



FEDERAL ENERGY MANAGEMENT PROGRAM

# YEAR IN REVIEW 2005

PRESIDENTIAL AWARDS FOR LEADERSHIP IN  
FEDERAL ENERGY MANAGEMENT

FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

SHOWCASE AWARDS



U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**

Bringing you a prosperous future where energy  
is clean, abundant, reliable, and affordable



*Cover photo: The Air Combat Command's (ACC) Civil Engineer Energy Management Team used a utility energy services contract with Dominion Virginia Power to convert the outdated heating, air conditioning, and ventilation systems at eight ACC Headquarters facilities to water source heat pump technology— the first large commercial application of water source heat pumps for the Air Force. The Team replaced 2,700 tons of inefficient chillers with 1,200 tons of efficient heat pumps, providing heating and cooling to 516,000 square-feet of Base facilities. Additionally, the project installed more than 10,000 high-efficiency lighting fixtures and replaced water conservation fixtures on all campus plumbing. Together, these measures save 57.8 billion Btu and 3.8 million gallons of water annually. More importantly, marginal office spaces have become comfortable, productive work environments for Air Force employees.*

## FEDERAL ENERGY MANAGEMENT

The Federal government must lead the way in reducing its energy consumption and related environmental impacts to set an example for the country. For this reason we often look to our leaders -- energy champions who are providing the innovation and dedication to overcome challenges in pursuing sound energy management.

Each year the U.S. Department of Energy, along with the Federal Interagency Energy Policy Committee and the White House, sponsor prestigious award programs to honor individuals and teams of champions who are making significant contributions to the efficient use of energy and water resources in the Federal government.

The Energy Champions we honor this year represent the cream of the Federal facility manager crop. Through hard work, originality, and forward-thinking, they continue to develop the creative solutions we need to maintain the efficient operation of government services while increasing our nation's energy independence.

Our winners illustrate the deep commitment that all Federal employees have to the economy, environment, and energy security. They inspire us to increase our own efforts to save energy and water and to more aggressively pursue the use of renewable resources. We are grateful for their continued pursuit of excellence in facility management. We encourage you to follow their example, to set a new standard of performance, and continually look for new, creative solutions to our nation's energy challenges.

**FEDERAL ENERGY  
MANAGEMENT**



**INTRODUCTION**

The President's National Energy Policy sets forth a clear direction to promote dependable, affordable, and reliable energy supplies for the future. It envisions a comprehensive long-term strategy that uses leading edge technology to produce an integrated energy and environmental plan for the 21st Century. As part of this plan, the Federal government has a vital role to play in modernizing its facilities, increasing renewable energy supplies, and accelerating the protection of our natural resources.

Federal building-related energy use has dropped more than 25 percent per square foot since 1985, due in no small measure to the hard work of the Federal Energy Management Program (FEMP) and its agency partners. FEMP works with agencies to reduce the cost and environmental impact of the Federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at Federal sites.

This 2005 "Year in Review" demonstrates excellent achievements in four service areas: Technical Assistance, Financing, Policy, and Outreach. It shows how FEMP is assisting agencies in their efforts to achieve greater energy efficiency and cost-effectiveness. The "Year in Review" also honors the winners of the Presidential, Federal Energy and Water Management, and Showcase awards programs.

The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) also has many other programs underway to help America achieve a healthier environment, a stronger economy, and a brighter future for the American people. Visit the EERE Web site at [www.eere.energy.gov](http://www.eere.energy.gov).

**FEDERAL ENERGY  
MANAGEMENT**

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## **TECHNICAL ASSISTANCE**



### **TECHNICAL ASSISTANCE**

In 2005, the FEMP Technical Assistance Program filled the gap between declining Congressional appropriations and the increasing funding needed to support broad Federal energy efficiency goals. Project assistance is grouped around topic areas such as sustainable buildings, facility operation and maintenance (O & M), training, energy efficient Federal procurement, and related areas that cover different energy technologies. These technical assistance programs help agencies reach their energy reduction targets and expand the market for new energy efficient technologies.

The Technical Assistance Program produces tremendous outreach materials including the Labs21 Conference, Best Practices O&M Manual, the Energy Efficient Federal Procurement online products catalog, and the FEMP training program, which reached more than 4,000 individuals in 2005.

### **LABS 21, LIFE CYCLE COSTING (LCC) AND O&M**

In FY 2005, the Labs21 Program and the Best Practices O&M Manual targeted markets with a large potential for energy savings within Federal facilities. Both programs also demonstrated market savvy by reaching “customers” with valuable information about energy conservation and efficiency. The O&M program won a national award in 2005 for its website and information products. The 2005 Labs 21 Annual Conference brought together more than 550 professionals from around the country to Portland, OR, to discuss the latest sustainable design developments for these complex and energy intensive building types. This event featured more than 50 technical sessions and a technology fair that included 40 of the largest manufacturers of the most innovative products and services on the market. FEMP training and education continued to receive high praise at the conference, as did the development of the *Labs 21 Tool Kit*.

The FEMP training program and Life Cycle Costing (LCC) program proved to be highly valuable in building and maintaining human resource capital in the Federal sector as it pertains to energy management. The O&M, LCC, and training program are highly technical programs that are excellent examples of specific program delivery to targeted audiences with great market relevance.

## TECHNICAL ASSISTANCE

### RENEWABLE ENERGY AND SUSTAINABLE BUILDINGS

As a whole, the Government reported purchasing or producing 13 trillion Btu of new renewable energy in FY 2005, equivalent to 6.9 percent of the Federal government's electricity use. This renewable energy mark easily surpassed the goal of 2.5 percent. Consumption of new renewable energy in 2005 was nearly double the amount reported by the agencies in FY 2004.

FEMP published the Guide to Buying Green Power which provides comprehensive and concise information on purchasing renewable energy resources at government facilities. This new FEMP publication is fulfilling a crucial role in helping the Federal sector meet its renewable energy targets through green power procurement and clear guidance for entering into green power contracts.

In the area of sustainable design and construction, FEMP continued to increase membership in its rapidly growing Interagency Sustainability Working Group (ISWG). The ISWG has now grown into a powerful forum for information exchange on sustainable design. The group provides much-needed technical guidance and has resulted in a rapid increase in the number of buildings that meet the U. S. Greening Building Council's LEED rating system. In addition, FEMP has updated several publications on sustainable design, including:

- Building Cost and Performance Metrics,
- Greening Federal Facilities (2nd ed.),
- Business Case for Sustainable Design in Federal Facilities, and
- Procurement of Architectural and Engineering Services for Sustainable Buildings.

