.

It is true that federal Executive Orders and the Energy Policy Act mandate the goals you will find contained in this plan. However, it is up to each of us to work to achieve these goals. Every associate in our workforce makes business and personal decisions throughout the day that can advance sustainable principles. I ask that each of you make a personal commitment to carry out our plan.

Sincerely,

[Signature]
Robin G. Graf
Assistant Regional Administrator

The Federal Supply Service will actively support the Strategic Energy Management Plan through our Multiple Award Schedules program. Our schedules provide, at best value, a source for virtually every commercial product or service you may need. The Energy Services Schedule 871 II and Environmental Services Schedule 899 can deliver a variety of comprehensive solutions that could assist with the implementation of this plan. These schedules provide access to contractors for energy audits, resource efficiency management, use of alternative and renewable energy sources, building commissioning, recycling and disposal, remediation and more. We stand behind our commitment to provide what you need.

Our GSA Fleet provides quality Alternative Fuel Vehicles (AFVs) to assist Customer Agencies in meeting The Energy Policy Act (EPACT) of 1992 and Executive Order 13149 which mandates federal agencies to acquire Alternative Fuel Vehicles (AFVs) and to reduce fuel consumption. GSA Fleet also actively promotes and educates on the merits of the alternative fuels vehicle program through sponsoring local seminars and focus groups. GSA partners with State and local Governments as well as private industry in promoting the use of Alternative Fuels through the Clean Cities Coalitions.

[Gary D. Casteele]
Assistant Regional Administrator
Federal Supply Service
Federal Technology Service
introduction

Our **strategic energy management plan (SEMP)** will help us to fulfill both the General Services Administration (GSA) mission and our regional vision of better serving the public by exceeding expectations. It will allow us to reach beyond the government mandates and become environmental leaders in our communities of the beautiful Northwest and Arctic regions of the United States. We developed this SEMP specifically for GSA Region 10 to create a custom roadmap for making smart financial and thoughtful environmental decisions about sustainable and energy-saving practices at our facilities in Alaska, Idaho, Oregon, and Washington.

This plan is a work in progress. We will review it every two to three years to refine it as a valuable tool that will help us implement sustainable energy management practices. Your input is welcome and needed to further craft our SEMP, so it helps each of us contribute to a sustainable future.

Using the SEMP

The SEMP is both a guide and workbook. It describes how we intend to implement our plan and how it will be improved. Whether facilities are leased or owned, new or old, this plan will help operations managers, design teams, and others accomplish energy goals and balance costs.

The SEMP provides the strategies, best practices, and tools we can use to meet the objectives outlined in this section. It also contains resources, strategies, and a variety of information on energy management practices and policies.
### Objectives in the Northwest/Arctic Region

<table>
<thead>
<tr>
<th>Objectives</th>
<th>To achieve our objectives we will . . .</th>
</tr>
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<tbody>
<tr>
<td>Improve asset value and reduce operating costs</td>
<td>Maintain a portfolio of efficient, sustainable workspaces with comfort conditions that enhance productivity, meet customer needs, and achieve financial objectives.</td>
</tr>
<tr>
<td>Ensure focus on sustainability in facility design, renovation, and construction</td>
<td>Enhance, support, and guide regional processes to ensure that new and renovated facilities are designed, constructed, commissioned, and operated with energy and water sustainability in mind.</td>
</tr>
<tr>
<td>Install renewable systems and procure renewable source energy</td>
<td>Seek to influence the movement of government agencies toward renewable energy sources by installing renewable systems and procuring energy from renewable sources, as well as leveraging our buying power to obtain the best pricing available in the market.</td>
</tr>
<tr>
<td>Strengthen energy security</td>
<td>Install on-site generation for reliable and secure energy and power (life-cycle cost-effective when feasible); consistently implement demand reduction and energy conservation measures at our facilities.</td>
</tr>
<tr>
<td>Provide education</td>
<td>Educate and involve tenants, employees, and visitors in our energy conservation efforts through awareness campaigns and other communication so they can make informed choices that have positive environmental results.</td>
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### Regional Goals

1. **Provide best value for customer agencies and taxpayers** by establishing strategic and tactical partnerships with customers, comparing costs with the private sector, and measuring customer satisfaction.

2. **Achieve responsible asset management** by diligently and fully implementing the “Family of Plans,” deriving maximum benefit from the Public Buildings Service (PBS) inventory, and implementing the National Portfolio Strategy.

3. **Operate efficiently and effectively** by applying results-oriented business measures, sharing best practices, evaluating the organization to ensure optimum support, managing operating costs, and improving project delivery for revenue start.

4. **Ensure financial accountability** by establishing financial targets and measures, maximizing funds from operations, and maintaining accurate financial data.

5. **Maintain a world-class workforce and a world-class workplace** by promoting associate engagement and development, succession planning, and a world-class workplace in conjunction with PBS’s national Human Capital Strategy.

6. **Carry out social, environmental, and other responsibilities as a federal government agency** by maintaining an active child care program, supporting the Good Neighbor Program, promoting “green” programs, conserving energy, and meeting Procurement Preference Program goals.
Progress toward Our Energy Goals

In the GSA Northwest/Arctic Region, we intend to continue our steady progress in reducing Btu-per-gross-square-foot energy consumption in our buildings. We are also working to meet our regional energy goals. The energy performance graph shows our progress as of September 2004. It compares Region 10’s energy consumption progress with that of other GSA regions and with GSA as a whole. For these comparisons, FY1985 data are used for the baseline.
Facility Operations

GSA Northwest/Arctic Region facilities include a variety of federally owned and leased buildings. Our inventory consists of office buildings, courthouses, border stations, warehouses, laboratory space, and child care space.

We can meet our targets by focusing our customer operations, portfolio management, property management, and business services on environmental stewardship.

To meet those targets we will:

- Identify and track energy consumption.
- Provide information to building tenants about the status of energy and sustainability projects.
- Demonstrate to customers the results of projects and efforts.
- Ask our tenants for feedback about the building environment to improve where necessary and to determine the effectiveness of our sustainable operating and custodial procedures.

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity</strong></td>
<td>118,717,722 kWh</td>
<td>$6,054,207</td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td>10,234,774 CF</td>
<td>$1,469,210</td>
</tr>
<tr>
<td><strong>Fuel Oil</strong></td>
<td>Not available this edition</td>
<td>Not available this edition</td>
</tr>
<tr>
<td><strong>Steam</strong></td>
<td>28,546 MLB</td>
<td>$451,770</td>
</tr>
<tr>
<td><strong>Geothermal</strong></td>
<td>Not available this edition</td>
<td>Not available this edition</td>
</tr>
</tbody>
</table>
National Policy

The Energy Policy Act of 1992, along with its amendments to the National Energy Conservation Policy Act, forms the statutory basis of federal energy management activities. Subtitle F of the Act focuses on energy management at the federal agency level. This Act also authorizes federal agencies to use third-party project financing that is offered by utilities and energy service companies. (For more information about the Energy Policy Act, see the Federal Energy Management Program’s (FEMP) Web site: www.eere.energy.gov/femp/about/legislation.cfm.)

Congress is considering a new National Energy Policy Act. If approved, this policy would create new requirements. In lieu of a new comprehensive policy, some aspects of the National Energy Policy Act may be enacted separately. We will track progress of the bills and incorporate any new requirements into an updated SEMP.

Executive Order 13123, Greening the Government Through Efficient Energy Management

E.O. 13123 (June 8, 1999) builds on work begun under the Energy Policy Act of 1992 and directs the federal government to take a leadership role in efficient energy management by significantly improving energy use to save taxpayer dollars, reduce dependence on foreign energy sources, and reduce emissions that contribute to air pollution. It directs agencies to conserve water and to use more cost-effective renewable energy technologies, which include solar, wind, geothermal, and biomass energy systems. This Executive Order is the basis for all federal agency mandates. (For more information on guidance for Executive Order 13123 see FEMP’s Web site: www.eere.energy.gov/femp/about/legislation.cfm.)
<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greenhouse Gas Emissions</strong></td>
<td>30% reduction by 2010</td>
<td>Base year is 1990. U.S. Department of Energy will calculate agencies’ progress toward this goal and report it on agencies’ annual energy scorecards.</td>
</tr>
<tr>
<td><strong>Energy Efficiency</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>35% improvement by 2010</td>
<td></td>
</tr>
<tr>
<td>Laboratory Facilities</td>
<td>20% improvement by 2005</td>
<td>Base year is 1990.</td>
</tr>
<tr>
<td></td>
<td>25% improvement by 2010</td>
<td></td>
</tr>
<tr>
<td>Exempt Facilities</td>
<td>N/A</td>
<td>Despite the lack of quantitative goals, agencies should implement strategies to improve energy efficiency at these facilities.</td>
</tr>
<tr>
<td>Audits</td>
<td>Conduct audits for energy efficiency on 10% of facilities annually.</td>
<td></td>
</tr>
<tr>
<td><strong>Renewable Energy</strong></td>
<td>Implement renewable energy projects.</td>
<td></td>
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<tr>
<td></td>
<td>Purchase electricity from renewable energy sources.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install 2,000 solar energy systems at federal facilities by 2000.</td>
<td>Renewable Energy Certificates can be purchased via GSA Schedule 871 II.</td>
</tr>
<tr>
<td></td>
<td>Install 20,000 solar energy systems at federal facilities by 2010.</td>
<td>These certificates count toward the federal energy goal.</td>
</tr>
<tr>
<td>Petroleum</td>
<td>Reduce petroleum use.</td>
<td>Switches to alternative energy sources should be cost effective as determined by life-cycle cost analysis.</td>
</tr>
<tr>
<td>Source Energy</td>
<td>Reduce use of source energy.</td>
<td>Accomplish by undertaking projects that are cost effective as determined by life-cycle cost analysis.</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>Reduce water consumption.</td>
<td>Accomplish with life-cycle cost-effective measures and financing mechanisms such as energy savings performance contracts. Agencies must implement water management plans and best management practices in their facilities and reduce water consumption according to the following schedule:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30% by 2006</td>
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<tr>
<td></td>
<td></td>
<td>50% by 2008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80% by 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Based on 2000 base year</td>
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</tbody>
</table>
Additional Requirements of Executive Order 13123

- Increase use of alternative financing arrangements.
- Purchase ENERGY STAR® equipment.
- Increase use of renewable power sources (on-site projects and green power purchases to equal 2.5% of requirements by 2005).
- Build and retrofit buildings to ENERGY STAR levels.
- Incorporate sustainable design principles in building projects.
- Submit an annual Energy Implementation Plan.
- Designate senior official and energy teams.
- Submit annual information and scorecard.

Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

E.O. 13101 (September 16, 1998) requires agencies to establish an Environmental Executive position; incorporate waste prevention and recycling in daily operations; and purchase and use environmentally preferable products and services, including recycled goods. (For more information, consult the following Web sites: FEMP Web site at www.eere.energy.gov/femp/technologies/sustainable_fedrequire.cfm and the Office of the Federal Environmental Executive Web site at www.ofee.gov/eo/eo.htm.)

Executive Order 13148, Greening the Government Through Leadership in Environmental Management

E.O. 13148 (April 21, 2000) requires the government to provide leadership to integrate environmental accountability into all operations; implement strategies to support environmental policies and procedures; comply with environmental regulations and emphasize pollution prevention; inform workers and the public of possible pollution sources; and develop environmental management systems. (For more information, visit the Office of the Federal Environmental Executive Web site at www.ofee.gov/sb/policies.html.)

Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

E.O. 13211 (May 18, 2001) requires agencies to prepare a Statement of Energy Effects when undertaking certain agency actions, including actions having significant adverse effects on energy supply, distribution, or use. These statements will provide useful energy-related information and hence improve the quality of agency decision-making.

Executive Order 13212, Actions to Expedite Energy-Related Projects

E.O. 13212 (May 18, 2001) calls for executive departments and agencies to expedite projects that increase the production, transmission, or conservation of energy.

Executive Order 13221, Energy-Efficient Standby Power Devices

E.O. 13221 (July 31, 2001) mandates the purchase of products that use minimal (less than 1 Watt) of power while in their standby power consuming mode. (For more information, see FEMP’s Web site: http://www.eere.energy.gov/femp/about/legislation.cfm.)
Executive Order 13149, Greening of the Government Through Federal Fleet and Transportation Efficiency

E.O. 13149 (April 26, 2000) calls for the government to take a leadership role in reducing petroleum consumption by improving the fuel efficiency in federal fleets and using alternative fuel vehicles and alternative fuels. (For more information, visit the U.S. Environmental Protection Agency [EPA] Web site at www.epa.gov/fedsite/eo13149.htm.)

Executive Order 13150, Federal Workforce Transportation

E.O. 13150 (April 21, 2000) directs agencies to provide staff with alternatives to reduce work-related transportation and fuel use, such as flexible workplace arrangements, carpooling, public transit reimbursement, and bicycle arrangements such as showering facilities. (For more information, visit the U.S. Department of Transportation Web site at www.fta.dot.gov/library/policy/cc/eo13150.htm.)

GSA Policies

GSA policies provide guidance on achieving our energy management goals. GSA’s guidance includes facility standards, design information, best practices, and other supportive information and tools. Our regional goals fully embrace and comply with all GSA internal policy. In addition, they meet or exceed the federal legislation and executive orders regarding environment and energy.

For more information:

Facility Standards (PBS P100)
http://insite.gsa.gov/_pbs/pbpc/

GSA Sustainable Design
http://insite.pbs.gsa.gov/PL/home.asp

GSA’s Design Excellence Program
www.gsa.gov (click on Design Excellence Program)

GSA Web site
www.gsa.gov

GSA Real Property Web site
www.gsa.gov/realpropertypolicy

Real Property Management Sustainable Development Guide (hard copy)

Energy, Environmental, and Sustainable Design in Lease Acquisition

Real Property Leasing Activities

*We concentrate on re-refined oil, recycled antifreeze, retread tires, and alternative fuel vehicles—LPG, CNG, biodiesel, ethanol, hybrid. We have incorporated recycled carpeting, recycled paint, solar power, and solar lighting into our Fleet Center and we remove mercury switches from disposal vehicles before we sell them.*

Lori Anderson
Puget Sound Fleet Manager
we are committed to reaching our energy management goals through the collaborative efforts of each GSA service (Public Buildings Service, Federal Supply Service, and Federal Technology Service), smart fiscal strategies, partnerships, and our personal commitments.

Partnerships form the foundation of the SEMP. We will combine our talents, knowledge, and services to provide comfortable, energy-efficient, and sustainable workspaces and products at the best value to our customers. We will also lead by our own example. Our actions will reflect our priorities of sustainable principles and smart fiscal strategies.

The basic elements of our approach are:

- Program Administration
- Program Budget
- Program Performance and Evaluation
- Training and Education
- Coordination and Collaboration
- Employee and Tenant Awareness
- Awards and Recognition

Program Administration
Two primary groups will administer our SEMP: an advisory board and a regional energy management team. See Appendix A for membership.

Advisory Board
The advisory board will meet periodically to advise on the components of the SEMP and review our progress. This board will include representatives from the Federal Supply Service and the Federal Technology Service. A chair from the Public Buildings Service will oversee the board. The board may include a National Energy Center representative and a representative from another GSA region. It may also include representation from public and private regional landlords, contractors, and other federal agencies such as the U.S. Department of Energy (DOE).

Regional Energy Management Team
The regional energy management team (REMT) will be composed of representatives from the Public Buildings Service and led by the regional energy coordinator (REC). The REMT will use a cooperative approach to identify and pursue opportunities to achieve the intent of the SEMP. Team members will be invited to participate in project planning, budget planning, design charrettes, and other key meetings.

The management advocate will support the SEMP and enhance the effectiveness of the REMT. The REC will facilitate the implementation of the SEMP through coordination, communication, and guidance. The
role of the other team members will be to participate fully by contributing their expertise, current
information, and commitment to meet the objectives of our SEMP.

Regular team meetings will be held to provide opportunities to communicate, define, and improve
processes to meet our goals and allow feedback for improvement. Focus meetings will address specific
issues or projects and identify resources and opportunities.

Roles and Responsibilities of REMT Members

*Management Advocate.* Encourages collaboration across
divisions and represents the interests of the region, the
SEMP, and the REMT during management resource planning
discussions.

*Technical Support Team Leader.* Provides the connection
between management and the REC, distributes and interprets
energy policy, and provides guidance on priorities.

*Regional Energy Coordinator.* Is the PBS spokesperson and
coordinator for the REMT, collaborates and shares lessons
learned with the Energy Center of Excellence and other
regions and agencies, coordinates and leads REMT
meetings, carries out action items identified in the SEMP, and
coordinates and implements the energy program.

*Portfolio Management and Property Development
Representatives.* Bring the perspective of the project managers, suggest procedural and policy changes
essential to implementation of the SEMP, identify opportunities and projects, and share objectives and
lessons learned.

*Supervisory Asset Manager Representatives.* Bring the perspective of the service centers, identify
concerns and needs of the field, suggest essential procedural and policy changes to implement the
SEMP, identify opportunities and projects, and collaborate and share lessons learned with other asset
managers. Asset managers may lead efforts to encourage and educate staff and tenants in energy
awareness and conservation.

*Lead Electrical Engineer.* Brings the perspective of the electrical design group to the REMT, identifies
projects and opportunities, and transfers implementation strategies back to the design group.

*Lead Mechanical Engineer.* Brings the perspective of the mechanical design group to the REMT,
identifies opportunities and projects, and transfers implementation strategies back to the design group.

*Facilities Services Support Branch Representative.* Brings the perspective of the O&M staff to the REMT,
identifies opportunities and projects, and transfers implementation strategies back to the O&M staff.
Project Architect/Designer. Brings the perspective of the architectural design group to the REMT, identifies opportunities and projects, and transfers implementation strategies back to the design group.

Contracting Representative. Provides contracting expertise, brings the perspective of the contracting group to the REMT, suggests essential procedural and policy changes, identifies opportunities and projects, and transfers implementation strategies back to the contracting group.

See Appendix A for REMT membership.

Program Budget

With environmental leadership as our goal and smart fiscal planning as our objective, we will continue to prepare and request an inclusive annual energy budget to submit as a specific line item. This budget will include funds to accomplish the initiatives, goals, and objectives of our SEMP. In addition, we will focus on opportunities to use all current budgets to fulfill the objectives of this plan.

As a region, all project cost estimates will include the resources to design, implement, commission, and verify project savings. With input from Public Buildings Service staff, the REMT will develop a 5-year plan to achieve the objective of the SEMP. (See Appendix B for the Goals, Resources, and Implementation Schedule.)

Our budget submissions for all new and renovation construction projects will include costs for:

- Sustainable design and construction
- Life-cycle, cost-effective energy projects
- High efficiency replacement equipment purchases
- Energy efficiency-focused operations and maintenance (O&M) and continuous commissioning
- Renewable energy procurements and projects
- Environmentally preferable product purchases.