The sustainable buildings program was also able to successfully negotiate favorable actions so that the sustainable design of new Federal construction and major retrofits will be a matter of course rather than the exceptions.



## **FINANCING**



The Department of the Navy partnered with NORESKO to construct a \$12 million wind turbine project at Guantanamo Bay, Cuba using an energy savings performance contract. Four wind turbines will generate 3,800 kilowatts of electricity – enough to supply about a quarter of the peak power needed for base operations.

In 2005, Federal agencies once again have three primary options for financing energy efficiency, water conservation, and renewable energy projects in buildings and facilities:

- Direct Congressional appropriated funding;
- Federal Energy Savings Performance Contracts (ESPCs); and
- Utility Energy Service Contracts (UESCs).

The alternative financing option for ESPCs was recently restored through legislative authority and is being renewed as an important way to fund much-needed improvements in the Federal government's real estate portfolio.

### **ESPCs**

Implementation authority for ESPCs expired on October 1, 2003 because Congress did not reauthorize the program. As a result, there was a 14-month gap in the Federal government's ability to finance projects with this alternative financing mechanism. During the ESPC hiatus period, FEMP focused on developing a stronger level of education and understanding of the technical issues and financial aspects of ESPC projects. Therefore, despite the prior year's setback, FEMP was able to produce a range of excellent achievements.

Some aspects of the ESPC program have changed significantly:

- ESPC Indefinite delivery/indefinite quantity (IDIQ) reforms were not instituted until FY 2005 to include new functions;
- ESPC core teams were introduced beginning in FY 2005;
- The ESPC Steering Committee was established in 2004; and
- The renewable technologies component was introduced to ESPC services in 2005.

In light of these changes, and with the renewal of ESPC authority in 2005, FEMP was well-positioned to both implement ESPC projects and increase the quality of its offerings. The FY 2005 ESPC budget of approximately \$5.1 million leveraged \$252 million in investment.



## **FINANCING**

### **UESCs**

Like ESPCs, the UESC program relies on partnerships and leverage. The UESC FY 2005 budget of \$1.7 million leveraged over \$100 million in private sector investment. FEMP UESC staff also helped agencies secure an additional \$11 million in demand side management funding for new efficiency and renewable energy projects. According to one study of voluntarily submitted data, FEMP UESC projects save 75 percent more than UESCs without FEMP support.

In FY 2005, FEMP worked to strengthen the Federal Utility Partnership Working Group (FUPWG). Through FUPWG, FEMP further developed and improved the "Model Agreement," which is the standard contracting vehicle for UESCs. FEMP also developed numerous best practices and guidance documents on implementing UESCs during the year. Approximately 74 percent of UESCs have been implemented by FUPWG partners, clearly demonstrating the value of the working group.

### **PARTNERSHIPS, LEVERAGE, AND RESULTS**

Funding from the three federally-approved financing sources outlined above totaled approximately \$463 million in FY 2005. In addition to \$290 million in direct congressional appropriations, Federal agencies used private sector financing mechanisms to implement 40 energy projects worth \$172 million, paid for by the generated savings from lower energy bills. ESPCs contributed \$97 million in energy improvements and UESCs resulted in \$76 million in improvements.



## **POLICY**



In FY 2005, the Administration continued building on the policy framework established by Executive Orders 13123 and 13221 and the National Energy Policy, with new initiatives supported by FEMP. On September 26, 2005, President Bush sent a memorandum to Department and agency heads directing them to conserve energy and fuel at their agencies to ease the energy market impact of Hurricanes Katrina and Rita. FEMP immediately issued guidance to agencies for reporting on their actions, posted tips and technical resources on the Web, and initiated deployment of energy savings expert teams to identify efficiency measures at targeted facilities. FEMP compiled reports received from the agencies in response to the President's directive and prepared summary findings for the Secretary of Energy to report to the President.

On August 8, 2005, President Bush signed into law the Energy Policy Act of 2005 which set new goals for reduction of energy intensity in Federal buildings as well as requiring Federal purchasing of energy efficient products and more sustainable designs for new Federal buildings. FEMP convened working groups to implement the provisions of the Act and develop necessary guidelines.

The Interagency Energy Management Task Force, chaired by FEMP, continued to closely coordinate policy implementation and associated reporting requirements with the Federal community. During 2005 Task Force members participated in a strategic planning exercise that required them to anticipate their energy reductions in standard and industrial facilities in 2005 and 2010, examine what areas they will emphasize to meet Federal goals, and identify FEMP services most important to helping them achieve their goals. The input that agencies provided proved valuable to FEMP in the development of its multiyear plan and in the conduct of its peer review, two other major activities for FEMP's policy group this year.

## REPORTING ON ENERGY MANAGEMENT

During 2005, FEMP drafted two reports on the energy management activities of the Federal government: the Annual Report to Congress on Federal Government Energy Management and Conservation Programs addressing Congressionally-mandated statutory requirements and the Report on Federal Agency Activities Under Executive Order 13123, Efficient Energy Management containing detailed information on agency-specific progress toward the seven major goals of the Order.

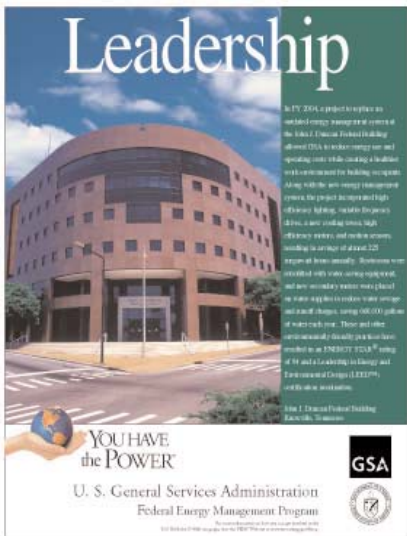
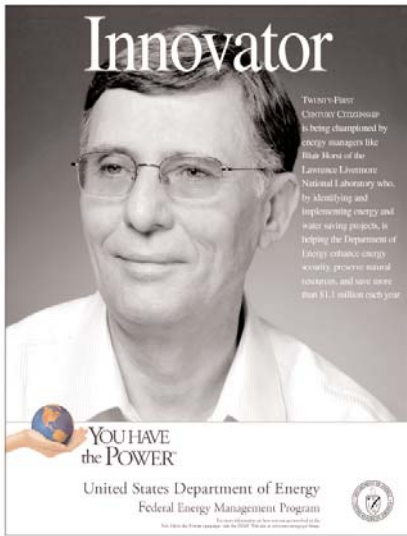
Preliminary findings from the reports include:

- The Federal government spent almost \$4.7 billion for buildings and facilities energy during FY 2004, a 3.3 percent increase (\$151.1 million) from FY 2003 expenditures.
- The government reduced the energy intensity of its standard buildings by 25.6 percent in FY 2004 versus the FY 1985 baseline year.
- Eight agencies, the Departments of Agriculture, Commerce, Defense, Energy, Justice, and Transportation, as well as the National Aeronautics and Space Administration and the Tennessee Valley Authority, achieved reductions of more than 25 percent in buildings energy use per gross square foot from 1985.
- Federal agencies purchased or produced almost 5.3 trillion Btu (1,547.5 Gigawatt hours) of new renewable energy in FY 2004, equivalent to 2.8 percent of the Government's electricity use, and surpassing the goal of 2.5 percent a year early. Consumption of new renewable energy increased 76.4 percent over the amount of new renewable energy the Federal Government used in FY 2003.
- Carbon emissions from energy used in Federal facilities declined 19.4 percent in FY 2004 as compared to FY 1990.

FEMP also worked closely with the Office of Management and Budget during FY 2005 to prepare a summary report of the Federal agencies' energy scorecards for the FY 2004 reporting period, required by Executive Order 13123.



**OUTREACH**



In FY 2005, Federal energy managers continued to improve our nation's energy security, while also facing new challenges with more stringent requirements of the new Energy Policy Act of 2005 and the Presidential directive issued to Federal agencies to conserve natural gas, electricity, gasoline, and diesel fuel after hurricanes Katrina and Rita threatened our national supplies. Federal agencies promoted themes of energy conservation and smart energy choices through a variety of education and awareness programs. At the same time, agencies continued to recognize outstanding efforts of teams and individuals striving to conserve energy resources and use innovative and renewable technologies to lessen our dependence on energy imports and reduce the environmental impact of energy use at Federal sites. Throughout the year, participation in expositions, meetings, and conferences brought Federal workers together to share success stories, promote partnerships, and honor achievements.

**RECOGNITION**

Agencies recognized exemplary leadership through annual energy management award programs. On October 27, 2005, the Department of Energy held its annual Federal Energy and Water Management Awards ceremony in the Dean Acheson Auditorium at the U.S. Department of State. David Garman, Under Secretary of Energy, and Douglas Faulkner, Acting Assistant Secretary of Energy Efficiency and Renewable Energy, honored 16 individuals, small groups, and organizations for saving more than \$14 million dollars in energy expenses and 500 billion Btu at Federal facilities across the United States. In addition, four Federal buildings representing exceptional models of energy efficiency, innovation, and sustainable design were designated Federal Energy Saver Showcases.

As part of this combined awards ceremony, David Garman and Clay Johnson, Deputy Director for Management, Office of Management and Budget presented five Presidential Awards for Leadership in Federal Energy Management. Outstanding teams from the Air Force, Army, Navy, Marine Corps, and General Services Administration were selected for their exemplary dedication and Federal leadership in energy efficiency and implementation of Executive order 13123. (Read more about these programs and honorees in the special awards section).

Twenty-one of the largest Federal agencies participate in FEMP's *You Have the Power* campaign to help reach their energy management goals by recognizing outstanding achievements and raising awareness. The campaign promotes "Energy Champions"—employees making extraordinary efforts to help their agencies save energy and money. Accomplishments are highlighted through campaign posters sent to regional offices around the nation. In FY 2005, 22 individuals were recognized, increasing the total number of Energy Champions to 404 since 1997. In addition, seven agencies developed posters featuring their Showcase and other important energy projects for recognition during Energy Awareness Month in October. The posters highlighted energy efficient, renewable, and sustainable design techniques including photovoltaic systems, wind turbines, light sensors, recycled and low-VOC construction materials, super-insulation, direct digital controls, geothermal heating

## OUTREACH

systems, water source heat pumps, ultra-efficient chillers, water-saving and reuse equipment, low-maintenance landscaping, daylighting, and high-efficiency lighting and windows.

### AWARENESS

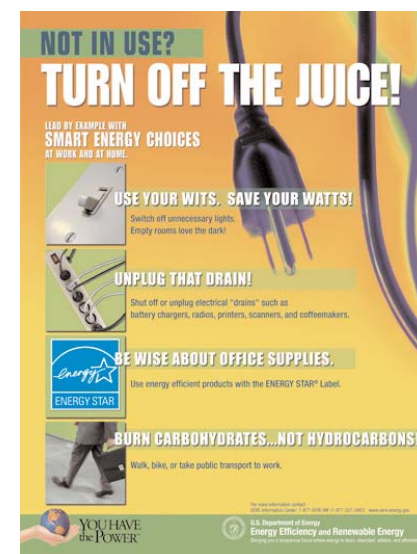
Energy managers, financial officers, and administrators received guidance on timely issues through the FEMP Web site at <http://www.eere.energy.gov/femp>. In FY 2004, there were more than 412,600 visits to the FEMP Web site, with visitors viewing an average of more than 3,000 pages each day. In-depth information was also available through the FEMP Focus newsletter, published quarterly. FEMP Focus provides information about successful Federal energy-saving projects and partnerships, conferences and workshops, innovative financing strategies, renewable energy, technical analysis tools and updates, and developments in energy management.

Federal agencies marked Earth Day and Energy Awareness Month by promoting energy efficiency and renewable energy through the distribution of posters and other awareness materials at local and regional events. For Earth Day, Federal agencies and workers were encouraged to see their energy use in a new light and take a more active role in facilitating and encouraging wise energy use. Energy Awareness Month promoted smart energy choices and reminded Federal workers and others to switch off unnecessary lights, unplug electrical "drains," use efficient ENERGY STAR® products, and take public transportation.

New in FY 2005, the campaign designed and produced animated energy awareness messages to promote employee energy awareness all year round. The messages can be sent out as a mass mailing or attached to e-mail messages as a simple, cost-free way for agencies to spread the word about energy efficiency. The animated gif files, as well as low resolution campaign graphics, are available on the FEMP Web site at [http://www.eere.energy.gov/femp/services/yhttp/campaign\\_materials.cfm](http://www.eere.energy.gov/femp/services/yhttp/campaign_materials.cfm).

### ENERGY EXPO

To help educate staff and share information about their own energy management activities and programs, agencies participated in a number of Federal conferences and expositions, the largest being Energy 2005: "The Solutions Network" held in August 2005 in Long Beach, California. The four-day gathering of Federal, state, local and private sector energy managers, energy service companies, utilities, procurement officials, engineers, and other energy professionals was co-sponsored by FEMP, the General Services Administration, and the Department of Defense. More than 100 industry-leading speakers provided a comprehensive overview of the latest tools and techniques in specialized learning tracks on effective operations and maintenance solutions; project financing; leadership, strategies, and performance; renewable energy; energy security; and sustainability. The exposition featured vendors exhibiting the latest products and services. FEMP's next annual workshop will be held August 6-9, 2006 in Chicago, Illinois.



August 6-9, 2006  
Chicago, IL


# YEAR IN REVIEW 2005



*The newly constructed 376,000 square-foot East Campus Complex at Oak Ridge National Laboratory (ORNL) consists of laboratory and office space, as well as an efficient, automated central energy plant. The Leadership in Energy and Environmental Design (LEED™)-certified complex features sustainable and energy-saving measures such as: recycled and low-VOC materials, reflective roofing, roof and wall insulation, high-performance glazing, high-efficiency lighting, direct digital controls, energy efficient motors, high-efficiency chillers, and variable air volume systems.*

## Innovator

**Twenty-First Century Citizen**  
is being honored by energy champions  
energy managers like Carlisle Tice  
of the Air Force and Training  
Command who, by managing fuel  
in EOPC contracts for 12 military  
bases and developing \$22M in  
renewable energy contracts for  
three Texas bases, is helping the  
Air Force save 312 billion in fuel  
and 177 megawatts of gas-based  
electricity, and \$5.5 million in  
other resources annually.




**YOU HAVE the POWER**

United States Department of the Air Force  
Federal Energy Management Program

## Catalyst

**Twenty-First Century Citizen**  
is being promoted by program  
managers like Mayjorie Buchanan  
who, by managing the  
Laboratory for the 21st Century  
program, the Emerging EPA  
newsletter and the  
Growing EPA Website,  
is educating fellow employees  
and the public about energy  
efficiency measures and helping the Environmental  
Protection Agency save  
energy conserve water and  
protect the environment.



**YOU HAVE the POWER**

Environmental Protection Agency  
Federal Energy Management Program

## Innovator

**Twenty-First Century Citizen**  
is being promoted by  
energy managers like  
Linda Fogarty of the  
Stanford Linear Accelerator  
Center who, by initiating,  
implementing and supporting  
numerous energy efficiency  
projects, is currently  
saving DOE more than  
32 billion BTU/h on  
electricity and natural  
gas annually.



**YOU HAVE the POWER**

United States Department of Energy  
Federal Energy Management Program

## Innovators

**Twenty-First Century Citizen**  
is being championed by federal  
workers like Dennis Hart, Jerry Locke,  
Bob Searing, and Simon Ng of the  
Memphis Service Center who, by  
establishing efficient turf watering  
practices, installing watering devices  
on the condenser water  
systems, and implementing  
an aggressive public  
awareness campaign on  
water waste, are helping  
the Department of the  
Treasury save more than  
30 million gallons of  
water annually.



**YOU HAVE the POWER**

United States Department of the Treasury  
Federal Energy Management Program

## Futurist

**Twenty-First Century Citizen**  
is being honored by energy  
program managers like Joe Sabel  
of the Civil Engineering Unit  
Oakland who, by identifying  
energy-saving opportunities,  
applying resources where they  
are needed most, and executing  
successful energy projects and  
awareness program is helping  
the U.S. Coast Guard achieve  
mission-critical improvements  
while saving more than  
\$2 million annually.



**YOU HAVE the POWER**

U. S. Department of Homeland Security  
Federal Energy Management Program

## Innovators

**Twenty-First Century Citizen**  
is being championed by federal  
workers like Dr. Tom Holloway  
and Julie Beckman of the  
Federal Aviation Administration  
who, by replacing 15,000  
insufficient red obstruction  
lights with models using  
light emitting diodes that last  
about 10 years, are helping the  
Department of Transportation  
save \$750,000 in electricity  
costs and \$12 million in  
reduced maintenance  
each year.



**YOU HAVE the POWER**

United States Department of Transportation  
Federal Energy Management Program

## Leader

**Twenty-First Century Citizen**  
is being led by federal  
workers like Steven White of the  
Energy Center of Expertise  
who, by heading GSA's  
advanced metering efforts,  
enhancing the Energy Usage  
Analysis System, developing  
standard EOPC contract  
language, and providing  
behind-the-scenes support to  
top state electric utility energy  
related projects, is helping  
GSA save energy, reduce  
pollution, and enhance  
energy security.



**YOU HAVE the POWER**

U. S. General Services Administration  
Federal Energy Management Program

## Innovator

**Twenty-First Century Citizen**  
is being honored by engineers  
like Steve White of the  
Centers for Disease Control  
and Prevention (CDC) who, by  
initiating and managing the  
redesign of a statewide  
economizer system, is helping  
the Department of Health and  
Human Services save  
18 percent of the electricity  
needed to provide chilled  
water to the CDC's Headquarters  
building and \$8,000 in  
energy costs each year.



**YOU HAVE the POWER**

U. S. Department of Health and Human Services  
Federal Energy Management Program

## Leader

**Twenty-First Century Citizen**  
is being advanced by energy  
management professionals  
like Rhonda Stewart of the  
Naval Facilities Engineering  
Service Center who, by  
identifying and-of energy  
efficiency of vital projects and  
operation, developing energy  
program policies and  
procedures, and providing  
technical assistance and  
support, is helping the  
Department of the Navy save  
more than \$5 million annually.



**YOU HAVE the POWER**

United States Department of the Navy  
Federal Energy Management Program

Nine of the individuals and teams recognized as 2005 "You Have the Power" Energy Champions.

PRESIDENTIAL  
AWARDS  
for  
LEADERSHIP  
in  
FEDERAL  
ENERGY  
MANAGEMENT

The Presidential Awards for Leadership in Federal Energy Management were established in 2000 as part of Executive Order 13123, which directs the Office of Management and Budget to select outstanding agency energy management programs for an annual Presidential award from candidates nominated by the Department of Energy. These are the most prestigious awards given to agency teams for demonstrated excellence in the management of energy and water resources in Federal facilities. Each year, the teams selected for this honor exemplify Federal leadership in efficient energy management and excel in implementing Executive Order 13123.