We will continue to use third-party financing when appropriate.

Project Budgeting

Funds for projects typically are allocated in the following budget accounts:

- New construction – BA51
- Major reconstruction/renovation – BA55
- Operations and maintenance (equipment replacement, minor projects) – BA61, BA63
- Repair and alteration – BA54.

Budget Process

Ongoing energy project identification and analysis are conducted. Funding is provided based on life-cycle cost (LCC) analysis. Projects should be submitted to the Energy Center of Expertise as soon as energy audits are completed.
Program Performance and Evaluation

The progression to leadership in energy efficiency and sustainability depends on effective program evaluation and honest performance feedback. The REMT will work each year with the advisory board to solicit input on additional goals for our SEMP, identify revisions and additions, and gauge our performance for the past year.

The intentions of performance evaluation are to:

- Track, monitor, and report on progress and activities of the SEMP.
- Request input from and provide feedback to service centers, project management, facility operations, and others.
- Provide information for the annual report to DOE and the Office of Management and Budget scorecard.
- Use our annual DOE reporting exercise as an opportunity to evaluate our performance.
- Use the GSA scorecard to identify opportunities to support goals and improve on performance.
- Invite input from and provide feedback to our clients and customers.
- Inform tenants of energy consumption history, progress toward goals, and impact of their actions.

See Appendix C for the Federal Agency Energy Scorecard.

Training and Education

Because adequate training is essential to meet our goals and objectives, we will strive to provide personnel with the training to carry out the goals of our SEMP. We have provided many training opportunities for staff to become knowledgeable in energy efficiency, efficient O&M, sustainable buildings, Leadership in Energy and Environmental Design (LEED), performance contracting, renewable energy projects, water conservation, and other areas that are pertinent to our SEMP. We will increase opportunities for education, on-the-job training, mentoring, presentations, and workshops.

We will strive to provide training opportunities that are cost effective. These include local training opportunities, hands-on education (such as photovoltaic [PV] installation), regional meetings that provide information and education for specific groups (annual Building Operator Conference), and on-site group training by educators from outside GSA.

In addition, we will continue to take advantage of the certification programs available to us, such as Certified Energy Manager, Operation and Maintenance Manager, and LEED accreditation.

See Appendix D for training information.

Our training goals will be supported by the following activities:

- The REMT will identify, recommend to staff, and take advantage of training opportunities.
- We will identify and encourage targeted training for the management team, project managers, asset managers, designers, O&M staff, and custodial staff.
- We will work with other agencies in the region to identify and sponsor or co-sponsor training sessions.
Coordination and Collaboration with Others

Our internal and external partners are valuable resources for information sharing, collaboration, and technical assistance. We will continue to collaborate with these partners and look for additional opportunities to share resources and information and to achieve common objectives.

Internal Partnerships

*Portfolio Development Division.* Portfolio Development provides strategic vision and operational guidance that is responsive to our business partners throughout the region.

Portfolio Management Branch. See the FY 2005 business plan.

The Asset Management Team provides long-term asset strategies for development, end uses, and quality financial performance.

The Professional Services Team provides pre-project planning and project follow-through with regards to technical expertise in architecture, engineering, interior design, and life safety. Staff are also designated as Regional Authorities Having Jurisdiction in the areas of life safety, fire safety, environmental, and occupational safety and health.

*Property Development Division.* Property Development provides project management, acquisition services, and technical support for all areas of PBS.

*Facilities Operations Support Branch.* This branch will work with the service centers and supervisory asset managers to create energy-efficient, sustainable facilities. They will encourage tenants to participate in the development of energy awareness plans with the REMT and to make conscious choices to reduce the impact on the environment through everyday activities and procurement.

*Business Service Division*

*Financial Services Branch.* This branch provides easy and effective access to an array of energy services. These services range from auditing, technical review, and design to alternative financing.
mechanisms. By collaborating, we can obtain a variety of support and assist our sister organization with continuous feedback to maintain the high quality of service offered in the schedule.

External Partnerships

*Federal Agencies.* Coordination with other federal agencies is another key aspect of realizing our goals. We have a thriving relationship with FEMP and the Western Regional Office. Through an Interagency Agreement (IAA) we can access the many services and resources FEMP offers to federal agencies. In addition, the DOE National Laboratories—including Lawrence Berkeley National Laboratory, the National Renewable Energy Laboratory, Oak Ridge National Laboratory, and Pacific Northwest National Laboratory—are available to provide reimbursable expertise. They offer SAVEnergy audits, surveys, technical and design assistance, alternative financing, and other support.

*Bonneville Power Administration (BPA)*. The BPA continues to be a key partner. It provides technical and financial assistance for energy efficiency projects through an IAA.

*Federal Executive Board (FEB).* The FEB improves coordination among federal activities and programs outside the Washington, D.C., area. Members provide information about new and current sustainability and energy programs to the regional offices.

*Federal Network for Sustainability (FNS).* The FNS is composed of more than 13 federal agencies in the West and works to promote sustainable practices. The Northwest/Arctic Region has been a member of the FNS and is in the process of re-signing the Statement of Unity and assuming a more active role in the group.

*Regional Councils.* Councils such as the Puget Sound Real Property Council help us achieve our goals. Key presentations have been given to the groups to raise awareness of the requirements for energy efficiency and sustainability.

*State Energy Offices, Local Governments, and Associations.* These entities within our region often provide us with information and project case studies. Professional and technical societies, including the American Institute of Architects (AIA) and the Association of Energy Engineers, frequently provide workshops and other sessions that can help us in our educational efforts. In return, we can use these forums to present our program overviews and case studies (such as an AIA forum at which information on GSA’s Design Excellence Program and the new Seattle Courthouse was presented).

*Utilities.* Utilities such as Puget Sound Energy and Seattle City Light are key partners in our efficiency efforts. They frequently provide technical advice, electronic utility data, rebates, and incentives. We will track and use the many programs available to us as utility customers.

“Developed with assistance from the National Renewable Energy Laboratory and FEMP/Western, GSA Region 10’s SEMP is an example of collaboration on a shared vision.”

Arun Jhaveri
Regional Technology Manger
U.S. DOE/FEMP/Seattle
Employee and Tenant Awareness

To minimize environmental impact and meet our goals and objectives, our employees, customers, and tenants must make conscious choices daily. We all can increase efficiency through wise procurement choices such as ENERGY STAR and other energy-saving products. Additionally, our personal choices, such as turning off computers and desk lamps and accepting lighting controls and temperature set points, reduce energy use.

To support individuals on the continuum from awareness to action, we will:

- Develop outreach programs.
- Focus energy awareness efforts on Earth Day and during Energy Awareness Month.

The REMT, along with staff and tenant representatives, will develop outreach programs for our employees and customers to promote an awareness and understanding of the objectives of our SEMP. Outreach efforts will include education, information, and training in multiple areas. Areas of outreach focus include:

- ENERGY STAR and other energy-efficient products
- Integration of sustainability in design and construction
- Use of renewable energy systems and procurement
- Facility operations focused on energy efficiency
- Informational and inspirational signage
- Incentives and motivational efforts.

We will use FEMP’s promotional materials and guidance to provide informational and educational opportunities for employees, customers, and tenants.

See Appendix E for energy awareness strategies.

Awards, Recognition, and Incentives

We understand the value of recognizing achievement. It is a necessary and important activity and motivates us all to continue our efforts even when they become challenging or routine. We will use available venues and create new avenues to acknowledge energy-saving efforts, communicate progress, and determine customer satisfaction. Awards and recognition for staff, customers, architects and engineers, partners, and tenants will be a key part of our SEMP. In addition, we have created a model O&M contract, which will provide incentives to contractors to provide energy efficiency benefits as part of their O&M activities.
We will also participate in GSA's and DOE's annual energy awards. Our Region 10 has been recently honored with a Federal Energy Saver Showcase designation. The Oroville-Osoyoos Border Crossing Station in Oroville, Washington, is a showcase for saving energy and using sustainable practices and products.

(See Appendix E for information on awards.)

Region 10 Awardees (from left) Roger Wright, John Jarosz, Carole Diamond, and Michael Okoro are honored in October 2003 for their work at the Edith Green/Wendell Wyatt federal building. Kit Meith, Regional Energy Coordinator (back row).
strategies, best practices, and tools

to successfully accomplish the goals set forth in our SEMP, we need the right resources for planning, implementation, and maintenance. The strategies, best practices, and tools that will help us accomplish our goals are available to us now. In fact, we use many of them already for projects that involve new construction, renovations, equipment replacement, retrofit projects, and building O&M. These resources help us increase energy efficiency and occupant satisfaction, reduce water consumption, support sustainability and renewable energy, and reduce utility costs.

The REMT will work with the Public Buildings Service to develop actions and an implementation schedule to meet our goals. (See Appendix B for the Goals, Resources, and Implementation Schedule.)

Life-Cycle Cost Analysis

Use of building LCC is mandated throughout E.O. 13123. We will continue to use and reinforce the use of LCC analysis to make effective, long-term business decisions about investments in energy-using systems. New construction, retrofit projects, and equipment replacement are areas in which we will use LCC. In addition, LCC is valuable in making decisions about non-energy-using materials (such as carpeting and wall treatments).

We will support the use of LCC in the following ways:

- Use LCC analysis for energy-using systems in all new construction, renovation, and retrofit projects.
- Follow the guidance developed in the LCC program used by the National Institute of Standards and Technology.
- Ensure that facility and procurement staff members are knowledgeable in the use of LCC.

For more information:

Building Life-Cycle Cost Software
http://www.eere.energy.gov/femp/information/download_blcc.cfm

Facility Energy Audits and Assessments

E.O. 13123 mandates that we audit 10% of our space each year. During the last 10 years, we have audited almost our entire inventory. We will continue to conduct energy audits, assessments, and surveys at a rate of 10% each year. Information we obtain will be used to identify the most cost-effective projects for implementation.
We will use audits and assessments to:

- Assign priorities to facilities that will receive audits on the basis of energy costs, upcoming renovations and equipment replacement opportunities, and the potential for emissions reductions.
- Use a variety of resources for audits, assessments, and surveys, such as FEMP, utilities, BPA, energy service companies (in conjunction with Energy Savings Performance Contracting), and private contractors.
- Encourage facility staff to conduct annual walk-through surveys to gain a greater understanding of their facilities and identify opportunities for more efficient operations and replacement of equipment.

For more information: Energy Services, Schedule 871 II

SAVEnergy Audits (FEMP)
http://www.eere.energy.gov/femp/services/assessments_savenergy.cfm

Project Funding and Financing

We will continue to use a variety of funding avenues for project financing. Our first step in the funding process will always be to identify available GSA internal funds. For new construction and large renovation projects, we will include the costs of sustainable design and commissioning in budget submissions. Energy and water efficiency projects, renewable energy, and other projects will require budget submission or may be combined with current construction or operations projects.

When internal funding is not available, and third-party financing appears to be the best alternative, we will encourage the use of project financing rather than delay the project.

To fulfill these objectives, we will:

- Identify the most appropriate funding option for each priority project (internal or external funding or a combination of both).
- Identify and consider the external financing options: energy savings performance contracting, utility energy savings contracting, and IAAs through BPA.
- Explore leveraging resources through partnerships. Consider rebate and incentives from utilities, other federal agencies such as BPA, solicitations for technology demonstration projects, and co-sponsorship of projects such as U.S./Canadian partnerships.

In the last 10 years, we have used alternative financing as well as internal funding for many projects. We have a solid foundation in use of energy savings performance contracting. Four projects have been awarded and others are being considered.

For more information:

Financing Mechanisms (FEMP)
http://www.eere.energy.gov/femp/financing/mechanisms.cfm
Energy-Efficient and Sustainable Procurement

We will continue to reinforce and expand our program to procure the most efficient and sustainable products during construction, renovation, equipment replacement, and building maintenance.

Equipment with the ENERGY STAR label will routinely be the equipment of choice. When that equipment is not available, we will select products that are in the top 25% efficiency. We will use the Environmentally Preferable Purchasing Guidelines for other purchases and the GSA Federal Supply Schedules for procuring sustainable and high efficiency products and energy services.

We will support these objectives in the following ways:

- Incorporate energy efficiency criteria into guidelines and specifications for all projects. Be consistent with use of ENERGY STAR, EPA Environmentally Preferable Purchasing, and EPA/DOE designated energy-efficiency products.
- Incorporate energy efficiency criteria consistent with ENERGY STAR and FEMP-designated products into product specification language developed for basic ordering agreements, blanket purchase agreements, architectural and engineering (A/E) services, and other purchasing procedures.

For more information:

ENERGY STAR Products
www.energystar.gov

EPA Environmentally Preferable Purchasing
www.epa.gov/oppt/epp/index.htm

FEMP Recommendations for Energy-Efficient Products
www.eere.energy.gov/femp/technologies/eeproducts.cfm

GSA Federal Supply Schedule for Energy Services
www.gsaelibrary.gsa.gov or www.gsa.gov/energyservices

Office of the Federal Environmental Executive
www.ofee.gov
Sustainable Building Design and Construction

Leading the way to sustainable design at federal facilities is an important goal for GSA Region 10. We embrace sustainable building design and "whole building" principles in which the interdependence of a building’s elements and systems is maximized to make it as sustainable and energy efficient as possible. Sustainable design recognizes the impact of every design choice (such as window placement and type of cooling system) on the natural and cultural resources of the local, regional, and global environments.

When designing new construction and major renovations, we will use many available resources. These include the *Procurement of Architectural and Engineering Services for Sustainability*, GSA Sustainable Design Guide, the Facilities Standards for the Public Buildings Service, P100; *The Design Excellence Program Guide; Building a Legacy; Real Property Sustainable Development Guide; Best Practices Special Edition, Fall 2002; Whole Building Design Guide*; the LEED program of the US Green Building Council, and the Sustainable Design Studio.

The GSA Northwest/Arctic Region is currently seeking LEED certification on three buildings, two new and one existing, and one client agency is housed in leased space that is LEED certified. We have several buildings designated as Federal Energy Saver Showcases and six ENERGY STAR buildings. Four of our buildings have received national Design Excellence awards.

We will continue to support sustainable design and construction in the following ways:

- Educate asset managers, portfolio managers, project managers, facility staff, architects, engineers, designers, budget analysts, maintenance staff, and other key personnel about sustainable design principles, energy efficiency, and LCC.
- Submit budgets that include costs for sustainable design and construction; include commissioning, building modeling, and other critical elements.
- Determine beforehand the rating to be obtained for each new construction project (such as LEED [including level] or Federal Energy Saver Showcase).
- Hold design charrettes and include customers, project managers, maintenance staff, A/E team, designers, and others to identify requirements and discuss sustainability, commissioning, and optimized O&M.
- Ensure that the selection criteria for A/E firms and design/build firms include experience with energy efficiency, water conservation, use of LCC, and sustainable building design.
- Incorporate sustainable design criteria into requirements for all new construction and major renovation projects.
- Review design guide specifications and incorporate current sustainability guidance.
- Consider O&M during planning and design.
- Include building commissioning in all new construction and substantial renovation projects.

Architect’s rendering of the U.S. Courthouse in Eugene, Oregon, under construction in 2005

Credit: GSA
Incorporate continuous commissioning and O&M planning in all new and renovation design specifications.
Use software such as Building for Environmental and Economic Sustainability (BEES), Life Cycle Costing (LCC), DOE2, Energy 10, and other tools.
Participate actively in the Federal Network for Sustainability, Sustainable Building Initiative to learn from other federal agencies and pass on our extensive knowledge.
Continue to nominate projects and buildings for regional and national design, energy efficiency, and sustainability awards.

For more information:

Building for Environmental and Economic Sustainability
www.bfrl.nist.gov/oae/software/bees.html

Business Case for Sustainable Design in Federal Facilities
www.eere.energy.gov/femp/technologies/sustainable_federaledfacilities.cfm

Child Care Center Design Guide
www.gsa.gov (Type in “Child Care Design” in search box.)
Federal Network for Sustainability
www.federalsustainability.org

FEMP Interagency Sustainability Working Group
www.eere.energy.gov/femp/technologies/sustainable_workinggroup.cfm

GSA Publications List
www.wbdg.org/references/publications.php

Greening Federal Facilities Guide
www.eere.energy.gov/femp/technologies/sustainable_greening.cfm

Leadership in Energy and Environmental Design (U.S. Green Building Council)
www.usgbc.org

Procurement of Architectural and Engineering Services for Sustainability
www.eere.energy.gov/femp/program/procuring_services.cfm

Whole Building Design Guide
www.wbdg.org
Building and System Commissioning

GSA Region 10 is at the forefront of building commissioning in the federal government. Commissioning helps us achieve, validate, and document that our building performance and systems meet the design needs and requirements of GSA and our occupants. For example, we are using commissioning for the new Seattle Courthouse.

Because all building systems are integrated, a problem in one system or component can affect the operation and performance of other components. Identifying and eliminating problems are important for improved occupant comfort, energy savings, environmental conditions, system and equipment functioning, and building O&M.

To remain in the forefront of building commissioning, we will:

- Emphasize building commissioning in all five phases of projects: program, design, construction, acceptance, and post-acceptance/occupancy, including recommissioning and continuous commissioning.
- Use available tools such as commissioning guides, information on selection of independent commissioning authorities, commissioning specifications, and commissioning reports to define and continuously improve our knowledge of commissioning.

For more information:

Continuous Commissioning Guidebook for Federal Managers
www.eere.energy.gov/femp/operations_maintenance

Greening Federal Facilities (Chapter 9.2—Building Commissioning)
www.eere.energy.gov/femp/technologies/sustainable_greening.cfm

Portland Energy Conservation, Inc. (PECI)—Commissioning and O&M Resources
www.peci.org/cx/index.html

Operations and Maintenance

Operations and maintenance is one of the most cost-effective areas for ensuring reliability, safety, and energy efficiency. Good maintenance practices can generate substantial energy savings. Energy losses from steam, water and air leaks, uninsulated lines, and maladjusted or inoperable controls are often considerable. Improvements to facility maintenance programs can often be immediate and low cost.

To build on our excellent O&M program, we will:
• Review and modify our regional O&M procedures and maintenance plans to reflect O&M best practices, focusing on energy efficiency and cost-effective O&M.
• Continue to educate maintenance personnel about equipment and how to optimize energy-consuming systems.
• Provide periodic training on building monitor and control systems and building control systems.
• Educate customers about comfort control and its impacts and costs.
• Budget for O&M training, continuous commissioning, and education.
• Continue to test and refine the new O&M contracts that include performance requirements and bonuses for contractors. Ensure that the performance criteria for O&M services include experience with energy management, continuous commissioning, and sustainable building practices.