The Federal government has a responsibility to lead the way in developing creative solutions needed to meet the challenge of maintaining government operations while increasing energy independence and security. This year, five winning teams from the U.S. Air Force, Department of the Army, the General Services Administration, Department of the Navy, and U.S. Marine Corps demonstrated excellence in a wide range of energy management activities to reduce energy and water consumption and utility costs including: building decommissioning; equipment upgrades; renewable energy purchases; alternative financing; facility energy audits; sustainable building design; off-grid generation; water conservation; and public outreach. These teams, which include 67 Federal employees and contractors, are responsible for efforts that have resulted in estimated annual savings of more than \$9 million and 900 billion Btu, equivalent to the energy used in 9,800 typical homes.

The ceremony, presented at the U.S. Department of State, was hosted by and included remarks from Clay Johnson, Deputy Director for Management, Office of Management and Budget; David Garman, Under Secretary of Energy; and Philip Grone, Deputy Under Secretary for Installations and Environment, U.S. Department of Defense. Douglas Faulkner, Acting Assistant Secretary, Office of Energy Efficiency and Renewable Energy, also assisted in the presentation of awards.

President Bush and Vice President Cheney extend their congratulations and gratitude to these teams helping to improve energy management in their agencies and save taxpayer dollars.



U.S. DEPARTMENT OF DEFENSE  
HEADQUARTERS PACIFIC AIR FORCES FACILITY  
ENERGY CONSERVATION PROGRAM

PRESIDENTIAL AWARDS  
FOR LEADERSHIP IN  
FEDERAL ENERGY MANAGEMENT



For its reduction of energy costs and environmental impact through the execution of a ten-year Energy Strategic Plan covering its 100 million square mile area of responsibility of 16 installations in the Pacific Region.

A key component to the Energy Strategic Plan, initiated in 2004, is its creative innovation in the use of new technologies, management practices, and funding approaches. Innovative management practices include the deployment of Resource Efficiency Managers and the inclusion of incentive clauses for energy conservation. The Pacific Air Forces (PACAF) energy projects and initiatives reduced consumption by 153 billion Btu and yielded net savings of \$1.1 million in 2004, compared to 2003 levels. Some of the innovative technologies installed and used in PACAF bases in 2004 include light-emitting diode taxiway lights, photovoltaic bollard lighting, high-efficiency aerator pumps for sewage treatment, solar hot water heating, photovoltaic obstruction lights, refuse-derived fuels, and fuel cells. The 153 billion Btu savings translate into reductions of 42,000 tons of greenhouse gases, almost 3 tons of volatile organic compounds, 127 tons of nitrogen oxides, 19 tons of carbon monoxide, 111 tons of sulfur dioxide, 8 tons of particulates, and more than 34 grams of mercury. This is equivalent to removing almost 3,800 cars from the road for one year. Water management plans were completed for all bases and 102 water conservation projects were identified with potential yearly savings of \$15 million. PACAF also trained more than 300 personnel, provided financial incentive awards totaling \$225,000 to the energy efficiency performers, and developed an energy and water conservation Web site.



COLONEL TIMOTHY A. BYERS  
COLONEL WILLIAM M. CORSON  
MAJOR GENERAL DAVID A. DEPTULA  
COLONEL WILLIAM T. GREENOUGH  
GENERAL PAUL V. HESTER  
COLONEL JAMES P. HOLLAND  
CHRIS D. LIPPERT  
ROBERT H. MATSUMOTO  
DEAN T. NAKASONE  
MICHAEL J. NII  
LIEUTENANT GENERAL VICTOR E. RENUART

Team Members (*l to r*):

David Garman  
Chris Lippert  
Dean Nakasone  
Michael Nii  
James Holland  
Paul Hester  
Clay Johnson,  
Kathleen Ferguson  
Philip Grone

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

U.S. DEPARTMENT OF DEFENSE  
U.S. ARMY INSTALLATION MANAGEMENT AGENCY  
SOUTHEAST REGION



TOMMY BALDWIN  
DARYL R. BROWN  
DOUG CULBRETH  
GEORGES DIB  
JAMES A. DIRKS  
DOUGLAS R. DIXON  
MICHAEL FRNKA  
LISA HOLLINGSWORTH  
STEVE F. JACKSON  
VICKIE L. JORDAN  
JERRY KAYLOR  
GARY MEREDITH  
GRAHAM B. PARKER  
JOSEPH H. PLUNKETT

### Team Members (l to r):

Phillip Sakowitz  
Jan Menig  
Gary T. Meredith  
David Garman  
Jerry T. Kaylor  
LTG David Barno  
Vickie L. Jordan  
John R. Stoudenmire  
Steve F. Jackson  
Michael Frnka  
Georges Dib  
Doug Culbreth  
Graham B. Parker  
Tommy E. Baldwin, Jr.  
Douglas R. Dixon  
James A. Dirks  
Joseph H. Plunkett  
Daryl R. Brown  
Clay Johnson  
Philip Grone



For its aggressive, continuous pursuit of greater energy conservation and savings since 1999

The U.S. Army Installation Management Agency, Southeast Region (IMA-SER) instituted a comprehensive energy management program by teaming with 16 Army installations; the Department of Energy's Southeast Regional Office; U.S. Army Corps of Engineers, Huntsville; and the Pacific Northwest National Laboratory. IMA-SER used alternative financing, facility energy audits, sustainable building design, and off-grid generation to reduce energy consumption and utility costs in 2004. IMA-SER achieved a net savings of more than \$1.8 million in 2004, and 1.4 trillion Btu from energy savings performance contract and utility energy service contract projects implemented over a five-year period, beginning in 1999. This five-year savings would provide enough energy for more than 3,000 typical households annually. The IMA-SER has also incorporated sustainable building design in 30 out of 48 of its new construction projects to comply with the Army's Sustainable Building Design or SPiRiT rating, adopted from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) rating program. IMA-SER also conducts an annual energy manager's forum, makes presentations at national and regional conferences, provides technical training, and maintains an energy program Web site.

U.S. GENERAL SERVICES ADMINISTRATION  
GREAT LAKES REGION

PRESIDENTIAL AWARDS  
FOR LEADERSHIP IN  
FEDERAL ENERGY MANAGEMENT



For working aggressively on its 2004 energy conservation program that resulted in energy savings of more than 106 billion Btu and \$460,000 from the previous year.