For more information:

Building Operator Certification
www.theBOC.info

FEMP O&M Best Practices Guide
www.eere.energy.gov/femp/operations_maintenance

PECI O&M Best Practices Series
www.peci.org/om/index.html

Laboratory Facilities

We will continue to address the special requirements of our laboratory space to meet the federal goal of reducing energy consumption by 20% by 2005 and 25% by 2010, relative to 1990 consumption levels.

To continuously build on our laboratory experience and efficiency efforts, we will use guidance generated from the Labs for the 21st Century Program sponsored by EPA and DOE.

For more information:

Labs for the 21st Century
http://www.labs21century.gov

Highly Efficient Systems

As part of the federal government, GSA Region 10 is in a strong position to lead in the adoption of new and more efficient technologies, distributed energy resources, and other highly efficient systems. We will continue to identify opportunities to demonstrate the appropriate use of promising technologies and to show leadership by example.

To fulfill these objectives, we will:

• Install and use advanced metering and monitoring techniques.
• Identify opportunities for use of geothermal heat pumps, combined heat and power (CHP), biomass, micro turbines, fuel cells, and other underused technologies.
• Disseminate information within GSA and the federal sector on results of demonstration projects.
Greenhouse Gas Emissions Reduction

Greenhouse gas emissions could alter forests, crops, and water supplies. Agencies are directed under E.O. 13123 to “reduce their greenhouse gas emissions attributed to facility energy use by 30% by 2010 compared to such emissions levels in 1990.”

We will take advantage of all opportunities to reduce emissions through the following measures:

- Switch to less polluting fuels as opportunities are presented.
- Increase the use of renewable energy technologies such as PV, wind, and geothermal.
- Assign priorities to energy-saving projects on the basis of technologies used and potential savings to obtain the best emissions reductions.

For more information:
EPA Greenhouse Gas Emissions Information
yosemite.epa.gov/oar/globalwarming.nsf/content/Emissions.html:

Petroleum Use Reduction and Energy Security

We recognize that reducing our use of petroleum contributes to energy security. E.O. 13123, Section 205 addresses federal agencies in this regard. According to this executive order, each agency is to reduce the use of petroleum in its facilities by switching to natural gas, biofuels, or renewable energy; eliminating unnecessary fuel use; or using other appropriate methods.

We will employ the following strategies to reduce petroleum use and enhance energy security:

- Target facilities that use significant amounts of petroleum.
- Assign priorities to potential projects on the basis of LCC and potential emissions reductions.

For more information:
FEMP Renewable Energy Program
www.eere.energy.gov/femp/technologies/renewable_energy.cfm
Source Energy

GSA Region 10 will strive to reduce total energy use and associated greenhouse gas and other air emissions as measured at the source (such as at electric or coal power plants). We will undertake cost-effective projects, for which LCC analysis has verified cost-effectiveness, that result in decreasing source energy, even if site energy use (measured at the point of use) increases. In addition, projects that result in source energy reductions will contribute directly to GSA’s performance in reaching greenhouse gas reduction goals.

We will undertake the following actions in support of these objectives:

- Adopt a self-generation strategy that supports the use of on-site generation and renewable energy by focusing on sites served by utilities that use fossil fuels.
- Follow guidelines to receive credits toward energy efficiency goals for cost-effective projects when source energy use declines (for example, purchasing green power or fuel switching).
- Purchase Renewable Energy Certificates.

For more information:

Purchasing Renewable Power (FEMP)
www.eere.energy.gov/femp/technologies/renewable_purchasepower.cfm

Source Energy Reduction Credit (toward energy efficiency goals)
www.eere.energy.gov/femp/pdfs/source_crediting.pdf

Purchasing Renewable Energy Certificates
GSA Energy Services Schedule 871 II
www.gsa.gov/energyservices
Renewable Energy

GSA Region 10 can be a leader in the use of renewable energy. By using renewable energy at our facilities, we can help advance the renewable energy market and preserve our precious natural resources. We can also contribute to the federal government's goal of striving to acquire 2.5% of its facilities' electricity from new renewable energy sources by the end of FY 2005.

Use of renewable energy is expanding at our facilities through targeted projects and energy purchases from renewable sources. In addition, we are supporting the DOE Million Solar Roofs Initiative, which challenges the government to install 20,000 solar energy systems at its facilities by 2010.

We will take the following actions to continue our contribution to renewable energy use:

- Use screening and analysis to identify facilities that will benefit from solar water and space heating, PV, wind, geothermal, or biomass-based systems.
- Purchase and install on-site renewable energy systems that pass screening analysis.
- Procure renewable power when sources are available from serving utilities or power marketing administrations (such as BPA and the Western Area Power Administration); strive for 100% at sites when possible.
- Procure Renewable Energy Certificates/Green Tags for sites when direct renewable power delivery is not available.
- Take advantage of technical assistance, utility programs, rebates, and other resources available from serving utilities or power marketing administration.

For more information:

FEMP Renewable Energy Program
www.eere.energy.gov/femp/technologies/renewable_energy.cfm

Purchasing Renewable Power (FEMP)
www.eere.energy.gov/femp/technologies/renewable_purchasepower.cfm

Purchasing Renewable Energy Certificates
GSA Energy Services Schedule 871 II
www.gsa.gov/energyservices

Water Conservation

E.O. 13123 calls on federal agencies to install all life-cycle, cost-effective projects with fewer than 10 years simple payback. To meet that objective, we will continue to implement water-saving measures.

We will perform the following activities to save water at our facilities:

- Implement FEMP Best Management Practices (BMPs) as appropriate (in 5% of facilities by 2005 and 15% of facilities by 2007).
- Establish a reliable baseline for regional water consumption.
- Review building operating plans and include water management and BMPs wherever applicable.
- Include water cost savings and sewage savings in LCC and alternatively financed projects (such as energy savings performance contracts and utility energy service contracts).
- Perform water studies via GSA Environmental Services Schedule 899.
For more information:

Water Efficiency Goals
www.eere.energy.gov/femp/technologies/water_goals.cfm

Best Water Management Practices
http://www.eere.energy.gov/femp/technologies/water_fedrequire.cfm

FEMP Water Conservation Program
www.eere.energy.gov/femp/technologies/water_efficiency.cfm

Guidance to Federal Agencies for Determining Baseline Water Usage
www.eere.energy.gov/femp/technologies/water_baseline.cfm

GSA Environmental Services Schedule 899
www.gsa.gov/environmental_services

Showcase Facilities

The GSA Northwest/Arctic Region is a proven leader in developing high performance facilities. We will strive to create ENERGY STAR and LEED-certified buildings and use whole building design in new construction and retrofits. These facilities should contain systems that represent some of the best applications of sustainability, energy efficiency, and renewable energy in the government.

To meet this objective we will:

- Assign priorities to high performance facilities on the basis of project quality, with special emphasis on sustainable design.
- Acquire management support and budget for resources to meet designations.
- Strive to designate several facilities each year.

For more information:

www.eere.energy.gov/buildings/highperformance

EPA ENERGY STAR Buildings
www.energystar.gov (Go to Business Improvement.)

LEED Rating System (Leadership in Energy and Environmental Design--U.S. Green Building Council)
www.usgbc.org

Leased Space

Our goal is to be a leader in providing the most sustainable, comfortable, and energy-efficient leased space to our customers. We currently include many requirements related to these topics in our lease documents.
To increase our focus on efficient and sustainable leased space, we will:

- Work with agencies to acquire new leased space or renew leases to understand the provisions in the lease agreement that pertain to energy efficiency and sustainability.
- Budget appropriately for LEED certification for space that is undergoing significant renovations.

For more information:

*Greening Federal Facilities* (Chapter 9.4—Leased Buildings)
Acknowledgments

We are grateful for the significant contributions to the content of our Strategic Energy Management Plan by Kit Meith, Michael Okoro, and Pat Clark at GSA, and Deb Beattie and Karen Thomas at the National Renewable Energy Laboratory (NREL). We thank Cheri Sayer and Arun Jhaveri of the U.S. Department of Energy (DOE) Western Regional Office for their valuable input, and the DOE Federal Energy Management Program.
### Standing Board Members:

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Management Advocate</td>
<td>GSA</td>
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<td>GSA Energy Center of Expertise</td>
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<td>DOE – local office</td>
<td>Federal Energy Management Program</td>
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### Auxiliary Members:

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<tr>
<td>GSA Region</td>
<td>As invited</td>
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<tr>
<td>Public &amp; Private Building Owners</td>
<td>As invited – Build to suit buildings; how they do their business; BOMA – building operations managers association</td>
</tr>
<tr>
<td>Utility</td>
<td>As invited – Utilities, BPA</td>
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<td>Building operations and maintenance contractors, vendors, and A/E firms</td>
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<td>Major GSA Client</td>
<td>Tenants</td>
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<tr>
<td>➢ Steve Butterworth, NPS</td>
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<tr>
<td>➢ Tim Scanlon, BPA</td>
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<tr>
<td>➢ Advocate for GSA</td>
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### Regional Energy Management Team

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<thead>
<tr>
<th>Title</th>
<th>Topics and Issues</th>
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<tbody>
<tr>
<td>Management Advocate</td>
<td>Overall R10 perspective</td>
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<tr>
<td>Facilities Operations Support Branch Leader</td>
<td>Facility operations, maintenance, energy consumption</td>
</tr>
<tr>
<td>Regional Energy Coordinator</td>
<td>Energy, commissioning, sustainable design</td>
</tr>
<tr>
<td>Project Management Representative</td>
<td>Project management procedures and policy</td>
</tr>
<tr>
<td>Supervisory Asset Manager Representative</td>
<td>Service Centers and tenant awareness</td>
</tr>
<tr>
<td>Lead Electrical Engineer</td>
<td>Electrical design</td>
</tr>
<tr>
<td>Lead Mechanical Engineer</td>
<td>Mechanical design</td>
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<tr>
<td>O&amp;M Representative</td>
<td>Operations &amp; maintenance</td>
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<tr>
<td>Contracting Representative</td>
<td>Contracting</td>
</tr>
<tr>
<td>Architect/Designer</td>
<td>Architectural and interior design</td>
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</table>
Develop the Strategic Energy Management Plan such that it supports the accomplishment of regional goals set forth in the Northwest/Arctic Business Plan.

**Executive Order 13123 Topic**  
**Energy Management Plan**

**Regional Goal:**  
Develop superior workplace through optimized building operations and sustainable design principles. All associates incorporate SEMP objectives during decision-making process.

**Supporting Action 1**  
Establish the REMT  
1. Name personnel  
2. Define purpose of the REMT  
3. Draft REMT Charter  
   a. Develop an energy management program vision statement and develop vision statements for each member of the EM program.  
   b. Obtain Division level signatures.

**Supporting Action 2**  
Develop an implementation based on the SEMP and the REMT Charter.

**Supporting Action 3**  
Provide SEMP education to energy champions, project managers, and design teams.  
See training and education objective

**Supporting Action 4**  
Verify progress and course correction.

**Tools**  
PBS Regional Business Plan  
GSA Strategic Plan  
GSA Performance Measure

**Target Dates**  
May 15, 2005  
June 1, 2005  
Ongoing  
Annual
## Executive Order 13123 Topic
Facility Energy Audits (Sec. 402)

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

Use auditing process and results to make smart cost effective facility upgrades and modifications that will improve workspace and meet environmental goals and objectives.

## Facilities Operations Support Branch

- **Regional Goals**
  - Provide best value for customer agencies and the taxpayers.
  - Achieve responsible asset management.
  - Operate efficiently and effectively.
  - Carry out social, environmental, and other responsibilities as a federal government agency.

### Supporting Action 1
Generate database of prioritized facilities with year to be audited identified based on 10% per year cycle. Rank based on:
- Large square footage, heavy energy consuming facilities, and cost of energy
- Facilities that have not undergone energy efficiency projects or recent renovations
- Office and campus type facilities
- Facilities with energy management systems
- Facilities with energy champions

**Target Date:** May 31, 2005

### Supporting Action 2
To improve process efficiency and reduce expenditures, consider consolidating various regional assessments into a single facility audit, e.g., energy, water, safety, operations, and renovations.

**Target Date:** July 15, 2005

### Supporting Action 3
Submit budget annually for facility energy audits

**Target Date:** April 20XX

### Supporting Action 4
Planned Audits for FY 2005:
1. FBCT Anchorage ak0031aa
2. FBCT Juneau ak0013zz
3. New CT Seattle wa0102zz
4. JFB Seattle wa0101zz
5. TUS Tacoma wa7587zz

**Target Dates:**
- FY 2005
- Utility provided no- or low-cost audits and surveys
- DOE FEMP SAVEnergy audits
- ESPC and UESC projects include audits

## Tools

DOE FEMP SavEnergy Program
## Appendix B: Action Plan

### Executive Order 13123 Topic
**Energy Efficiency Improvements (Sec. 202)**

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Resources

### Target Dates

### Regional Goals

### Responsible Office

### Federal Goals

#### R10 Strategic Objective

- 30% by 2005
- 35% by 2010

(Relative to 1985 baseline)

Reach beyond federal goals to provide fiscally smart, efficiently operated, sustainable office space.

### Supporting Action 1

- Identify and prioritize projects based on value to customer, impact on environment, and cost effectiveness.

### Energy project database integration

- **Ongoing**

### Supporting Action 2

- Implement prioritized projects.

#### FY 2005 Planned Projects:

1. Lighting for Warehouse 8, Auburn, WA.
2. Lighting for FBCT Anchorage parking garage.
3. Commissioning at JFB, Seattle, WA.

### Tools

- **FY 2005**

#### FEMP design and technical assistance, alternative finance support, and LCC analysis

#### ESPC and UESC

- **1985 Building Trends spreadsheet**
- **Financial tier information**
- **FEMP services - design and technical assistance, alternative finance support, LCC analysis, building energy simulation modeling, DOE-2, Energy 10, SAVEnergy audits**
- **ENERGY STAR products**
- **Leadership in Energy & Environmental Design**
### Executive Order 13123 Topic
Water Conservation (Sec. 207)

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th>Resources</th>
<th>Target Dates</th>
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<tbody>
<tr>
<td>Provide best value for customer agencies and the taxpayers.</td>
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<tr>
<td>Achieve responsible asset management.</td>
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<tr>
<td>Operate efficiently and effectively.</td>
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<tr>
<td>Carry out social, environmental, and other responsibilities as a federal government agency.</td>
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**Regional energy management team with regional energy coordinator lead**

### Federal Goal
Implement water management plans and best management practices at sites

- 30% of sites by 2006
- 50% of sites by 2008
- 80% of sites by 2010

### R10 Strategic Objective
Same as federal goal

### Supporting Action 1
Establish water use in millions of gallons per year (MGY) for baseline year 2000.

http://www.eere.energy.gov/femp/technologies/water_baseline.cfm

### Supporting Action 2
Develop a water management plan and incorporate into facility planning process and operating plan.

http://www.eere.energy.gov/femp/technologies/water_fedrequire.cfm

### Supporting Action 3
Integrate water best management practices into current operating plans and put applicable O&M into practice.

Water management plans

Best management practices

### Supporting Action 4
Identify water efficiency retrofit and replacement measures. Prioritize projects based on combined energy and water audits.

Energy audit prioritized list and audit recommendations

Consider environmental impact, cost effectiveness and current projects.

FEMP water efficiency improvement goal for federal agencies
## Executive Order 13123 Topic
Sustainable Building Design (Sec. 403(d))

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Regional Goals
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsibilities

#### Office
Regional energy coordinator with property development lead

Region 10 will lead by example and integrate sustainable principles in the design and construction of new facilities and major renovation projects.
- Design all new construction to meet LEED Silver rating or better.

### Supporting Action 1
Incorporate sustainable design criteria into requirements for new construction and renovation projects. Include commissioning and recommissioning requirements.

- Include sustainable experience and “sustainable design studio” as requirements for A/E contracting.

### Supporting Action 2
Implement new procurement guidelines that specify the use of sustainable materials to be used in new construction and retrofit projects.

### Supporting Action 3
Implement sustainable projects.

- Greening charrette

### Supporting Action 4
Track costs to show sustainable design can be done within budget.

- Sustainable development guide
- Whole Building Design Guide
- “Procuring Low Energy Design and Consulting Services”
- Sustainable working group
- FEMP guidance and criteria (LEED)
- GSA IDIQ (commissioning)
- FEMP staff with experience (commissioning)

### Tools
- Sustainable development guide
- Whole Building Design Guide
- “Procuring Low Energy Design and Consulting Services”
- Sustainable working group
- FEMP guidance and criteria (LEED)
- GSA IDIQ (commissioning)
- FEMP staff with experience (commissioning)
# Appendix B: Action Plan

## Executive Order 13123 Topic

**Renewable Energy (Sec. 204)**

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Regional Goals

**Executive Order 13123 Topic**

**Renewable Energy (Sec. 204)**

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Federal Goal

Expand the use of renewable energy within facilities via projects and by purchasing from renewable energy sources.

## R10 Strategic Objective

**Regional energy management team with regional energy coordinator lead**

- Educate customers on the value of supporting RE and negotiate premiums, so that they are dropped once the RE source stands on its own.

## Supporting Action 1

- Identify sites for renewable energy procurement.
- Renewable energy certificates count toward the federal energy goal.

## Supporting Action 2

Identify facilities that will benefit from solar water heating and PV.

## Supporting Action 3

Identify locations where green energy is available for purchase (GSA contract).

## Supporting Action 4

Identify locations where wind energy is viable.

## Supporting Action 5

Educate customers on the value of supporting RE and negotiate premiums, so that they are dropped once the RE source stands on its own.

## Supporting Action 6

FY 2005 Planned Projects:

1. Renewable energy, 10-kW PV for FBCT, Boise, ID.

## Tools

- GSA Schedule 871 II for online purchase of Renewable Energy Certificates - [www.gsa.gov/advantage](http://www.gsa.gov/advantage)
- PBS Energy Center can solicit proposals for purchase of Renewable Certificates
- Solar equipment purchases via e-buy, Schedule 84
- FRESA screenings
- FEMP Renewable Energy Workshop
- Guidebook for purchasing renewable energy

<table>
<thead>
<tr>
<th>Regional Goals</th>
</tr>
</thead>
</table>
| Executive Order 13123 Topic
| Renewable Energy (Sec. 204) |

<table>
<thead>
<tr>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Center RE Purchasing Service</td>
</tr>
<tr>
<td>GSA Schedule 871 II</td>
</tr>
<tr>
<td>GSA Schedule 84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target Dates</th>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify sites for renewable energy procurement.</td>
</tr>
<tr>
<td></td>
<td>Renewable energy certificates count toward the federal energy goal.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify facilities that will benefit from solar water heating and PV.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify locations where green energy is available for purchase (GSA contract).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify locations where wind energy is viable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Educate customers on the value of supporting RE and negotiate premiums, so that they are dropped once the RE source stands on its own.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of</th>
<th>Action 6</th>
</tr>
</thead>
</table>
|             | FY 2005 Planned Projects:
|             | 1. Renewable energy, 10-kW PV for FBCT, Boise, ID. |

### Tools

- GSA Schedule 871 II for online purchase of Renewable Energy Certificates - [www.gsa.gov/advantage](http://www.gsa.gov/advantage)
- PBS Energy Center can solicit proposals for purchase of Renewable Certificates
- Solar equipment purchases via e-buy, Schedule 84
- FRESA screenings
- FEMP Renewable Energy Workshop
- Guidebook for purchasing renewable energy
### Executive Order 13129 Topic

**Energy Star Products (Sec. 403 (b))**

<table>
<thead>
<tr>
<th>Regional Goals</th>
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</thead>
<tbody>
<tr>
<td>✓ Provide best value for customer agencies and the taxpayers.</td>
</tr>
<tr>
<td>✓ Achieve responsible asset management.</td>
</tr>
<tr>
<td>✓ Operate efficiently and effectively.</td>
</tr>
<tr>
<td>✓ Carry out social, environmental, and other responsibilities as a federal government agency.</td>
</tr>
</tbody>
</table>

#### Region-wide with customer operations division lead

- Select ENERGY STAR and other energy-efficient products when acquiring energy-using products. Select products in upper 25% of energy efficiency.

#### Federal Goal

Specify ENERGY STAR and other energy-efficient products when acquiring energy-using products. Specify products in upper 25% of energy efficiency.

#### R10 Strategic Objective

- Provide customer satisfaction and save money for the taxpayers.
  - Specify ENERGY STAR and other energy-efficient products when acquiring energy-using products.
  - Specify products in upper 25% of energy efficiency.

#### Supporting Action 1

Include ENERGY STAR new procurement guidelines for purchase of any new equipment.

#### Supporting Action 2

Implement ENERGY STAR certification.

#### Tools

FEMP "Product Energy Efficient Recommendations"
## appendix b
## action plan

<table>
<thead>
<tr>
<th>Regional Goal</th>
<th>Executive Order 13123 Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Green House Gas Emissions (Sec. 202)</td>
</tr>
</tbody>
</table>

- Carry out social, environmental, and other responsibilities as a federal government agency.

### Property Development

By 2010, reduce greenhouse gas emissions by 30% relative to the 1990 baseline.

Deliver smart, cost-effective facility upgrades and modifications that will reduce greenhouse gas emissions.

### Federal Goal

By 2010, reduce greenhouse gas emissions by 30% relative to the 1990 baseline.

### R10 Strategic Objective

Deliver smart, cost-effective facility upgrades and modifications that will reduce greenhouse gas emissions.

### Supporting Action 1

Determine the 1990 baseline.

### Supporting Action 2

Prioritize identified energy efficiency projects to maximize emissions reductions based on fuel type and potential savings.

### Supporting Action 3

Implement projects.

### Tools

FEMP Emissions Calculation Guidance

Energy audit results and project prioritization list
### Regional Goals
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Federal Goal

Through LCC measures, each agency shall reduce use of petroleum in facilities by eliminating unnecessary consumption and switching to natural gas or renewable energy sources.

### R10 Strategic Objective

Reduce use of petroleum by eliminating unnecessary consumption and switching to natural gas or renewable energy sources.

### Supporting Action 1

- Identify candidate facilities to reduce use of petroleum, such as switching fuels and using renewable technologies.
- Prioritize projects based on LCC and potential emissions reductions.

### Supporting Action 2

- Implement projects that are LCC effective and have the greatest potential for emissions reduction.

**Regional energy management team with regional energy coordinator lead**
## Executive Order 13123 Topic

**Source Energy (Sec. 206)**

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve responsible asset management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operate efficiently and effectively.</td>
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</tr>
<tr>
<td>Carry out social, environmental, and other responsibilities as a federal government agency.</td>
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</tr>
</tbody>
</table>

### Responsible Office

Regional energy management team with regional energy coordinator lead

### Federal Goal

Undertake LCC-effective projects in which source energy decreases.

Deliver smart, cost-effective facility upgrades and modifications that will reduce source energy use.

### R10 Strategic Objective

**Deliver smart, cost-effective facility upgrades and modifications that will reduce source energy use.**

### Supporting Action 1

Identify and prioritize LCC projects that result in a decrease in source energy use.

Decreased source energy is credited toward energy reduction even if site energy increases.

### Supporting Action 2

Implement LCC projects that reduce source energy use.

BLCC software and training

---
## Executive Order 13123 Topic
Showcase Facilities (Sec 406(e))

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide best value for customer agencies and the taxpayers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieve responsible asset management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operate efficiently and effectively.</td>
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<td></td>
</tr>
<tr>
<td>Carry out social, environmental, and other responsibilities as a federal agency.</td>
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<td></td>
</tr>
</tbody>
</table>

### Responsible Office

Regional energy coordinator with property development lead

Designate exemplary facilities with significant access and exposure.

### Federal Goal

Same as federal goal

### R10 Strategic Objective

Prioritize new construction and major renovation projects.

Initiate a "super showcase facility" or a "super energy star."

### Supporting Action 1

Nominate showcase projects for awards.

### Supporting Action 2

FEMP guidance and criteria
## Executive Order 13123 Topic
**Life Cycle Cost Analysis (Sec. 401)**

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th>Resources</th>
<th>Target Dates</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Property Development

- Use LCC analysis and findings for decision making on all new construction and renovation projects.

- **Supporting Action 1**: Provide LCC training for engineers and architects.

- **Supporting Action 2**: Use LCC analysis for all projects.

- **Supporting Action 3**: Prioritize and implement projects based on LCC.

### Tools

- BLCC software and training
## Executive Order 13123 Topic
Financing (Sec. 403 (a))

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Facilities Operations Support Branch

Maximize use of alternative financing mechanisms.

Use alternative financing mechanisms where project budget is inadequate to accomplish LCC effective energy efficiency projects.

<table>
<thead>
<tr>
<th>Supporting Action 1</th>
<th>Supporting Action 2</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy team members attend ESPC and utility financing workshops as needed for project implementation.</td>
<td>Identify all funding sources, including appropriations and financing, and use the most suitable funding source based on project conditions.</td>
<td>DOE FEMP alternative financing workshops</td>
</tr>
</tbody>
</table>

- FEMP alternative financing workshops
- FEMP “How to Choose” guidance
- GSA "Procuring Energy Management Services with the Utility AWC"
# Executive Order 13123 Topic
Training & Education 9Sec. 406 (d))

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Regional Goals

<table>
<thead>
<tr>
<th>Responsible Office</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional energy management team with regional energy coordinator lead</td>
<td>Agencies shall ensure appropriate personnel receive training.</td>
<td>DOE FEMP workshops and conferences</td>
</tr>
</tbody>
</table>

## Federal Goal

Federal Goal Agencies shall ensure appropriate personnel receive training.

## Supporting Action 1

Develop and implement training plan to introduce the SEMP to staff, contractors, and customers.

Provide training and education to the REMT:
- CO and Legal: ESPC and UESC workshops
- Asset and property managers: BLCC, RE, sustainable design, ESPC, and UESC workshops etc.
- Project managers, Engineers & Architects: BLCC, RE, sustainable design, ESPC & UESC workshops etc.
- O&M Staff: O&M workshop, ESPC and UESC workshops when applicable to their site

## Supporting Action 2

Meet with O&M and janitorial contractors to implement energy efficiency performance requirements, discuss progress and improvements.

FEMP training catalog

## Supporting Action 3
Executive Order 13129 Topic
Energy Awareness

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

Regional energy management team with regional energy coordinator lead

Develop and implement an energy awareness program that results in consistent reduction in energy use due to staff and customer choices.

Supporting Action 1
Develop a regional awareness plan with involvement across all divisions and include input from contractors and customers.

Supporting Action 2
Educate: schedule awareness sessions with management analysis review system (MARS) reviews at property management offices.

Supporting Action 3
Celebrate accomplishments: recognize efforts and accomplishments:
- Nominate individuals and groups for the Region 10 awards.
- Develop a fact sheet of accomplishments like cogeneration, PV, fuel cells, micro turbines.
- Build a portable display for training and presentations.
- Develop a flow chart with communications interfaces. Delineate a design from operations, fleet, asset managers, and other groups.

Tools
FEMP You Have the Power campaign resources
## Executive Order 13123 Topic

### FLEET

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Responsible Office

### Federal Goal

**R10 Strategic Objective**

Reduce our impact on the environment through thoughtful implementation of fleet management. Purchase quality fuel-efficient vehicles.

### Supporting Action 1

Develop a mobility plan that includes staff education.

### Supporting Action 2

Make smart leasing and purchasing choices based on environmental requirements and impacts.

### Supporting Action 3

Use alternative fuels and alternative fuel vehicles where possible:
- LPG
- CNG
- Biodiesel
- Ethanol
- Hybrid vehicles

### Supporting Action 4

Incorporate the use of recycled carpeting, recycled paint, solar power, solar lighting in our Fleet Center.

### Supporting Action 5

Reuse and recycle fleet related products and materials:
- Re-refined oil
- Recycled anti-freeze
- Retread tires
- Remove mercury switches from disposal vehicles prior to sale.

## Target Dates

<table>
<thead>
<tr>
<th>Tools</th>
<th>Ongoing</th>
<th>Complete</th>
</tr>
</thead>
</table>

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**B-16**
### Executive Order 13123 Topic: Security
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsible Office
Regional energy management team

### R10 Strategic Objective
Enhance facility and energy security through thoughtfully designed, constructed, renovated, operated and occupied facilities. Use site generation where necessary and renewable generation where applicable.

### Supporting Action 1
Use standby generators for load shedding.

### Supporting Action 2
Encourage on-site renewables.
**appendix b**

**action plan**

<table>
<thead>
<tr>
<th>Executive Order 13129 Topic GSA Scorecard</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Order 13129 Topic GSA Scorecard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regiona Goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional energy management team with regional energy coordinator lead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide best value for customer agencies and the taxpayers.</td>
<td></td>
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<tr>
<td>Achieve responsible asset management.</td>
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<td></td>
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<tr>
<td>Operate efficiently and effectively.</td>
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<td></td>
</tr>
<tr>
<td>Carry out social, environmental, and other responsibilities as a federal government agency.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Goal Each agency shall submit annual reports and be given an annual scorecard.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R10 Strategic Objective Meet or exceed the requirements of the Energy Policy Act and the various executive orders addressed in the SEMP.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting Action 1 Train staff in the use of the GSA reporting system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tools</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix C
**FY 2005 Federal Agency Energy Scorecard**

<table>
<thead>
<tr>
<th>Department/Agency Name</th>
<th>Contact Name and Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Name of Senior Energy Official</th>
<th>Signature of Senior Energy Official</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did your agency . . .</th>
<th>Yes</th>
<th>No</th>
<th>Anticipated Submittal Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Submit its FY 2005 energy report to OMB and DOE by January 1, 2006 (Sec. 303)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Submit a FY 2006 Implementation Plan by January 1, 2006 (Sec. 302)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Implement or continue to use renewable energy projects at federal installations or facilitate the siting of renewable generation on federal land in FY 2005 (Sec. 204)? (Report all self-generated renewable energy from projects installed after 1990; refer to Table 1-7 on the Energy Management Data Report.)</td>
<td>If yes, how many projects and how much energy generated? (Specify unit: MWh or MMBtu) Solar Wind Thermal 1 Biomass Other RE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Purchase energy generated from new renewable energy sources in FY 2005 (Sec. 204)?</td>
<td>If yes, how much: MWh or MMBtu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Invest direct FY 2005 appropriations in projects that contribute to the goals of the order (Sec. 301)?</td>
<td>If yes, how much: $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Specifically request funding necessary to achieve the goals of the order in its FY 2007 budget request to OMB (Sec. 301)? (Refer to OMB Circular A-11, Section 25.5, Table 2.)</td>
<td>If yes, how much: $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Perform energy audits of 10% of its facility space during the fiscal year (Sec. 402)?</td>
<td>What percentage of facility space was audited during the FY? How much facility space has been audited since 1992?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Issue to private sector energy service companies (ESCOs) any energy savings performance contract (ESPC) task orders (Sec. 403(a))? (Refer to Table 2-2 on the Energy Management Data Report.)</td>
<td>How many? Annual savings (MMBtu): $ Total investment value: $ Cumulative guaranteed cost savings: $ Contracts award value: $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Issue any utility energy services contract (UESC) task orders (Sec. 403(a))? (Refer to Table 2-3 on the Energy Management Data Report.)</td>
<td>How many? Annual savings (MMBtu): $ Total investment value: $ Cumulative cost savings: $ Contracts award value: $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did your agency...</td>
<td>Yes</td>
<td>No</td>
<td>Anticipated Submittal Date</td>
</tr>
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<td>---------------------------</td>
</tr>
<tr>
<td>10. Incorporate energy efficiency requirements into relevant acquisitions (Sec. 403(b)(3))?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Adopt and apply the sustainable design principles (e.g., Whole Building Design Guide, Leadership in Energy and Environmental Design (LEED)) to the siting, design, and construction of new facilities or major (budget line item) renovations begun in FY 2005 (Sec. 403(d))?</td>
<td></td>
<td></td>
<td>Number of new building design/construction projects in FY 2005:__________ Number of these projects that can or will be certified under LEED:__________</td>
</tr>
<tr>
<td>12. Provide training to appropriate personnel* on energy management (Sec. 406(d))?</td>
<td>Number of appropriate personnel trained:__________ Total number of appropriate personnel:__</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Implement any additional management tools (Sec. 406)?</td>
<td>Check all that apply: Awards:_____ Performance Evaluations:_____ Showcase Facilities:______ Number of Showcase Facilities designated in fiscal year:_____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Establish water management plans (WMPs) and implement at least 4 best management practices (BMPs) in at least 10% of agency facilities (Sec. 207,503(f))?</td>
<td></td>
<td>Number of facilities with WMPs and 4 BMPs:__________ Number of facilities in agency inventory:_____</td>
<td></td>
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</tbody>
</table>

NOTE: Provide additional information if a “No” reply is used for any of the questions above.
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<tbody>
<tr>
<td></td>
<td>Base Year</td>
<td>Previous Year (2004)</td>
<td>Current Year (2005)</td>
<td>% Change (Current vs. Base)</td>
</tr>
<tr>
<td>15. Site Energy Efficiency Improvement Goals (Sec. 202). 1985 Base Year</td>
<td>Btu/ft²</td>
<td>Btu/ft²</td>
<td>Btu/ft²</td>
<td>%</td>
</tr>
<tr>
<td>16. Source Energy Use (Sec. 206). 1985 Base Year</td>
<td>BBtu</td>
<td>BBtu</td>
<td>BBtu</td>
<td>%</td>
</tr>
<tr>
<td>17. Industrial/Energy Intensive Facilities Goals (Sec. 203). 1990 Base Year</td>
<td>Btu/unit</td>
<td>Btu/unit</td>
<td>Btu/unit</td>
<td>%</td>
</tr>
<tr>
<td>18. Water Conservation Goal (Sec. 207). 2000 Base Year</td>
<td>MGal</td>
<td>N/A</td>
<td>MGal</td>
<td>%</td>
</tr>
<tr>
<td>19. Renewable Energy (Sec. 204) used from self-generation and RE purchases</td>
<td>N/A</td>
<td>BBtu</td>
<td>BBtu</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Abbreviation Key:**
- Btu/ft² = British thermal units per gross square foot
- Btu/unit = British thermal units per unit of productivity
- MGal = Million gallons
- MMBtu = Million British Thermal Units
- RE = Renewable energy
- N/A = Not applicable

1. Examples are geothermal, solar thermal, and geothermal heat pumps. Thermal energy from geothermal heat pumps should be determined as follows: Thermal energy = Total geothermal heat transferred – electrical energy used.


3. Investment value includes design, materials, labor, overhead, and profit, but excludes contractor’s financing costs and government’s administration costs. Using investment value allows comparison with other traditional execution methods such as appropriated and working capital funded projects.

4. Appropriate personnel include the agency energy management team as well as federal employees and on-site contractors who are energy or facility managers, operations and maintenance workers, design personnel, procurement and budget staff, and legal counsel.
The GSA Region 10 multiyear training plan will be developed by the REMT and updated periodically. It will include training scenarios for different positions.

The objective of the training plan is to educate staff and operations and maintenance personnel to be knowledgeable about and motivated toward energy efficiency and sustainability. It will be GSA Region 10 policy to support associates who wish to become certified energy managers, LEED-accredited professionals, or active members of the Association of Energy Engineers.

Possible training events:

- Green-Build Expo (annual)
- DOE Energy Conference (annual Energy20xx) and workshops
- AEE Certified Energy Manager training
- LEED Accredited Professionals training
Energy Awareness Campaign Strategy

Ten to thirty percent of energy consumption can be saved through employee choices. In energy-saving campaigns, involve employees at both GSA and tenant facilities. Educate, motivate, and involve individuals to help them consciously choose to reduce energy, recycle, commute by carpooling or using alternate ways to get to work, and elect other energy-saving options.

Develop a plan to be used throughout the region. Develop training to educate on the plan.
- Daily work activities
- Fleet use
- Procurement choices.

Determine water, energy, recyclable materials, and commuting footprints according to
- Work groups
- Facility types
- Job types.

Calculate impact based on equipment used, lights, hours of business, drive to work, and so forth. Derive a baseline for the group in Btu/day/person.

Create incentives such as competition between groups to reduce the baseline in Btu/day/person.
- Reward the lowest baseline.
- Reward the biggest improvement over time.
- Reward maintenance of low Btu/day/person (this would mean points for taking the bus, walking, and carpooling, and for turning off lights and equipment).

Recognize achievements with awards and celebrations.
- Acknowledge architectural and engineering staff and GSA staff on great projects.
- Show status and results of conscious efforts. Use case studies, newsletters, an annual open house, and other means to show results of conscious efforts. Graphics illustrating baseline, current status, and targets show results at a glance.
We are in the business of providing workplace solutions to thousands of federal employees. Because of the large volume of our business, we have the ability to influence markets with our informed decisions regarding the use of energy-efficient practices, sustainable design, renewable power purchases, and other sustainability practices.

To meet the objectives of our Strategic Energy Management Plan, we must consistently integrate the guidance in our plan with our daily operations. In our purchasing decisions, we must consider energy efficiency, renewable energy, recycled products, and other sustainable options. We will give attention to Leadership in Energy and Environmental Design (LEED), sustainability, building commissioning, and other energy and resource conserving practices. These are piers in the foundation of energy efficient building design and operation.