In terms of energy intensity, the region's buildings used 7 percent less Btu per square foot than in 2003. In addition, in 2004, the region purchased electricity generated from wind power for a 1.3 million square foot facility in Cincinnati, Ohio. This purchase is part of a two-year contract with Strategic Energy, Inc. that will save the region \$60,000 over the contract period compared to the cost of purchasing conventional power from the local utility company. The region's Energy Strategic Plan incorporated E.O. 13123 energy management tools, such as use of alternative financing, purchasing energy-efficient products, using sustainable building design, developing model leasing and procuring renewable energy, and established a network of individuals to implement the plan. Using this strategy, energy and water conservation projects were identified using life-cycle analysis, audits, and renewable energy studies. The region reached out to members of the Federal, state, and local government communities and communicated information about the Executive Order 13123 tools through energy and water conservation workshops. The region partnered with the Department of Energy and Environmental Protection Agency in conducting this training.



ROGER BLUMMER  
JAMES HOPKINS  
JOHN C. JOHNSON, JR.  
HEATHER KILBRIDE  
LARRY LEWIS  
ERIC LIPOWICZ  
TIMOTHY MILLER  
MICHAEL PALMER  
CHARLES E. ROUSH  
JOHN SIEGEL  
PAMELA UNDERWOOD  
ALLEN WRIGHT III

Team Members (*l to r*):

David Garman  
Roger Blummer  
Timothy Miller  
Michael Palmer  
Charles E. Roush  
Pamela Underwood  
Alan Wright III  
James C. Handley  
Clay Johnson

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

U.S. DEPARTMENT OF DEFENSE  
MARINE CORPS BASE CAMP PENDLETON



JEFF ALLEN  
JAY BERGAMINI  
RUSSELL EVE  
RODNEY FRAZIER  
MYRON HAMPTON  
RALPH HARGIS  
DAVID MACEK  
RICHARD MANDRIGUES  
RANDY J. MONOHAN  
EDMUND ROGERS  
DOUGLAS SPENCE  
DALE TATTERSALL  
GREGORY THOMAS  
TIMOTHY VINCENT  
JOHN WALLACE

### Team Members (l to r):

David Garman  
Paul Bouley  
Stephen Vines  
Timothy Vincent  
Paul Hubbell  
Randy J Monohan  
Dale Tattersall  
Richard Mandrigues  
Edmund Rogers  
Rodney Frazier  
Gregory Thomas  
Jeff Allen  
Clay Johnson  
Philip Grone



For surpassing the Federal government's mandated energy reduction goal (35 percent by 2010) six years early by achieving a 44 percent reduction in 2004 compared to 1985 levels and a 16 percent reduction from 2003 levels

Projects focused on replacing inefficient heating and air conditioning units, replacing industrial lighting with high-efficiency lighting, and outfitting warehouses with natural day-lighting systems. The biggest accomplishment was the final decommissioning of a large central steam plant, which alone reduced energy consumption by 93 billion Btu, contributing to the total of almost 280 billion Btu of energy saved and \$1.9 million in net energy costs saved in 2004. These savings occurred despite an increase in facility space by 2 million square feet in only a few years. As a result of these energy savings, the environment benefited from reduced emissions of almost 38 million pounds per year of greenhouse gases. This is equivalent to the annual emissions of more than 6,000 typical households. Camp Pendleton also incorporated U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) standards into construction projects – in fact, all Camp Pendleton Military Construction projects require maximum effort in meeting the LEED™ program guidelines. Camp Pendleton shares its success in energy management through recognition programs, conference presentations, and Earth Day and Energy Awareness Day events.

U.S. DEPARTMENT OF DEFENSE  
NAVY REGION SOUTHWEST

PRESIDENTIAL AWARDS  
FOR LEADERSHIP IN  
FEDERAL ENERGY MANAGEMENT



For its outstanding achievements in reducing energy and water usage through low- and no-cost measures.

As Commander, Navy Region Southwest, Rear Admiral Betancourt (Ret.) challenged the 11 installations in the Navy Region Southwest to cut their utility costs by 10 percent in 2004. The installations successfully met the challenge. In meeting the Admiral's challenge, Navy Region Southwest installations implemented initiatives that saved almost \$4.1 million in 2004, with another \$1 million in savings to accrue in 2005. These savings included reductions of approximately 47.8 billion Btu of steam and chilled water, 17.0 billion Btu of natural gas, 16.8 billion Btu of electricity, and 40 million gallons of water in 2004. Navy Region Southwest's Building Tune-Up Program also achieved a significant savings of \$1.4 million in 2004, through simple improvements to operating procedures, such as turning off redundant computer room air conditioning units, turning off unnecessary pumps, resetting controls, and optimizing air conditioning systems. As a result of the Region's ground-breaking work in saving energy in data centers, a list of common-sense measures was developed and disseminated to data center managers throughout the Navy and Marine Corps.



REAR ADMIRAL JOSE LUIS BETANCOURT, JR.  
(RET.)  
JON DUKE  
REAR ADMIRAL LEN HERING  
LIEUTENANT JUNIOR GRADE  
CHIH-MING KAO  
DONNA KIMBALL  
COMMANDER CHRISTINE LONIE  
CRISTIAN OUATU  
GARY PHILLIPS  
JACK SALERNO  
THOMAS SANTOIANNI  
PETER SORENSEN  
JOHN THOMAS  
KEN THOMAS

Team Members (*l to r*):

Ken Thomas  
Bill Tayler  
Gary Philips  
Tom Santoianni  
Jack Salerno  
David Garman  
John Thomas  
Cris Ouatu  
Peter Sorensen  
Donna Kimball  
Jon Duke  
Jerry Kao  
Christine Lonie  
Len Hering  
Clay Johnson  
Philip Grone

## FEDERAL ENERGY and WATER MANAGEMENT AWARDS

FEMP and its partnering agencies celebrated the 24th Anniversary of the Federal Energy and Water Management awards in 2005. The awards are presented annually by the Department of Energy and the Federal Interagency Energy Policy Committee. As directed by Executive Order 13123, the awards recognize Federal government facility and resource managers for their exceptional service in the conservation of energy resources, use of renewable technologies, and the reduction of the environmental impact of energy use at Federal sites.