It is true that federal Executive Orders and the Energy Policy Act mandate the goals you will find contained in this plan. However, it is up to each of us to work to achieve these goals. Every associate in our workforce makes business and personal decisions throughout the day that can advance sustainable principles. I ask that each of you make a personal commitment to carry out our plan.

Sincerely,

Robin G. Graf
Assistant Regional Administrator

The Federal Supply Service will actively support the Strategic Energy Management Plan through our Multiple Award Schedules program. Our schedules provide, at best value, a source for virtually every commercial product or service you may need. The Energy Services Schedule 871 II and Environmental Services Schedule 899 can deliver a variety of comprehensive solutions that could assist with the implementation of this plan. These schedules provide access to contractors for energy audits, resource efficiency management, use of alternative and renewable energy sources, building commissioning, recycling and disposal, remediation and more. We stand behind our commitment to provide what you need.

Our GSA Fleet provides quality Alternative Fuel Vehicles (AFVs) to assist Customer Agencies in meeting The Energy Policy Act (EPACT) of 1992 and Executive Order 13149 which mandates federal agencies to acquire Alternative Fuel Vehicles (AFVs) and to reduce fuel consumption. GSA Fleet also actively promotes and educates on the merits of the alternative fuels vehicle program through sponsoring local seminars and focus groups. GSA partners with State and local Governments as well as private industry in promoting the use of Alternative Fuels through the Clean Cities Coalitions.

GARY D. CASTEEL
Assistant Regional Administrator
Federal Supply Service
Federal Technology Service
introduction

Our strategic energy management plan (SEMP) will help us to fulfill both the General Services Administration (GSA) mission and our regional vision of better serving the public by exceeding expectations. It will allow us to reach beyond the government mandates and become environmental leaders in our communities of the beautiful Northwest and Arctic regions of the United States. We developed this SEMP specifically for GSA Region 10 to create a custom roadmap for making smart financial and thoughtful environmental decisions about sustainable and energy-saving practices at our facilities in Alaska, Idaho, Oregon, and Washington.

This plan is a work in progress. We will review it every two to three years to refine it as a valuable tool that will help us implement sustainable energy management practices. Your input is welcome and needed to further craft our SEMP, so it helps each of us contribute to a sustainable future.

Using the SEMP

The SEMP is both a guide and workbook. It describes how we intend to implement our plan and how it will be improved. Whether facilities are leased or owned, new or old, this plan will help operations managers, design teams, and others accomplish energy goals and balance costs.

The SEMP provides the strategies, best practices, and tools we can use to meet the objectives outlined in this section. It also contains resources, strategies, and a variety of information on energy management practices and policies.
## Objectives in the Northwest/Arctic Region

<table>
<thead>
<tr>
<th>Objectives</th>
<th>To achieve our objectives we will . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve asset value and reduce operating costs</td>
<td>Maintain a portfolio of efficient, sustainable workspaces with comfort conditions that enhance productivity, meet customer needs, and achieve financial objectives.</td>
</tr>
<tr>
<td>Ensure focus on sustainability in facility design, renovation, and construction</td>
<td>Enhance, support, and guide regional processes to ensure that new and renovated facilities are designed, constructed, commissioned, and operated with energy and water sustainability in mind.</td>
</tr>
<tr>
<td>Install renewable systems and procure renewable source energy</td>
<td>Seek to influence the movement of government agencies toward renewable energy sources by installing renewable systems and procuring energy from renewable sources, as well as leveraging our buying power to obtain the best pricing available in the market.</td>
</tr>
<tr>
<td>Strengthen energy security</td>
<td>Install on-site generation for reliable and secure energy and power (life-cycle cost-effective when feasible); consistently implement demand reduction and energy conservation measures at our facilities.</td>
</tr>
<tr>
<td>Provide education</td>
<td>Educate and involve tenants, employees, and visitors in our energy conservation efforts through awareness campaigns and other communication so they can make informed choices that have positive environmental results.</td>
</tr>
</tbody>
</table>

## Regional Goals

1. **Provide best value for customer agencies and taxpayers** by establishing strategic and tactical partnerships with customers, comparing costs with the private sector, and measuring customer satisfaction.

2. **Achieve responsible asset management** by diligently and fully implementing the “Family of Plans,” deriving maximum benefit from the Public Buildings Service (PBS) inventory, and implementing the National Portfolio Strategy.

3. **Operate efficiently and effectively** by applying results-oriented business measures, sharing best practices, evaluating the organization to ensure optimum support, managing operating costs, and improving project delivery for revenue start.

4. **Ensure financial accountability** by establishing financial targets and measures, maximizing funds from operations, and maintaining accurate financial data.

5. **Maintain a world-class workforce and a world-class workplace** by promoting associate engagement and development, succession planning, and a world-class workplace in conjunction with PBS’s national Human Capital Strategy.

6. **Carry out social, environmental, and other responsibilities as a federal government agency** by maintaining an active child care program, supporting the Good Neighbor Program, promoting “green” programs, conserving energy, and meeting Procurement Preference Program goals.
Progress toward Our Energy Goals

In the GSA Northwest/Arctic Region, we intend to continue our steady progress in reducing Btu-per-gross-square-foot energy consumption in our buildings. We are also working to meet our regional energy goals. The energy performance graph shows our progress as of September 2004. It compares Region 10’s energy consumption progress with that of other GSA regions and with GSA as a whole. For these comparisons, FY1985 data are used for the baseline.

![Energy Performance Graph](image-url)
Facility Operations

GSA Northwest/Arctic Region facilities include a variety of federally owned and leased buildings. Our inventory consists of office buildings, courthouses, border stations, warehouses, laboratory space, and child care space.

We can meet our targets by focusing our customer operations, portfolio management, property management, and business services on environmental stewardship.

To meet those targets we will:

- Identify and track energy consumption.
- Provide information to building tenants about the status of energy and sustainability projects.
- Demonstrate to customers the results of projects and efforts.
- Ask our tenants for feedback about the building environment to improve where necessary and to determine the effectiveness of our sustainable operating and custodial procedures.

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity</strong></td>
<td>118,717,722 kWh</td>
<td>$6,054,207</td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td>10,234,774 CF</td>
<td>$1,469,210</td>
</tr>
<tr>
<td><strong>Fuel Oil</strong></td>
<td>Not available this edition</td>
<td>Not available this edition</td>
</tr>
<tr>
<td><strong>Steam</strong></td>
<td>28,546 MLB</td>
<td>$451,770</td>
</tr>
<tr>
<td><strong>Geothermal</strong></td>
<td>Not available this edition</td>
<td>Not available this edition</td>
</tr>
</tbody>
</table>
national and agency policies and mandates provide the guidance and specific directives we need to follow while we pursue our energy and environmental goals and objectives. On a national level, legislative directives and executive orders provide mandates related to energy and the environment for federal agencies. And on an agency level, GSA has developed energy management policies and procedures that are relevant to its mission.

**National Policy**

The Energy Policy Act of 1992, along with its amendments to the National Energy Conservation Policy Act, forms the statutory basis of federal energy management activities. Subtitle F of the Act focuses on energy management at the federal agency level. This Act also authorizes federal agencies to use third-party project financing that is offered by utilities and energy service companies. (For more information about the Energy Policy Act, see the Federal Energy Management Program’s (FEMP) Web site: www.eere.energy.gov/femp/about/legislation.cfm.)

Congress is considering a new National Energy Policy Act. If approved, this policy would create new requirements. In lieu of a new comprehensive policy, some aspects of the National Energy Policy Act may be enacted separately. We will track progress of the bills and incorporate any new requirements into an updated SEMP.

**Executive Order 13123, Greening the Government Through Efficient Energy Management**

E.O. 13123 (June 8, 1999) builds on work begun under the Energy Policy Act of 1992 and directs the federal government to take a leadership role in efficient energy management by significantly improving energy use to save taxpayer dollars, reduce dependence on foreign energy sources, and reduce emissions that contribute to air pollution. It directs agencies to conserve water and to use more cost-effective renewable energy technologies, which include solar, wind, geothermal, and biomass energy systems. This Executive Order is the basis for all federal agency mandates. (For more information on guidance for Executive Order 13123 see FEMP’s Web site: www.eere.energy.gov/femp/about/legislation.cfm.)
### Goals of Executive Order 13123

<table>
<thead>
<tr>
<th>Category</th>
<th>Goal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greenhouse Gas Emissions</strong></td>
<td>30% reduction by 2010</td>
<td>Base year is 1990. U.S. Department of Energy will calculate agencies’ progress toward this goal and report it on agencies’ annual energy scorecards.</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Buildings</td>
<td>30% improvement by 2005 35% improvement by 2010</td>
<td>Base year is 1985.</td>
</tr>
<tr>
<td>Laboratory Facilities</td>
<td>20% improvement by 2005 25% improvement by 2010</td>
<td>Base year is 1990.</td>
</tr>
<tr>
<td>Exempt Facilities</td>
<td>N/A</td>
<td>Despite the lack of quantitative goals, agencies should implement strategies to improve energy efficiency at these facilities.</td>
</tr>
<tr>
<td>Audits</td>
<td>Conduct audits for energy efficiency on 10% of facilities annually.</td>
<td></td>
</tr>
<tr>
<td><strong>Renewable Energy</strong></td>
<td>Implement renewable energy projects.</td>
<td>Renewable Energy Certificates can be purchased via GSA Schedule 871 II. These certificates count toward the federal energy goal. Solar equipment can be purchased via e-buy, from Schedule 84. Installing federal solar energy systems will help support the Million Solar Roofs Initiative.</td>
</tr>
<tr>
<td></td>
<td>Purchase electricity from renewable energy sources.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install 2,000 solar energy systems at federal facilities by 2000.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install 20,000 solar energy systems at federal facilities by 2010.</td>
<td></td>
</tr>
<tr>
<td>Petroleum</td>
<td>Reduce petroleum use.</td>
<td>Switches to alternative energy sources should be cost effective as determined by life-cycle cost analysis.</td>
</tr>
<tr>
<td>Source Energy</td>
<td>Reduce use of source energy.</td>
<td>Accomplish by undertaking projects that are cost effective as determined by life-cycle cost analysis.</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>Reduce water consumption.</td>
<td>Accomplish with life-cycle cost-effective measures and financing mechanisms such as energy savings performance contracts. Agencies must implement water management plans and best management practices in their facilities and reduce water consumption according to the following schedule: 30% by 2006 50% by 2008 80% by 2010 Based on 2000 base year</td>
</tr>
</tbody>
</table>
**Additional Requirements of Executive Order 13123**

- Increase use of alternative financing arrangements.
- Purchase ENERGY STAR® equipment.
- Increase use of renewable power sources (on-site projects and green power purchases to equal 2.5% of requirements by 2005).
- Build and retrofit buildings to ENERGY STAR levels.
- Incorporate sustainable design principles in building projects.
- Submit an annual Energy Implementation Plan.
- Designate senior official and energy teams.
- Submit annual information and scorecard.

**Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition**

E.O. 13101 (September 16, 1998) requires agencies to establish an Environmental Executive position; incorporate waste prevention and recycling in daily operations; and purchase and use environmentally preferable products and services, including recycled goods. (For more information, consult the following Web sites: FEMP Web site at www.eere.energy.gov/femp/technologies/sustainable_fedrequire.cfm and the Office of the Federal Environmental Executive Web site at www.ofee.gov/eo/eo.htm.)

**Executive Order 13148, Greening the Government Through Leadership in Environmental Management**

E.O. 13148 (April 21, 2000) requires the government to provide leadership to integrate environmental accountability into all operations; implement strategies to support environmental policies and procedures; comply with environmental regulations and emphasize pollution prevention; inform workers and the public of possible pollution sources; and develop environmental management systems. (For more information, visit the Office of the Federal Environmental Executive Web site at www.ofee.gov/sb/policies.html.)

**Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use**

E.O. 13211 (May 18, 2001) requires agencies to prepare a Statement of Energy Effects when undertaking certain agency actions, including actions having significant adverse effects on energy supply, distribution, or use. These statements will provide useful energy-related information and hence improve the quality of agency decision-making.

**Executive Order 13212, Actions to Expedite Energy-Related Projects**

E.O. 13212 (May 18, 2001) calls for executive departments and agencies to expedite projects that increase the production, transmission, or conservation of energy.

**Executive Order 13221, Energy-Efficient Standby Power Devices**

E.O. 13221 (July 31, 2001) mandates the purchase of products that use minimal (less than 1 Watt) of power while in their standby power consuming mode. (For more information, see FEMP’s Web site: http://www.eere.energy.gov/femp/about/legislation.cfm.)
Executive Order 13149, Greening of the Government Through Federal Fleet and Transportation Efficiency

E.O. 13149 (April 26, 2000) calls for the government to take a leadership role in reducing petroleum consumption by improving the fuel efficiency in federal fleets and using alternative fuel vehicles and alternative fuels. (For more information, visit the U.S. Environmental Protection Agency [EPA] Web site at www.epa.gov/fedsite/eo13149.htm.)

Executive Order 13150, Federal Workforce Transportation

E.O. 13150 (April 21, 2000) directs agencies to provide staff with alternatives to reduce work-related transportation and fuel use, such as flexible workplace arrangements, carpooling, public transit reimbursement, and bicycle arrangements such as showering facilities. (For more information, visit the U.S. Department of Transportation Web site at www.fta.dot.gov/library/policy/cc/eo13150.htm.)

GSA Policies

GSA policies provide guidance on achieving our energy management goals. GSA’s guidance includes facility standards, design information, best practices, and other supportive information and tools. Our regional goals fully embrace and comply with all GSA internal policy. In addition, they meet or exceed the federal legislation and executive orders regarding environment and energy.

For more information:

- Facility Standards (PBS P100)  
  http://insite.gsa.gov/_pbs/pc/

- GSA Sustainable Design  
  http://insite.pbs.gsa.gov/PL/home.asp

- GSA’s Design Excellence Program  
  www.gsa.gov (click on Design Excellence Program)

- GSA Web site  
  www.gsa.gov

- GSA Real Property Web site  
  www.gsa.gov/realpropertypolicy

- Real Property Management Sustainable Development Guide (hard copy)

- Energy, Environmental, and Sustainable Design in Lease Acquisition

- Real Property Leasing Activities

"We concentrate on re-refined oil, recycled anti-freeze, retread tires, and alternative fuel vehicles—LPG, CNG, biodiesel, ethanol, hybrid. We have incorporated recycled carpeting, recycled paint, solar power, and solar lighting into our Fleet Center and we remove mercury switches from disposal vehicles before we sell them.

Lori Anderson  
Puget Sound Fleet Manager

Alternative fuel vehicles help agencies reduce petroleum consumption
we are committed to reaching our energy management goals through the collaborative efforts of each GSA service (Public Buildings Service, Federal Supply Service, and Federal Technology Service), smart fiscal strategies, partnerships, and our personal commitments.

Partnerships form the foundation of the SEMP. We will combine our talents, knowledge, and services to provide comfortable, energy-efficient, and sustainable workspaces and products at the best value to our customers. We will also lead by our own example. Our actions will reflect our priorities of sustainable principles and smart fiscal strategies.

The basic elements of our approach are:

- Program Administration
- Program Budget
- Program Performance and Evaluation
- Training and Education
- Coordination and Collaboration
- Employee and Tenant Awareness
- Awards and Recognition

**Program Administration**

Two primary groups will administer our SEMP: an advisory board and a regional energy management team. See Appendix A for membership.

**Advisory Board**

The advisory board will meet periodically to advise on the components of the SEMP and review our progress. This board will include representatives from the Federal Supply Service and the Federal Technology Service. A chair from the Public Buildings Service will oversee the board. The board may include a National Energy Center representative and a representative from another GSA region. It may also include representation from public and private regional landlords, contractors, and other federal agencies such as the U.S. Department of Energy (DOE).

**Regional Energy Management Team**

The regional energy management team (REMT) will be composed of representatives from the Public Buildings Service and led by the regional energy coordinator (REC). The REMT will use a cooperative approach to identify and pursue opportunities to achieve the intent of the SEMP. Team members will be invited to participate in project planning, budget planning, design charrettes, and other key meetings.

The management advocate will support the SEMP and enhance the effectiveness of the REMT. The REC will facilitate the implementation of the SEMP through coordination, communication, and guidance.
role of the other team members will be to participate fully by contributing their expertise, current information, and commitment to meet the objectives of our SEMP.

Regular team meetings will be held to provide opportunities to communicate, define, and improve processes to meet our goals and allow feedback for improvement. Focus meetings will address specific issues or projects and identify resources and opportunities.

Roles and Responsibilities of REMT Members

*Management Advocate.* Encourages collaboration across divisions and represents the interests of the region, the SEMP, and the REMT during management resource planning discussions.

*Technical Support Team Leader.* Provides the connection between management and the REC, distributes and interprets energy policy, and provides guidance on priorities.

*Regional Energy Coordinator.* Is the PBS spokesperson and coordinator for the REMT, collaborates and shares lessons learned with the Energy Center of Excellence and other regions and agencies, coordinates and leads REMT meetings, carries out action items identified in the SEMP, and coordinates and implements the energy program.

*Portfolio Management and Property Development Representatives.* Bring the perspective of the project managers, suggest procedural and policy changes essential to implementation of the SEMP, identify opportunities and projects, and share objectives and lessons learned.

*Supervisory Asset Manager Representatives.* Bring the perspective of the service centers, identify concerns and needs of the field, suggest essential procedural and policy changes to implement the SEMP, identify opportunities and projects, and collaborate and share lessons learned with other asset managers. Asset managers may lead efforts to encourage and educate staff and tenants in energy awareness and conservation.

*Lead Electrical Engineer.* Brings the perspective of the electrical design group to the REMT, identifies projects and opportunities, and transfers implementation strategies back to the design group.

*Lead Mechanical Engineer.* Brings the perspective of the mechanical design group to the REMT, identifies opportunities and projects, and transfers implementation strategies back to the design group.

*Facilities Services Support Branch Representative.* Brings the perspective of the O&M staff to the REMT, identifies opportunities and projects, and transfers implementation strategies back to the O&M staff.

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**REMT Roles**

- Educate, motivate, and acknowledge success.
- Carry out the action items from the SEMP.
- Identify and implement projects.
- Check progress, set new goals, and move forward.
Project Architect/Designer. Brings the perspective of the architectural design group to the REMT, identifies opportunities and projects, and transfers implementation strategies back to the design group.

Contracting Representative. Provides contracting expertise, brings the perspective of the contracting group to the REMT, suggests essential procedural and policy changes, identifies opportunities and projects, and transfers implementation strategies back to the contracting group.

See Appendix A for REMT membership.

Program Budget

With environmental leadership as our goal and smart fiscal planning as our objective, we will continue to prepare and request an inclusive annual energy budget to submit as a specific line item. This budget will include funds to accomplish the initiatives, goals, and objectives of our SEMP. In addition, we will focus on opportunities to use all current budgets to fulfill the objectives of this plan.

As a region, all project cost estimates will include the resources to design, implement, commission, and verify project savings. With input from Public Buildings Service staff, the REMT will develop a 5-year plan to achieve the objective of the SEMP. (See Appendix B for the Goals, Resources, and Implementation Schedule.)

Our budget submissions for all new and renovation construction projects will include costs for:

- Sustainable design and construction
- Life-cycle, cost-effective energy projects
- High efficiency replacement equipment purchases
- Energy efficiency-focused operations and maintenance (O&M) and continuous commissioning
- Renewable energy procurements and projects
- Environmentally preferable product purchases.

We will continue to use third-party financing when appropriate.

Project Budgeting

Funds for projects typically are allocated in the following budget accounts:

- New construction – BA51
- Major reconstruction/renovation – BA55
- Operations and maintenance (equipment replacement, minor projects) – BA61, BA63
- Repair and alteration – BA54.

Budget Process

Ongoing energy project identification and analysis are conducted. Funding is provided based on life-cycle cost (LCC) analysis. Projects should be submitted to the Energy Center of Expertise as soon as energy audits are completed.
Program Performance and Evaluation

The progression to leadership in energy efficiency and sustainability depends on effective program evaluation and honest performance feedback. The REMT will work each year with the advisory board to solicit input on additional goals for our SEMP, identify revisions and additions, and gauge our performance for the past year.

The intentions of performance evaluation are to:

- Track, monitor, and report on progress and activities of the SEMP.
- Request input from and provide feedback to service centers, project management, facility operations, and others.
- Provide information for the annual report to DOE and the Office of Management and Budget scorecard.
- Use our annual DOE reporting exercise as an opportunity to evaluate our performance.
- Use the GSA scorecard to identify opportunities to support goals and improve on performance.
- Invite input from and provide feedback to our clients and customers.
- Inform tenants of energy consumption history, progress toward goals, and impact of their actions.

See Appendix C for the Federal Agency Energy Scorecard.

Training and Education

Because adequate training is essential to meet our goals and objectives, we will strive to provide personnel with the training to carry out the goals of our SEMP. We have provided many training opportunities for staff to become knowledgeable in energy efficiency, efficient O&M, sustainable buildings, Leadership in Energy and Environmental Design (LEED), performance contracting, renewable energy projects, water conservation, and other areas that are pertinent to our SEMP. We will increase opportunities for education, on-the-job training, mentoring, presentations, and workshops.

We will strive to provide training opportunities that are cost effective. These include local training opportunities, hands-on education (such as photovoltaic [PV] installation), regional meetings that provide information and education for specific groups (annual Building Operator Conference), and on-site group training by educators from outside GSA.

In addition, we will continue to take advantage of the certification programs available to us, such as Certified Energy Manager, Operation and Maintenance Manager, and LEED accreditation.

See Appendix D for training information.

Our training goals will be supported by the following activities:

- The REMT will identify, recommend to staff, and take advantage of training opportunities.
- We will identify and encourage targeted training for the management team, project managers, asset managers, designers, O&M staff, and custodial staff.
- We will work with other agencies in the region to identify and sponsor or co-sponsor training sessions.
For more information:

Better Bricks (Northwest Energy Efficiency Alliance)
www.betterbricks.com/default.aspx

DOE Western Regional Office
http://www.eere.energy.gov/sro/

Energy Ideas Clearinghouse
www.energyideas.org

Federal Energy Management Program Training
http://www.eere.energy.gov/femp/services/training

U.S. Green Building Council
www.usgbc.org

**Coordination and Collaboration with Others**

Our internal and external partners are valuable resources for information sharing, collaboration, and technical assistance. We will continue to collaborate with these partners and look for additional opportunities to share resources and information and to achieve common objectives.

**Internal Partnerships**

*Portfolio Development Division.* Portfolio Development provides strategic vision and operational guidance that is responsive to our business partners throughout the region.

*Portfolio Management Branch.* See the FY 2005 business plan.

The Asset Management Team provides long-term asset strategies for development, end uses, and quality financial performance.

The Professional Services Team provides pre-project planning and project follow-through with regards to technical expertise in architecture, engineering, interior design, and life safety. Staff are also designated as Regional Authorities Having Jurisdiction in the areas of life safety, fire safety, environmental, and occupational safety and health.

*Property Development Division.* Property Development provides project management, acquisition services, and technical support for all areas of PBS.

*Facilities Operations Support Branch.* This branch will work with the service centers and supervisory asset managers to create energy-efficient, sustainable facilities. They will encourage tenants to participate in the development of energy awareness plans with the REMT and to make conscious choices to reduce the impact on the environment through everyday activities and procurement.

*Business Service Division Financial Services Branch.* This branch provides easy and effective access to an array of energy services. These services range from auditing, technical review, and design to alternative financing
mechanisms. By collaborating, we can obtain a variety of support and assist our sister organization with continuous feedback to maintain the high quality of service offered in the schedule.

External Partnerships

*Federal Agencies.* Coordination with other federal agencies is another key aspect of realizing our goals. We have a thriving relationship with FEMP and the Western Regional Office. Through an Interagency Agreement (IAA) we can access the many services and resources FEMP offers to federal agencies. In addition, the DOE National Laboratories—including Lawrence Berkeley National Laboratory, the National Renewable Energy Laboratory, Oak Ridge National Laboratory, and Pacific Northwest National Laboratory—are available to provide reimbursable expertise. They offer SAVEnergy audits, surveys, technical and design assistance, alternative financing, and other support.

*Bonneville Power Administration (BPA).* The BPA continues to be a key partner. It provides technical and financial assistance for energy efficiency projects through an IAA.

*Federal Executive Board (FEB).* The FEB improves coordination among federal activities and programs outside the Washington, D.C., area. Members provide information about new and current sustainability and energy programs to the regional offices.

*Federal Network for Sustainability (FNS).* The FNS is composed of more than 13 federal agencies in the West and works to promote sustainable practices. The Northwest/Arctic Region has been a member of the FNS and is in the process of re-signing the Statement of Unity and assuming a more active role in the group.

*Regional Councils.* Councils such as the Puget Sound Real Property Council help us achieve our goals. Key presentations have been given to the groups to raise awareness of the requirements for energy efficiency and sustainability.

*State Energy Offices, Local Governments, and Associations.* These entities within our region often provide us with information and project case studies. Professional and technical societies, including the American Institute of Architects (AIA) and the Association of Energy Engineers, frequently provide workshops and other sessions that can help us in our educational efforts. In return, we can use these forums to present our program overviews and case studies (such as an AIA forum at which information on GSA’s Design Excellence Program and the new Seattle Courthouse was presented).

*Utilities.* Utilities such as Puget Sound Energy and Seattle City Light are key partners in our efficiency efforts. They frequently provide technical advice, electronic utility data, rebates, and incentives. We will track and use the many programs available to us as utility customers.

— Arun Jhaveri
Regional Technology Manager
U.S. DOE/FEMP/Seattle

“Developed with assistance from the National Renewable Energy Laboratory and FEMP/Western, GSA Region 10’s SEMP is an example of collaboration on a shared vision.”
Employee and Tenant Awareness

To minimize environmental impact and meet our goals and objectives, our employees, customers, and tenants must make conscious choices daily. We all can increase efficiency through wise procurement choices such as ENERGY STAR and other energy-saving products. Additionally, our personal choices, such as turning off computers and desk lamps and accepting lighting controls and temperature set points, reduce energy use.

To support individuals on the continuum from awareness to action, we will:

- Develop outreach programs.
- Focus energy awareness efforts on Earth Day and during Energy Awareness Month.

The REMT, along with staff and tenant representatives, will develop outreach programs for our employees and customers to promote an awareness and understanding of the objectives of our SEMP. Outreach efforts will include education, information, and training in multiple areas. Areas of outreach focus include:

- ENERGY STAR and other energy-efficient products
- Integration of sustainability in design and construction
- Use of renewable energy systems and procurement
- Facility operations focused on energy efficiency
- Informational and inspirational signage
- Incentives and motivational efforts.

We will use FEMP’s promotional materials and guidance to provide informational and educational opportunities for employees, customers, and tenants.

See Appendix E for energy awareness strategies.

Awards, Recognition, and Incentives

We understand the value of recognizing achievement. It is a necessary and important activity and motivates us all to continue our efforts even when they become challenging or routine. We will use available venues and create new avenues to acknowledge energy-saving efforts, communicate progress, and determine customer satisfaction. Awards and recognition for staff, customers, architects and engineers, partners, and tenants will be a key part of our SEMP. In addition, we have created a model O&M contract, which will provide incentives to contractors to provide energy efficiency benefits as part of their O&M activities.
We will also participate in GSA's and DOE's annual energy awards. Our Region 10 has been recently honored with a Federal Energy Saver Showcase designation. The Oroville-Osoyoos Border Crossing Station in Oroville, Washington, is a showcase for saving energy and using sustainable practices and products.

(See Appendix E for information on awards.)

Region 10 Awardees (from left) Roger Wright, John Jarosz, Carole Diamond, and Michael Okoro are honored in October 2003 for their work at the Edith Green/Wendell Wyatt federal building. Kit Meith, Regional Energy Coordinator (back row).
strategies, best practices, and tools

to successfully accomplish the goals set forth in our SEMP, we need the right resources for planning, implementation, and maintenance. The strategies, best practices, and tools that will help us accomplish our goals are available to us now. In fact, we use many of them already for projects that involve new construction, renovations, equipment replacement, retrofit projects, and building O&M. These resources help us increase energy efficiency and occupant satisfaction, reduce water consumption, support sustainability and renewable energy, and reduce utility costs.

The REMT will work with the Public Buildings Service to develop actions and an implementation schedule to meet our goals. (See Appendix B for the Goals, Resources, and Implementation Schedule.)

Life-Cycle Cost Analysis

Use of building LCC is mandated throughout E.O. 13123. We will continue to use and reinforce the use of LCC analysis to make effective, long-term business decisions about investments in energy-using systems. New construction, retrofit projects, and equipment replacement are areas in which we will use LCC. In addition, LCC is valuable in making decisions about non-energy-using materials (such as carpeting and wall treatments).

We will support the use of LCC in the following ways:

- Use LCC analysis for energy-using systems in all new construction, renovation, and retrofit projects.
- Follow the guidance developed in the LCC program used by the National Institute of Standards and Technology.
- Ensure that facility and procurement staff members are knowledgeable in the use of LCC.

For more information:

Building Life-Cycle Cost Software
http://www.eere.energy.gov/femp/information/download_blcc.cfm

Facility Energy Audits and Assessments

E.O. 13123 mandates that we audit 10% of our space each year. During the last 10 years, we have audited almost our entire inventory. We will continue to conduct energy audits, assessments, and surveys at a rate of 10% each year. Information we obtain will be used to identify the most cost-effective projects for implementation.
We will use audits and assessments to:

- Assign priorities to facilities that will receive audits on the basis of energy costs, upcoming renovations and equipment replacement opportunities, and the potential for emissions reductions.
- Use a variety of resources for audits, assessments, and surveys, such as FEMP, utilities, BPA, energy service companies (in conjunction with Energy Savings Performance Contracting), and private contractors.
- Encourage facility staff to conduct annual walk-through surveys to gain a greater understanding of their facilities and identify opportunities for more efficient operations and replacement of equipment.

For more information: Energy Services, Schedule 871 II

SAVEnergy Audits (FEMP)
http://www.eere.energy.gov/femp/services/assessments_savenergy.cfm

Project Funding and Financing

We will continue to use a variety of funding avenues for project financing. Our first step in the funding process will always be to identify available GSA internal funds. For new construction and large renovation projects, we will include the costs of sustainable design and commissioning in budget submissions. Energy and water efficiency projects, renewable energy, and other projects will require budget submission or may be combined with current construction or operations projects.

When internal funding is not available, and third-party financing appears to be the best alternative, we will encourage the use of project financing rather than delay the project.

To fulfill these objectives, we will:

- Identify the most appropriate funding option for each priority project (internal or external funding or a combination of both).
- Identify and consider the external financing options: energy savings performance contracting, utility energy savings contracting, and IAAs through BPA.
- Explore leveraging resources through partnerships. Consider rebate and incentives from utilities, other federal agencies such as BPA, solicitations for technology demonstration projects, and co-sponsorship of projects such as U.S./Canadian partnerships.

In the last 10 years, we have used alternative financing as well as internal funding for many projects. We have a solid foundation in use of energy savings performance contracting. Four projects have been awarded and others are being considered.

For more information:

Financing Mechanisms (FEMP)
http://www.eere.energy.gov/femp/financing/mechanisms.cfm
Energy-Efficient and Sustainable Procurement

We will continue to reinforce and expand our program to procure the most efficient and sustainable products during construction, renovation, equipment replacement, and building maintenance.

Equipment with the ENERGY STAR label will routinely be the equipment of choice. When that equipment is not available, we will select products that are in the top 25% efficiency. We will use the Environmentally Preferable Purchasing Guidelines for other purchases and the GSA Federal Supply Schedules for procuring sustainable and high efficiency products and energy services.

We will support these objectives in the following ways:

- Incorporate energy efficiency criteria into guidelines and specifications for all projects. Be consistent with use of ENERGY STAR, EPA Environmentally Preferable Purchasing, and EPA/DOE designated energy-efficiency products.
- Incorporate energy efficiency criteria consistent with ENERGY STAR and FEMP-designated products into product specification language developed for basic ordering agreements, blanket purchase agreements, architectural and engineering (A/E) services, and other purchasing procedures.

For more information:

ENERGY STAR Products www.energystar.gov

EPA Environmentally Preferable Purchasing www.epa.gov/oppt/epp/index.htm


Sustainable Building Design and Construction

Leading the way to sustainable design at federal facilities is an important goal for GSA Region 10. We embrace sustainable building design and "whole building" principles in which the interdependence of a building's elements and systems is maximized to make it as sustainable and energy efficient as possible. Sustainable design recognizes the impact of every design choice (such as window placement and type of cooling system) on the natural and cultural resources of the local, regional, and global environments.

When designing new construction and major renovations, we will use many available resources. These include the Procurement of Architectural and Engineering Services for Sustainability; GSA Sustainable Design Guide, the Facilities Standards for the Public Buildings Service, P100; The Design Excellence Program Guide; Building a Legacy; Real Property Sustainable Development Guide; Best Practices Special Edition, Fall 2002; Whole Building Design Guide; the LEED program of the US Green Building Council, and the Sustainable Design Studio.

The GSA Northwest/Arctic Region is currently seeking LEED certification on three buildings, two new and one existing, and one client agency is housed in leased space that is LEED certified. We have several buildings designated as Federal Energy Saver Showcases and six ENERGY STAR buildings. Four of our buildings have received national Design Excellence awards.

We will continue to support sustainable design and construction in the following ways:

- Educate asset managers, portfolio managers, project managers, facility staff, architects, engineers, designers, budget analysts, maintenance staff, and other key personnel about sustainable design principles, energy efficiency, and LCC.
- Submit budgets that include costs for sustainable design and construction; include commissioning, building modeling, and other critical elements.
- Determine beforehand the rating to be obtained for each new construction project (such as LEED [including level] or Federal Energy Saver Showcase).
- Hold design charrettes and include customers, project managers, maintenance staff, A/E team, designers, and others to identify requirements and discuss sustainability, commissioning, and optimized O&M.
- Ensure that the selection criteria for A/E firms and design/build firms include experience with energy efficiency, water conservation, use of LCC, and sustainable building design.
- Incorporate sustainable design criteria into requirements for all new construction and major renovation projects.
- Review design guide specifications and incorporate current sustainability guidance.
- Consider O&M during planning and design.
- Include building commissioning in all new construction and substantial renovation projects.
- Incorporate continuous commissioning and O&M planning in all new and renovation design specifications.
- Use software such as Building for Environmental and Economic Sustainability (BEES), Life Cycle Costing (LCC), DOE2, Energy 10, and other tools.
- Participate actively in the Federal Network for Sustainability, Sustainable Building Initiative to learn from other federal agencies and pass on our extensive knowledge.
- Continue to nominate projects and buildings for regional and national design, energy efficiency, and sustainability awards.

For more information:

Building for Environmental and Economic Sustainability
www.bfrl.nist.gov/oae/software/bees.html

Business Case for Sustainable Design in Federal Facilities
www.eere.energy.gov/femp/technologies/sustainable_federalfacilities.cfm

Child Care Center Design Guide
www.gsa.gov (Type in “Child Care Design” in search box.)
Federal Network for Sustainability
www.federalsustainability.org

FEMP Interagency Sustainability Working Group
www.eere.energy.gov/femp/technologies/sustainable_workinggroup.cfm

GSA Publications List
www.wbdg.org/references/publications.php
Greening Federal Facilities Guide
www.eere.energy.gov/femp/technologies/sustainable_greening.cfm

Leadership in Energy and Environmental Design (U.S. Green Building Council)
www.usgbc.org

Procurement of Architectural and Engineering Services for Sustainability
www.eere.energy.gov/femp/program/procuring_services.cfm

Whole Building Design Guide
www.wbdg.org
Building and System Commissioning

GSA Region 10 is at the forefront of building commissioning in the federal government. Commissioning helps us achieve, validate, and document that our building performance and systems meet the design needs and requirements of GSA and our occupants. For example, we are using commissioning for the new Seattle Courthouse.

Because all building systems are integrated, a problem in one system or component can affect the operation and performance of other components. Identifying and eliminating problems are important for improved occupant comfort, energy savings, environmental conditions, system and equipment functioning, and building O&M.

To remain in the forefront of building commissioning, we will:

- Emphasize building commissioning in all five phases of projects: program, design, construction, acceptance, and post-acceptance/occupancy, including recommissioning and continuous commissioning.
- Use available tools such as commissioning guides, information on selection of independent commissioning authorities, commissioning specifications, and commissioning reports to define and continuously improve our knowledge of commissioning.

For more information:

*Continuous Commissioning Guidebook for Federal Managers*
www.eere.energy.gov/femp/operations_maintenance

*Greening Federal Facilities* (Chapter 9.2—Building Commissioning)
www.eere.energy.gov/femp/technologies/sustainable_greening.cfm

Portland Energy Conservation, Inc. (PECI)—Commissioning and O&M Resources
www.peci.org/cx/index.html

Operations and Maintenance

Operations and maintenance is one of the most cost-effective areas for ensuring reliability, safety, and energy efficiency. Good maintenance practices can generate substantial energy savings. Energy losses from steam, water and air leaks, uninsulated lines, and maladjusted or inoperable controls are often considerable. Improvements to facility maintenance programs can often be immediate and low cost.

To build on our excellent O&M program, we will:
• Review and modify our regional O&M procedures and maintenance plans to reflect O&M best practices, focusing on energy efficiency and cost-effective O&M.
• Continue to educate maintenance personnel about equipment and how to optimize energy-consuming systems.
• Provide periodic training on building monitor and control systems and building control systems.
• Educate customers about comfort control and its impacts and costs.
• Budget for O&M training, continuous commissioning, and education.
• Continue to test and refine the new O&M contracts that include performance requirements and bonuses for contractors. Ensure that the performance criteria for O&M services include experience with energy management, continuous commissioning, and sustainable building practices.

For more information:

Building Operator Certification
www.theBOC.info

FEMP O&M Best Practices Guide
www.eere.energy.gov/femp/operations_maintenance

PECI O&M Best Practices Series
www.peci.org/om/index.html

Laboratory Facilities

We will continue to address the special requirements of our laboratory space to meet the federal goal of reducing energy consumption by 20% by 2005 and 25% by 2010, relative to 1990 consumption levels.

To continuously build on our laboratory experience and efficiency efforts, we will use guidance generated from the Labs for the 21st Century Program sponsored by EPA and DOE.

For more information:

Labs for the 21st Century
http://www.labs21century.gov

Highly Efficient Systems

As part of the federal government, GSA Region 10 is in a strong position to lead in the adoption of new and more efficient technologies, distributed energy resources, and other highly efficient systems. We will continue to identify opportunities to demonstrate the appropriate use of promising technologies and to show leadership by example.

To fulfill these objectives, we will:

• Install and use advanced metering and monitoring techniques.
• Identify opportunities for use of geothermal heat pumps, combined heat and power (CHP), biomass, micro turbines, fuel cells, and other underused technologies.
• Disseminate information within GSA and the federal sector on results of demonstration projects.
Greenhouse Gas Emissions Reduction

Greenhouse gas emissions could alter forests, crops, and water supplies. Agencies are directed under E.O. 13123 to “reduce their greenhouse gas emissions attributed to facility energy use by 30% by 2010 compared to such emissions levels in 1990.”

We will take advantage of all opportunities to reduce emissions through the following measures:

- Switch to less polluting fuels as opportunities are presented.
- Increase the use of renewable energy technologies such as PV, wind, and geothermal.
- Assign priorities to energy-saving projects on the basis of technologies used and potential savings to obtain the best emissions reductions.

For more information:
EPA Greenhouse Gas Emissions Information
yosemite.epa.gov/oar/globalwarming.nsf/content/Emissions.html:

Petroleum Use Reduction and Energy Security

We recognize that reducing our use of petroleum contributes to energy security. E.O. 13123, Section 205 addresses federal agencies in this regard. According to this executive order, each agency is to reduce the use of petroleum in its facilities by switching to natural gas, biofuels, or renewable energy; eliminating unnecessary fuel use; or using other appropriate methods.

We will employ the following strategies to reduce petroleum use and enhance energy security:

- Target facilities that use significant amounts of petroleum.
- Assign priorities to potential projects on the basis of LCC and potential emissions reductions.

For more information:
FEMP Renewable Energy Program
www.eere.energy.gov/femp/technologies/renewable_energy.cfm
Source Energy

GSA Region 10 will strive to reduce total energy use and associated greenhouse gas and other air emissions as measured at the source (such as at electric or coal power plants). We will undertake cost-effective projects, for which LCC analysis has verified cost-effectiveness, that result in decreasing source energy, even if site energy use (measured at the point of use) increases. In addition, projects that result in source energy reductions will contribute directly to GSA's performance in reaching greenhouse gas reduction goals.

We will undertake the following actions in support of these objectives:

- Adopt a self-generation strategy that supports the use of on-site generation and renewable energy by focusing on sites served by utilities that use fossil fuels.
- Follow guidelines to receive credits toward energy efficiency goals for cost-effective projects when source energy use declines (for example, purchasing green power or fuel switching).
- Purchase Renewable Energy Certificates.

For more information:

Purchasing Renewable Power (FEMP)
www.eere.energy.gov/femp/technologies/renewable_purchasepower.cfm

Source Energy Reduction Credit (toward energy efficiency goals)
www.eere.energy.gov/femp/pdfs/source_crediting.pdf

Purchasing Renewable Energy Certificates
GSA Energy Services Schedule 871 II
www.gsa.gov/energyservices
Renewable Energy

GSA Region 10 can be a leader in the use of renewable energy. By using renewable energy at our facilities, we can help advance the renewable energy market and preserve our precious natural resources. We can also contribute to the federal government's goal of striving to acquire 2.5% of its facilities' electricity from new renewable energy sources by the end of FY 2005.

Use of renewable energy is expanding at our facilities through targeted projects and energy purchases from renewable sources. In addition, we are supporting the DOE Million Solar Roofs Initiative, which challenges the government to install 20,000 solar energy systems at its facilities by 2010.

We will take the following actions to continue our contribution to renewable energy use:

- Use screening and analysis to identify facilities that will benefit from solar water and space heating, PV, wind, geothermal, or biomass-based systems.
- Purchase and install on-site renewable energy systems that pass screening analysis.
- Procure renewable power when sources are available from serving utilities or power marketing administrations (such as BPA and the Western Area Power Administration); strive for 100% at sites when possible.
- Procure Renewable Energy Certificates/Green Tags for sites when direct renewable power delivery is not available.
- Take advantage of technical assistance, utility programs, rebates, and other resources available from serving utilities or power marketing administration.

For more information:

FEMP Renewable Energy Program
www.eere.energy.gov/femp/technologies/renewable_energy.cfm

Purchasing Renewable Power (FEMP)
www.eere.energy.gov/femp/technologies/renewable_purchasepower.cfm

Purchasing Renewable Energy Certificates
GSA Energy Services Schedule 871 II
www.gsa.gov/energyservices

Water Conservation

E.O. 13123 calls on federal agencies to install all life-cycle, cost-effective projects with fewer than 10 years simple payback. To meet that objective, we will continue to implement water-saving measures.

We will perform the following activities to save water at our facilities:

- Implement FEMP Best Management Practices (BMPs) as appropriate (in 5% of facilities by 2005 and 15% of facilities by 2007).
• Establish a reliable baseline for regional water consumption.
• Review building operating plans and include water management and BMPs wherever applicable.
• Include water cost savings and sewage savings in LCC and alternatively financed projects (such as energy savings performance contracts and utility energy service contracts).
• Perform water studies via GSA Environmental Services Schedule 899.
Showcase Facilities

The GSA Northwest/Arctic Region is a proven leader in developing high performance facilities. We will strive to create ENERGY STAR and LEED-certified buildings and use whole building design in new construction and retrofits. These facilities should contain systems that represent some of the best applications of sustainability, energy efficiency, and renewable energy in the government.

To meet this objective we will:

- Assign priorities to high performance facilities on the basis of project quality, with special emphasis on sustainable design.
- Acquire management support and budget for resources to meet designations.
- Strive to designate several facilities each year.

For more information:

www.eere.energy.gov/buildings/highperformance

LEED Rating System (Leadership in Energy and Environmental Design--U.S. Green Building Council)
www.usgbc.org

Leased Space

Our goal is to be a leader in providing the most sustainable, comfortable, and energy-efficient leased space to our customers. We currently include many requirements related to these topics in our lease documents.
To increase our focus on efficient and sustainable leased space, we will:

- Work with agencies to acquire new leased space or renew leases to understand the provisions in the lease agreement that pertain to energy efficiency and sustainability.
- Budget appropriately for LEED certification for space that is undergoing significant renovations.

For more information:

*Greening Federal Facilities* (Chapter 9.4—Leased Buildings)

Acknowledgments

We are grateful for the significant contributions to the content of our Strategic Energy Management Plan by Kit Meith, Michael Okoro, and Pat Clark at GSA, and Deb Beattie and Karen Thomas at the National Renewable Energy Laboratory (NREL). We thank Cheri Sayer and Arun Jhaveri of the U.S. Department of Energy (DOE) Western Regional Office for their valuable input, and the DOE Federal Energy Management Program.
appendix a
advisory board

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
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<tbody>
<tr>
<td>Management Advocate</td>
<td>GSA</td>
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<td>PBS</td>
<td>GSA</td>
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<td>FSS</td>
<td>GSA</td>
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<td>FTS</td>
<td>GSA</td>
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<tr>
<td>GSA Energy Center of Expertise</td>
<td>GSA</td>
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<td>DOE – local office</td>
<td>Federal Energy Management Program</td>
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**Standing Board Members:**

**Auxiliary Members:**

<table>
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<tr>
<th>GSA Region</th>
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<td>As invited</td>
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<tr>
<th>Public &amp; Private Building Owners</th>
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<tbody>
<tr>
<td>As invited – Build to suit buildings; how they do their business; BOMA – building operations managers association</td>
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<th>Utility</th>
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<tr>
<td>As invited – Utilities, BPA</td>
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<table>
<thead>
<tr>
<th>Contractors</th>
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<tbody>
<tr>
<td>Building operations and maintenance contractors, vendors, and A/E firms</td>
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<table>
<thead>
<tr>
<th>Major GSA Client</th>
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<tbody>
<tr>
<td>Steve Butterworth, NPS</td>
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<tr>
<td>Tim Scanlon, BPA</td>
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<tr>
<td>Advocate for GSA</td>
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<tr>
<td>Tenants</td>
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**regional energy management team**

<table>
<thead>
<tr>
<th>Title</th>
<th>Topics and Issues</th>
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<tbody>
<tr>
<td>Management Advocate</td>
<td>Overall R10 perspective</td>
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<tr>
<td>Facilities Operations Support</td>
<td>Facility operations, maintenance, energy consumption</td>
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<tr>
<td>Branch Leader</td>
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<tr>
<td>Regional Energy Coordinator</td>
<td>Energy, commissioning, sustainable design</td>
</tr>
<tr>
<td>Project Management Representative</td>
<td>Project management procedures and policy</td>
</tr>
<tr>
<td>Supervisory Asset Manager</td>
<td>Service Centers and tenant awareness</td>
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<tr>
<td>Representative</td>
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<tr>
<td>Lead Electrical Engineer</td>
<td>Electrical design</td>
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<td>Lead Mechanical Engineer</td>
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<td>O&amp;M Representative</td>
<td>Operations &amp; maintenance</td>
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<tr>
<td>Contracting Representative</td>
<td>Contracting</td>
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<tr>
<td>Architect/Designer</td>
<td>Architectural and interior design</td>
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</tbody>
</table>
Develop the Strategic Energy Management Plan such that it supports the accomplishment of regional goals set forth in the Northwest/Arctic Business Plan.

**Facilities Operations Support Branch**

Deliver superior workplace through optimized building operations and sustainable design principles. All associates incorporate SEMP objectives during decision-making process.

<table>
<thead>
<tr>
<th>Supporting Action 1</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish the REMT</td>
<td></td>
<td>May 15, 2005</td>
</tr>
<tr>
<td>1. Name personnel</td>
<td></td>
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</tr>
<tr>
<td>2. Define purpose of the REMT</td>
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<tr>
<td>3. Draft REMT Charter</td>
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</tr>
<tr>
<td>a. Develop an energy management program vision statement and develop vision statements for each member of the EM program.</td>
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<tr>
<td>b. Obtain Division level signatures.</td>
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**Supporting Action 2**
Provide SEMP education to energy champions, project managers, and design teams. See training and education objective Ongoing

**Supporting Action 3**
Verify progress and course correction. Annual

**Supporting Action 4**
PBS Regional Business Plan
GSA Strategic Plan
GSA Performance Measure
Appendix B
Action Plan

<table>
<thead>
<tr>
<th>Executive Order 13123 Topic</th>
<th>Resources</th>
<th>Target Dates</th>
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<tbody>
<tr>
<td>Facility Energy Audits (Sec. 402)</td>
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</table>

Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

Use auditing process and results to make smart cost effective facility upgrades and modifications that will improve workspace and meet environmental goals and objectives.

**Facilities Operations Support Branch**

Audit 10% of facilities annually

Supporting Action 1

Generate database of prioritized facilities with year to be audited identified based on 10% per year cycle. Rank based on:

- Large square footage, heavy energy consuming facilities, and cost of energy
- Facilities that have not undergone energy efficiency projects or recent renovations
- Office and campus type facilities
- Facilities with energy management systems
- Facilities with energy champions.

May 31, 2005

Supporting Action 2

To improve process efficiency and reduce expenditures, consider consolidating various regional assessments into a single facility audit, e.g., energy, water, safety, operations, and renovations.

July 15, 2005

Supporting Action 3

Submit budget annually for facility energy audits

April 20XX

Supporting Action 4

Planned Audits for FY 2005:
1. FBCT Anchorage ak0031aa
2. FBCT Juneau ak0013zz
3. New CT Seattle wa0102zz
4. JFB Seattle wa0101zz
5. TUS Tacoma wa7587zz

Utility provided no- or low-cost audits and surveys
DOE FEMP SAVEnergy audits
ESPC and UESC projects include audits

FY 2005

Tools

DOE FEMP SavEnergy Program
## Facilities Operations Support Branch

### Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Federal Goals

- 30% by 2005
- 35% by 2010

(Relative to 1985 baseline)

Reach beyond federal goals to provide fiscally smart, efficiently operated, sustainable office space.

### Supporting Action 1

- Identify and prioritize projects based on value to customer, impact on environment, and cost effectiveness.
- Energy project database integration
  - Ongoing

### Supporting Action 2

- Implement prioritized projects.

**FY 2005 Planned Projects:**

1. Lighting for Warehouse 8, Auburn, WA.
2. Lighting for FBCT Anchorage parking garage.
3. Commissioning at JFB, Seattle, WA.

- FEMP design and technical assistance, alternative finance support, and LCC analysis
  - FY 2005
- ESPC and UESC

### Tools

- 1985 Building Trends spreadsheet
- Financial tier information
- FEMP services - design and technical assistance, alternative finance support, LCC analysis, building energy simulation modeling, DOE-2, Energy 10, SAVEnergy audits
- ENERGY STAR products
- Leadership in Energy & Environmental Design
# Appendix B
## Action Plan

<table>
<thead>
<tr>
<th>Executive Order 13123 Topic</th>
<th>Resources</th>
<th>Target Dates</th>
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<tr>
<td>Water Conservation (Sec. 207)</td>
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- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

**Regional Goals**

- Responsible Office: Regional energy management team with regional energy coordinator lead

**Federal Goal**

Implement water management plans and best management practices at sites

- 30% of sites by 2006
- 50% of sites by 2008
- 80% of sites by 2010

**R10 Strategic Objective**

Same as federal goal

**Supporting Action 1**

Establish water use in millions of gallons per year (MGY) for baseline year 2000.  
[http://www.eere.energy.gov/femp/technologies/water_baseline.cfm](http://www.eere.energy.gov/femp/technologies/water_baseline.cfm)

**Supporting Action 2**

Develop a water management plan and incorporate into facility planning process and operating plan.  

**Supporting Action 3**

Integrate water best management practices into current operating plans and put applicable O&M into practice.  
Water management plans  
Best management practices

**Supporting Action 4**

Identify water efficiency retrofit and replacement measures. Prioritize projects based on combined energy and water audits.  
Energy audit prioritized list and audit recommendations  
Consider environmental impact, cost effectiveness and current projects.

**Tools**

FEMP water efficiency improvement goal for federal agencies
## Appendix B
### Action Plan

<table>
<thead>
<tr>
<th>Executive Order 13123 Topic</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Building Design (Sec. 403(d))</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Regional Goals

#### Responsible Office
- Regional energy coordinator with property development lead

#### Federal Goals
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

#### R10 Strategic Objective
Region 10 will lead by example and integrate sustainable principles in the design and construction of new facilities and major renovation projects.
- Design all new construction to meet LEED Silver rating or better.

<table>
<thead>
<tr>
<th>Supporting Action 1</th>
<th>Supporting Action 2</th>
<th>Supporting Action 3</th>
<th>Supporting Action 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporate sustainable design criteria into requirements for new construction and renovation projects. Include commissioning and recommissioning requirements.</td>
<td>Implement new procurement guidelines that specify the use of sustainable materials to be used in new construction and retrofit projects.</td>
<td>Implement sustainable projects.</td>
<td>Track costs to show sustainable design can be done within budget.</td>
</tr>
</tbody>
</table>

#### Tools
- Sustainable development guide
- Whole Building Design Guide
- “Procuring Low Energy Design and Consulting Services”
- Sustainable working group
- FEMP guidance and criteria (LEED)
- GSA IDIQ (commissioning)
- FEMP staff with experience (commissioning)
# Appendix B
## Action Plan

### Executive Order 13123 Topic
Renewable Energy (Sec. 204)

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Regional Goals
- Regional energy management team with regional energy coordinator lead

### Federal Goal
Expand the use of renewable energy within facilities via projects and by purchasing from renewable energy sources.

### R10 Strategic Objective
Same as federal goal

### Supporting Action 1
- Identify sites for renewable energy procurement.
- Renewable energy certificates count toward the federal energy goal.
- Energy Center RE Purchasing Service
- GSA Schedule 871 II

### Supporting Action 2
- Identify facilities that will benefit from solar water heating and PV.
- GSA Schedule 84

### Supporting Action 3
- Identify locations where green energy is available for purchase (GSA contract).

### Supporting Action 4
- Identify locations where wind energy is viable.

### Supporting Action 5
- Educate customers on the value of supporting RE and negotiate premiums, so that they are dropped once the RE source stands on its own.

### Supporting Action 6
- FY 2005 Planned Projects:
  1. Renewable energy, 10-kW PV for FBCT, Boise, ID.

### Tools
- GSA Schedule 871 II for online purchase of Renewable Energy Certificates
  - [www.gsa.gov/advantage](http://www.gsa.gov/advantage)
- PBS Energy Center can solicit proposals for purchase of Renewable Certificates
- Solar equipment purchases via e-buy, Schedule 84
- FRESA screenings
- FEMP Renewable Energy Workshop
- Guidebook for purchasing renewable energy
## Regional Goals
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsible Office
Region-wide with customer operations division lead

#### Federal Goal
Select ENERGY STAR and other energy-efficient products when acquiring energy-using products. Select products in upper 25% of energy efficiency.

#### R10 Strategic Objective
- Provide customer satisfaction and save money for the taxpayers.
- Specify ENERGY STAR and other energy-efficient products when acquiring energy-using products.
- Specify products in upper 25% of energy efficiency.

#### Supporting Action 1
Include ENERGY STAR new procurement guidelines for purchase of any new equipment.

#### Supporting Action 2
Implement ENERGY STAR certification.

**Tools**

FEMP "Product Energy Efficient Recommendations"
### appendix b
### action plan

<table>
<thead>
<tr>
<th>Regional Goal</th>
<th>Executive Order 13123 Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Green House Gas Emissions (Sec. 202)</td>
</tr>
</tbody>
</table>

- Carry out social, environmental, and other responsibilities as a federal government agency.

<table>
<thead>
<tr>
<th>Responsible Office</th>
<th>Federal Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Development</td>
<td>By 2010, reduce greenhouse gas emissions by 30% relative to the 1990 baseline.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R10 Strategic Objective</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority identified energy efficiency projects to maximize emissions reductions based on fuel type and potential savings.</td>
<td>FEMP Emissions Calculation Guidance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supporting Action 1</th>
<th>Energy audit results and project prioritization list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the 1990 baseline.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supporting Action 2</th>
<th>Supporting Action 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize identified energy efficiency projects to maximize emissions reductions based on fuel type and potential savings.</td>
<td>Implement projects.</td>
</tr>
</tbody>
</table>
### Executive Order 13123 Topic

Petroleum Reduction (Sec. 205)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
</table>

#### Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

#### Responsible Office

Regional energy management team with regional energy coordinator lead

#### Federal Goal

Through LCC measures, each agency shall reduce use of petroleum in facilities by eliminating unnecessary consumption and switching to natural gas or renewable energy sources.

#### R10 Strategic Objective

Reduce use of petroleum by eliminating unnecessary consumption and switching to natural gas or renewable energy sources.

#### Supporting Action 1

Identify candidate facilities to reduce use of petroleum, such as switching fuels and using renewable technologies. Prioritize projects based on LCC and potential emissions reductions.

#### Supporting Action 2

Implement projects that are LCC effective and have the greatest potential for emissions reduction.
### Executive Order 13123 Topic
Source Energy (Sec. 206)

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve responsible asset management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operate efficiently and effectively.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carry out social, environmental, and other responsibilities as a federal government agency.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Responsible Office
Regional energy management team with regional energy coordinator lead

#### Federal Goal
Undertake LCC-effective projects in which source energy decreases.

#### R10 Strategic Objective
Deliver smart, cost-effective facility upgrades and modifications that will reduce source energy use.

#### Supporting Action 1
Identify and prioritize LCC projects that result in a decrease in source energy use.

**Decreased source energy is credited toward energy reduction even if site energy increases.**

#### Supporting Action 2
Implement LCC projects that reduce source energy use.

**Tools**
BLCC software and training
appendix b  
action plan

<table>
<thead>
<tr>
<th>Regional Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Order 13123 Topic</td>
<td>Showcase Facilities (Sec 406(e))</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
</tr>
<tr>
<td>Target Dates</td>
<td></td>
</tr>
<tr>
<td>➢ Provide best value for customer agencies and the taxpayers.</td>
<td></td>
</tr>
<tr>
<td>➢ Achieve responsible asset management.</td>
<td></td>
</tr>
<tr>
<td>➢ Operate efficiently and effectively.</td>
<td></td>
</tr>
<tr>
<td>➢ Carry out social, environmental, and other responsibilities as a federal government agency.</td>
<td></td>
</tr>
</tbody>
</table>

Regional energy coordinator with property development lead

Designate exemplary facilities with significant access and exposure.

Same as federal goal

Prioritize new construction and major renovation projects.

Initiate a “super showcase facility” or a “super energy star.”

Nominate showcase projects for awards.

FEMP guidance and criteria
### Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsible Office

- **Property Development**

<table>
<thead>
<tr>
<th>Federal Goal</th>
<th>Action 1</th>
<th>Action 2</th>
<th>Action 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10 Strategic Objective</td>
<td>Provide LCC training for engineers and architects.</td>
<td>Use LCC analysis for all projects.</td>
<td>Prioritize and implement projects based on LCC.</td>
</tr>
</tbody>
</table>

### Tools

- BLCC software and training
### Executive Order 13123 Topic
**Financing (Sec. 403 (a))**

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOE FEMP ESPC and UESC workshops</td>
<td></td>
</tr>
<tr>
<td>DOE FEMP alternative financing support</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsible Office</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facilities Operations Support Branch</strong></td>
</tr>
</tbody>
</table>

Maximize use of alternative financing mechanisms.

Use alternative financing mechanisms where project budget is inadequate to accomplish LCC effective energy efficiency projects.

#### Supporting Action 1
Energy team members attend ESPC and utility financing workshops as needed for project implementation.

**Tools**
- FEMP alternative financing workshops
- FEMP "How to Choose" guidance
- GSA "Procuring Energy Management Services with the Utility AWC"
<table>
<thead>
<tr>
<th>Executive Order 13123 Topic</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training &amp; Education 9Sec. 406 (d))</td>
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</tbody>
</table>

**Regional Goals**
- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Regional energy management team with regional energy coordinator lead

Agencies shall ensure appropriate personnel receive training.

Provide training and education to all staff, contractors, and customers to ensure facilities are designed, constructed, renovated, operated, and occupied sustainably.

**Supporting Action 1**
Develop and implement training plan to introduce the SEMP to staff, contractors, and customers.

- Provide training and education to the REMT:
  - CO and Legal: ESPC and UESC workshops
  - Asset and property managers: BLCC, RE, sustainable design, ESPC, and UESC workshops etc.
  - Project managers, Engineers & Architects: BLCC, RE, sustainable design, ESPC & UESC workshops etc.
  - O&M Staff: O&M workshop, ESPC and UESC workshops when applicable to their site

**Supporting Action 2**
Meet with O&M and janitorial contractors to implement energy efficiency performance requirements, discuss progress and improvements.

Tools
- FEMP training catalog

- DOE FEMP workshops and conferences
## Executive Order 13129 Topic: Energy Awareness

<table>
<thead>
<tr>
<th>Responsible Office</th>
<th>Region</th>
<th>Goals</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
</table>
| Regional energy management team with regional energy coordinator lead | R10 | ➢ Provide best value for customer agencies and the taxpayers.  
➢ Achieve responsible asset management.  
➢ Operate efficiently and effectively.  
➢ Carry out social, environmental, and other responsibilities as a federal government agency. | Tools FEMP You Have the Power campaign resources | 

### Supporting Action 1
Develop a regional awareness plan with involvement across all divisions and include input from contractors and customers.

### Supporting Action 2
Educate: schedule awareness sessions with management analysis review system (MARS) reviews at property management offices.

### Supporting Action 3
Celebrate accomplishments: recognize efforts and accomplishments:  
- Nominate individuals and groups for the Region 10 awards.  
- Develop a fact sheet of accomplishments like cogeneration, PV, fuel cells, micro turbines.  
- Build a portable display for training and presentations.  
- Develop a flow chart with communications interfaces.  
- Delineate a design from operations, fleet, asset managers, and other groups.
## Executive Order 13123 Topic

**FLEET**

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

## Regional Goals

**FLEET**

Reduce our impact on the environment through thoughtful implementation of fleet management. Purchase quality fuel-efficient vehicles.

## Responsible Office

**Federal Goal**

R10 Strategic Objective

Reduce our impact on the environment through thoughtful implementation of fleet management. Purchase quality fuel-efficient vehicles.

## Supporting Action 1

Develop a mobility plan that includes staff education.

## Supporting Action 2

Make smart leasing and purchasing choices based on environmental requirements and impacts.

Use alternative fuels and alternative fuel vehicles where possible:

- LPG
- CNG
- Biodiesel
- Ethanol
- Hybrid vehicles

## Supporting Action 3

Incorporate the use of recycled carpeting, recycled paint, solar power, solar lighting in our Fleet Center.

## Supporting Action 4

Reuse and recycle fleet related products and materials:

- Re-refined oil
- Recycled anti-freeze
- Retread tires
- Remove mercury switches from disposal vehicles prior to sale.

## Supporting Action 5

Reuse and recycle fleet related products and materials:

- Re-refined oil
- Recycled anti-freeze
- Retread tires
- Remove mercury switches from disposal vehicles prior to sale.

## Tools

- Complete
- Ongoing
## Executive Order 13123 Topic

<table>
<thead>
<tr>
<th>Executive Order 13123 Topic</th>
<th>Resources</th>
<th>Target Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

### Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsible Office

**Regional energy management team**

Enhance facility and energy security through thoughtfully designed, constructed, renovated, operated and occupied facilities. Use site generation where necessary and renewable generation where applicable.

### Supporting Action 1

- Use standby generators for load shedding.

### Supporting Action 2

- Encourage on-site renewables.
appendix b

action plan

### Regional Goals

- Provide best value for customer agencies and the taxpayers.
- Achieve responsible asset management.
- Operate efficiently and effectively.
- Carry out social, environmental, and other responsibilities as a federal government agency.

### Responsible Office

**Regional energy management team with regional energy coordinator lead**

Each agency shall submit annual reports and be given an annual scorecard.

Meet or exceed the requirements of the Energy Policy Act and the various executive orders addressed in the SEMP.

### Supporting Action 1

Train staff in the use of the GSA reporting system.
## Appendix C
### FY 2005 Federal Agency Energy Scorecard

<table>
<thead>
<tr>
<th>Did your agency . . .</th>
<th>Yes</th>
<th>No</th>
<th>Anticipated Submittal Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Submit its FY 2005 energy report to OMB and DOE by January 1, 2006 (Sec. 303)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Submit a FY 2006 Implementation Plan by January 1, 2006 (Sec. 302)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Implement or continue to use renewable energy projects at federal installations or facilitate the siting of renewable generation on federal land in FY 2005 (Sec. 204)? (Report all self-generated renewable energy from projects installed after 1990; refer to Table 1-7 on the Energy Management Data Report.)</td>
<td>If yes, how many projects and how much energy generated? (Specify unit: MWh or MMBtu)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td>Wind</td>
<td>Thermal</td>
<td>Biomass</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>If yes, how much: __________ MWh or __________ MMBtu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Purchase energy generated from new renewable energy sources in FY 2005 (Sec. 204)?</td>
<td>If yes, how much: $__________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Invest direct FY 2005 appropriations in projects that contribute to the goals of the order (Sec. 301)?</td>
<td>If yes, how much: $__________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Specifically request funding necessary to achieve the goals of the order in its FY 2007 budget request to OMB (Sec. 301)? (Refer to OMB Circular A-11, Section 25.5, Table 2.)</td>
<td>What percentage of facility space was audited during the FY? __________%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much facility space has been audited since 1992? __________%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Perform energy audits of 10% of its facility space during the fiscal year (Sec. 402)?</td>
<td>How many?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual savings (MMBtu): $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total investment value: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative guaranteed cost savings: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contracts award value: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Issue to private sector energy service companies (ESCOs) any energy savings performance contract (ESPC) task orders (Sec. 403(a))? (Refer to Table 2-2 on the Energy Management Data Report.)</td>
<td>How many?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual savings (MMBtu): $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total investment value: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative guaranteed cost savings: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contracts award value: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Issue any utility energy services contract (UESC) task orders (Sec. 403(a))? (Refer to Table 2-3 on the Energy Management Data Report.)</td>
<td>How many?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual savings (MMBtu): $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total investment value: $__________</td>
<td></td>
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<tr>
<td>Contracts award value: $__________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
<td>Anticipated Submittal Date</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----</td>
<td>----</td>
<td>----------------------------</td>
</tr>
<tr>
<td>10. Incorporate energy efficiency requirements into relevant acquisitions (Sec. 403(b)(3))?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Adopt and apply the sustainable design principles (e.g., Whole Building Design Guide, Leadership in Energy and Environmental Design (LEED)) to the siting, design, and construction of new facilities or major (budget line item) renovations begun in FY 2005 (Sec. 403(d))?</td>
<td></td>
<td></td>
<td>Number of new building design/construction projects in FY 2005: ________ Number of these projects that can or will be certified under LEED: ________</td>
</tr>
<tr>
<td>12. Provide training to appropriate personnel on energy management (Sec. 406(d))?</td>
<td></td>
<td></td>
<td>Number of appropriate personnel trained: ________ Total number of appropriate personnel: ________</td>
</tr>
<tr>
<td>13. Implement any additional management tools (Sec. 406)?</td>
<td></td>
<td></td>
<td>Check all that apply:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Awards: ________ Performance Evaluations: ________ Showcase Facilities: ________ Number of Showcase Facilities designated in fiscal year: ________</td>
</tr>
<tr>
<td>14. Establish water management plans (WMPs) and implement at least 4 best management practices (BMPs) in at least 10% of agency facilities (Sec. 207,503(f))?</td>
<td></td>
<td></td>
<td>Number of facilities with WMPs and 4 BMPs: ________ Number of facilities in agency inventory: ________</td>
</tr>
</tbody>
</table>

NOTE: Provide additional information if a “No” reply is used for any of the questions above.
Please enter data from annual energy report pertinent to performance toward the goals of Executive Order 13123

<table>
<thead>
<tr>
<th>Section</th>
<th>Base Year</th>
<th>Previous Year (2004)</th>
<th>Current Year (2005)</th>
<th>% Change (Current vs. Base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Site Energy Efficiency Improvement Goals (Sec. 202). 1985 Base Year</td>
<td>Btu/ft²</td>
<td>Btu/ft²</td>
<td>Btu/ft²</td>
<td>%</td>
</tr>
<tr>
<td>16. Source Energy Use (Sec. 206). 1985 Base Year</td>
<td>BBtu</td>
<td>BBtu</td>
<td>BBtu</td>
<td>%</td>
</tr>
<tr>
<td>17. Industrial/Energy Intensive Facilities Goals (Sec. 203). 1990 Base Year</td>
<td>Btu/unit</td>
<td>Btu/unit</td>
<td>Btu/unit</td>
<td>%</td>
</tr>
<tr>
<td>18. Water Conservation Goal (Sec. 207). 2000 Base Year</td>
<td>MGal</td>
<td>N/A</td>
<td>MGal</td>
<td>%</td>
</tr>
<tr>
<td>19. Renewable Energy (Sec. 204) used from self-generation and RE purchases</td>
<td>N/A</td>
<td>BBtu</td>
<td>BBtu</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Abbreviation Key:

- Btu/ft² = British thermal units per gross square foot
- Btu/unit = British thermal units per unit of productivity (or gross square foot when such a unit is inappropriate or unavailable)
- MGal = Million gallons
- MMBtu = Million British Thermal Units
- BBtu = Billion British Thermal Units
- RE = Renewable energy
- N/A = Not applicable

1 Examples are geothermal, solar thermal, and geothermal heat pumps. Thermal energy from geothermal heat pumps should be determined as follows: Thermal energy = Total geothermal heat transferred – electrical energy used.

2 “New” renewable energy means sources developed after 1990.

3 Investment value includes design, materials, labor, overhead, and profit, but excludes contractor’s financing costs and government’s administration costs. Using investment value allows comparison with other traditional execution methods such as appropriated and working capital funded projects.

4 Appropriate personnel include the agency energy management team as well as federal employees and on-site contractors who are energy or facility managers, operations and maintenance workers, design personnel, procurement and budget staff, and legal counsel.
appendix d
training plan

The GSA Region 10 multiyear training plan will be developed by the REMT and updated periodically. It will include training scenarios for different positions.

The objective of the training plan is to educate staff and operations and maintenance personnel to be knowledgeable about and motivated toward energy efficiency and sustainability. It will be GSA Region 10 policy to support associates who wish to become certified energy managers, LEED-accredited professionals, or active members of the Association of Energy Engineers.

Possible training events:

Green-Build Expo (annual)
DOE Energy Conference (annual Energy20xx) and workshops
AEE Certified Energy Manager training
LEED Accredited Professionals training
appendix e
energy awareness strategies

The REC will lead GSA Region 10’s energy awareness campaigns, along with the REMT, tenant agencies, maintenance contractors, and others as necessary. Below is a sample template to help develop energy awareness strategies.

**Energy Awareness Campaign Strategy**

Ten to thirty percent of energy consumption can be saved through employee choices. In energy-saving campaigns, involve employees at both GSA and tenant facilities. Educate, motivate, and involve individuals to help them consciously choose to reduce energy, recycle, commute by carpooling or using alternate ways to get to work, and elect other energy-saving options.

Develop a plan to be used throughout the region. Develop training to educate on the plan.

- Daily work activities
- Fleet use
- Procurement choices.

Determine water, energy, recyclable materials, and commuting footprints according to

- Work groups
- Facility types
- Job types.

Calculate impact based on equipment used, lights, hours of business, drive to work, and so forth. Derive a baseline for the group in Btu/day/person.

Create incentives such as competition between groups to reduce the baseline in Btu/day/person.

- Reward the lowest baseline.
- Reward the biggest improvement over time.
- Reward maintenance of low Btu/day/person (this would mean points for taking the bus, walking, and carpooling, and for turning off lights and equipment).

Recognize achievements with awards and celebrations.

- Acknowledge architectural and engineering staff and GSA staff on great projects.
- Show status and results of conscious efforts. Use case studies, newsletters, an annual open house, and other means to show results of conscious efforts. Graphics illustrating baseline, current status, and targets show results at a glance.
appendix f resources

Guidance

Advanced Utility Metering
http://www.eere.energy.gov/femp/technologies/om_advmetering.cfm

Agency Scorecards: See Appendix C and visit the FEMP Web site at

Buying Energy-Efficient Products
http://www.eere.energy.gov/femp/technologies/eeproducts.cfm

Continuous Commissioning Guidebook for Federal Managers
http://www.eere.energy.gov/femp/operations_maintenance

Energy Service Schedule 871 II
http://www.gsa.gov/energyservices

ENERGY STAR® Buildings Web Site
http://www.energystar.gov

Environmental Services Schedule 899
http://www.gsa.gov/environmentalservices

Federal Executive Orders

Federal Legislation, Executive Orders, and Other Requirements
http://www.eere.energy.gov/femp/about/legislation.cfm

Green Building: Project Planning and Cost Estimating
http://www.rsmeans.com/bookstore

Greening Federal Facilities Guide
http://www.eere.energy.gov/femp/technologies/sustainable_greening.cfm

Green Power Procurement Guidance
http://www.eere.energy.gov/femp/technologies/renewable_purchasepower.cfm

O&M Best Practices Guide
http://www.eere.energy.gov/femp/operations_maintenance

Leadership in Energy and Environmental Design (LEED)
http://www.usgbc.org/leed/leed_main.asp

P100 – Facilities Standards for the Public Buildings Service
http://www.wbdg.org

Super Energy Savings Performance Contracting
http://www.eere.energy.gov/femp/financing/superespcs.cfm

Utility Energy Services Contracts Enabling Documents

Whole Building Design Guide
http://www.wbdg.org

Software Tools

Building Life-Cycle Cost (BLCC)
http://www.eere.energy.gov/femp/information/download_software.cfm

DOE-2

Energy 10

Federal Renewable Energy Screening Assistant (FRESA)
http://www.eere.energy.gov/femp/information/download_software.cfm

Watergy
http://www.eere.energy.gov/femp/information/download_software.cfm