President Bush has asked the Federal government to lead by example and set new energy benchmarks for the rest of the country. The 2005 awardees used all the tools and technologies at their disposal to arrive at their energy solutions— many featuring alternative financing and private-sector partnerships – to finance conventional energy conservation measures such as lighting retrofits, chiller replacements, heating, ventilating, and air conditioning improvements, and energy management control systems. They also used renewable energy technologies such as geothermal heating and cooling systems and large-scale photovoltaic installations.

The 2005 winners of the Federal Energy and Water Management Awards are Federal employees who create, innovate, and demonstrate the perseverance to overcome many challenges to help our nation achieve energy security.

FEMP is proud to salute the 2005 winners, celebrate their contributions, and recognize their inspirational efforts to help create a stronger and more efficient Federal government.

**WATER CONSERVATION AWARD TO AN ORGANIZATION**

UNITED STATES MARINE CORPS

MARINE CORPS BASE HAWAII  
KANEOHE BAY, HAWAII



*(l to r) David Garman, Paul Bouley,  
and Douglas Faulkner*

During FY 2004, Marine Corps Base Hawaii (MCBH) implemented a number of best management practices to reduce water consumption on the Base using tools such as energy savings performance contracts, sustainable building design, facility audits, and life-cycle cost analysis. Projects included upgrading the effluent irrigation system, conducting a leak detection survey and repairing identified leaks, replacing old plumbing fixtures in 1,200 housing facility bathrooms, replacing top-loading clothes washers with efficient front-loading washers, and installing low-flow plumbing fixtures in all renovation and new construction projects. MCBH also expanded their public awareness and information program to include training, awareness fairs and exhibits, and community information events. Together, these measures helped MCBH reduce water consumption by 19 percent in FY 2004, saving 183 million gallons of water and more than \$360,000. Additionally, these efforts are helping conserve the island of Oahu's potable water supply.



**WATER CONSERVATION AWARDS TO SMALL GROUPS**

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES HAWAII  
PEARL HARBOR, HAWAII

JAMES EBISU  
PAUL EYRE  
MICHAEL FITZGERALD  
GREG HAYASHI  
CLAUDIO LAMOSAO



*(l to r)* David Garman, Paul Eyre,  
and Douglas Faulkner

The Naval Facilities Hawaii Public Works Team executed an aggressive water resource master strategy to reduce water consumption and waste. The strategy centered on a long-term project to replace aging water distribution piping, some of which dated back to World War II. Replacing the pipes reduced leaks and other water loss in the system. The team also repaired and recalibrated the existing metering system, adding irrigation meters that save millions of dollars in avoided sewer charges. Additionally, the team implemented a multi-media public awareness campaign, improved the waste reporting system, formed a rapid deployment response team to fix system leaks, and increased the use of moisture sensors and irrigation time clocks to avoid over-watering. These efforts saved 1 billion gallons of water and \$5.4 million in FY 2004. The team also saved thousands of dollars in electricity costs by adjusting water distribution pump controls to turn off one 400 horsepower pump a few hours each day during the critical peak utility period.



**WATER CONSERVATION AWARDS TO SMALL GROUPS**

SMITHSONIAN INSTITUTION  
NATIONAL ZOOLOGICAL PARK  
WASHINGTON, DC

RICHARD FARY  
WAYNE JORDAN  
PATRICK O'NEAL  
HIMANSHU PATEL

FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS



The 163 acre National Zoological Park consumes more than 70 percent of the water used by Smithsonian Institution facilities in Washington, DC. In 2001, the Smithsonian energy and building managers identified a number of water conservation opportunities at the zoo, and converted them into a project financed and executed under a GSA area-wide energy services contract. The project included new water meters, digital controls of pool water levels, rain sensors for automatic irrigation systems, water pressure reducing valves and flow regulation valves, and repair of leaking valves and underground pipes. The work was coordinated closely with animal keepers and scheduled after hours to minimize disruption to zoo visitors. Although the project was completed in FY 2002, the Smithsonian began to realize savings from the project in FY 2004, equating to \$207,000 in cost savings and 31.8 million gallons of water—an 8.7 percent reduction compared to pre-project water consumption.

*(l to r) David Garman, Himanshu Patel, Pat O'Neal, Rick Fary, Wayne Jordan, and Douglas Faulkner*



**RENEWABLE ENERGY AWARDS TO SMALL GROUPS**

U.S. GENERAL SERVICES ADMINISTRATION'S  
ENERGY CENTER OF EXPERTISE  
GREENING OF GSA POWER PROCUREMENTS  
WASHINGTON, DC

LINDA COLLINS  
LOUIS LOZITO  
BRIAN MAGDEN  
KEN SHUTIKA  
MIKE ZISKIND



*(l to r)* David Garman, Louis Lozito,  
Ken Shutika, Linda Collins,  
Douglas Faulkner, Mike Ziskind,  
Brian Magden

In FY 2004, the General Services Administration's Energy Center of Expertise, in conjunction with their Northeast and Caribbean Regions, awarded its largest green power contracts in agency history, equating to a total of 92 million kilowatt-hours (kWh). GSA significantly increased its commitment from 6.3 million kWh in FY 2003, procuring the additional biomass and wind power from four energy providers in New York and New Jersey for the United Nations, National Park Service, Smithsonian Institution, Social Security Administration, U.S. Coast Guard, EPA, and GSA facilities. Of the 92 million kWh, GSA purchased 75 million kWh for its own facilities, equivalent to 33 percent of their regional electricity requirements—13 times more than the renewable energy goal of 2.5 percent by FY 2005. Through these large procurements, GSA pays only 10.66 cents per kWh for biomass energy purchased for the Federal Building at 26 Federal Plaza in New York City, 0.14 cents less than the cost of non-green electricity, resulting in annual savings of \$51,000.

## RENEWABLE ENERGY AWARDS TO SMALL GROUPS

U.S. DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
BRAZORIA NATIONAL WILDLIFE REFUGE  
ENVIRONMENTAL DISCOVERY EDUCATION CENTER  
FREEPORT, TEXAS

JEFFREY JOHNS  
TRACEY McDONNELL  
DON MORRISON  
JENNIFER SANCHEZ  
FLOYD TRUETKEN



The new 2,095-square-foot Brazoria Environmental Discovery Educational Center is used by more than 5,000 students per year to conduct experiments in biology and environmental science. The complex consists of an education building with an open classroom and visitor displays, a restroom building, a water pump house, and a nature trail. The Center generates 100 percent of its own electrical power using two photovoltaic arrays totaling 7.4 kilowatts of capacity and producing 35.5 kilowatt-hours per day, saving approximately 44.2 million Btu annually. The building also incorporates numerous sustainable design principles to minimize energy consumption, conserve water, enhance indoor quality, and optimize operation and maintenance practices. Some of these measures include: small environmental footprint and minimal site disturbance, superinsulation, clerestory windows, low-E windows, T-8 lighting, natural ventilation, reflective metal roofing, an energy efficient HVAC system, roof rainwater capture for irrigation, low-VOC (volatile organic compound) materials, low-flow water fixtures, and an aerobic wastewater treatment system powered by solar energy.

FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS



(l to r) David Garman,  
Debra Sonderman, Floyd Truetken,  
Tracey McDonnell, Douglas Faulkner,  
Jeffrey Johns, Tony Leger,  
Jeffery Donahoe, Nina Rose Hatfield

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



### RENEWABLE ENERGY AWARDS TO SMALL GROUPS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
SOLAR THERMAL PILOT PROJECT AT FILM STORAGE BUILDING  
KENNEDY SPACE CENTER, FLORIDA

RICHARD BUCKMAN  
MICHAEL CONRAD  
CURT IFFINGER  
BRIAN ORRISON  
WAYNE THALASINOS



(l to r) David Garman,  
James Leatherwood,  
Olga Dominguez, Richard Buckman,  
Michael Conrad, Curt Iffinger,  
Douglas Faulkner,  
Wayne Thalasinios,  
Brian Orrison

In FY 2004, a solar thermal pilot project was completed at the Film Storage Building at Kennedy Space Center. This building has unique temperature and relative humidity requirements due to storage of microfilm, photographic records, and computer media associated with shuttle and historic Apollo moon missions. About 80 percent of the building's electrical load is used by the HVAC system for cooling and dehumidification of conditioned storage space. With the existing system, process air used to cool the space is dehumidified as it is blown through a bed of dry silica desiccant. The desiccant removes the moisture from the process air stream, and after a certain period of time becomes saturated and requires drying. The project used ten evacuated tube solar collectors to produce the heat required to evaporate moisture from the desiccant, thereby displacing the need for the 19 kilowatt electrical heating element and saving 196 million Btu annually. More importantly, the project showed that solar energy is a viable heat source for the regenerating process of a desiccant dehumidification system and increased awareness of this replicable renewable conservation measure.

**RENEWABLE ENERGY AWARDS TO SMALL GROUPS**

SMITHSONIAN TROPICAL RESEARCH INSTITUTE  
BOCAS DEL TORO RESEARCH STATION, PANAMA

MELINDA HUMPHRY BECKER  
SHERYL KOLASINKI  
FERNANDO PASCAL  
DEREK ROSS  
IRA RUBINOFF

FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS



In FY 2004, the new 7,500-square-foot Bocas del Toro Research Station opened as part of Smithsonian Tropical Research Institute. It is used year-round for the research of the ecology, behavior, and evolution of tropical organisms. A 38 kilowatt photovoltaic roof is integrated into the low-impact design of the building, producing 75 percent of the building's energy or close to 70 megawatt-hours annually. The photovoltaic system also provides interior shading and acts as a rainwater collection system. The roof profile directs rainfall into a 4,000 gallon storage tank where the water is filtered and treated with ultra-violet light. This system, along with low-flow plumbing and a planned man-made wetland to treat grey water, is estimated to save 55,000 gallons of water annually. Additional sustainable features include habitat restoration of an adjacent pond, reduction of impervious pavement, site impact minimization, daylighting, and the use of locally-harvested, low-VOC (volatile organic compounds) building materials.

*(l to r)* David Garman,  
Sheryl Kolasinki, Fernando Pascal,  
Melinda Humphry Becker,  
Derek Ross, and Douglas Faulkner

**FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS**



**ENERGY SECURITY AND RELIABILITY AWARD TO A SMALL GROUP**

UNITED STATES MARINE CORPS  
MARINE CORPS AIR STATION YUMA  
YUMA, ARIZONA

MICHAEL BOYD  
RON DURFEY



*(l to r)* David Garman,  
William Sheedy, Michael Boyd,  
Ron Durfey, and Douglas Faulkner

In FY 2004, Marine Corps Air Station Yuma installed approximately one mile of solar lighting to illuminate a perimeter fence and multi-use pathway, increasing the safety and security for military personnel, their families, and visitors walking, running, or bicycling between the Air Station and the City of Yuma. The project also provides security of the fence line, allowing security personnel to more easily identify unauthorized individuals along the lighted perimeter or determine if the fence line has been compromised. The solar lighting project replaced a proposed project to install permanent electrical wiring and compact fluorescent lighting. The renewable option was chosen not only to reduce the overall cost for construction and future energy and maintenance costs, but to assure its functional reliability in the event of an electrical power outage. The solar project saved more than \$540,000 in construction, labor, and materials costs over the non-renewable option, and will avoid almost 41 million Btu annually.

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

DEPARTMENT OF THE ARMY  
FORT LEWIS  
FORT LEWIS, WASHINGTON



(l to r) David Garman, Bernadette Rose, and Douglas Faulkner

Fort Lewis developed and implemented several key energy projects in FY 2004, reducing their energy use by 19 percent below the 1985 baseline. An ESPC project initiated in FY 2003 consisted of several energy conservation measures including: zone setback controls and space heating infrastructure upgrades; new control valves for heating, steam, and domestic hot water applications; and added insulation to exposed heating and hot water distribution systems. Load assessments at six key buildings, funded by the Department of Energy, identified additional low-cost energy savings opportunities such as repairing dampers, adjusting heating schedules, and tuning boilers. The Public Works staff implemented the recommended measures, while also converting incandescent traffic lights to LED technology throughout the installation. Finally, Fort Lewis is engaged in a comprehensive sustainability program that in FY 2004 included the installation's first Leadership in Energy and Environmental Design (LEED™) facilities, increased use of alternative fueled vehicles, and purchase of 12 gigawatt-hours of green power—equal to six percent of FY 2004 electricity consumption. Projects implemented in FY 2004 saved \$500,000 and almost 50 billion Btu.

**FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS**



**ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS  
TO ORGANIZATIONS**

U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY NATIONAL CENTER  
RESTON, VIRGINIA



*(l to r)* David Garman,  
Keith Anderson,  
Debra Sonderman, John Brown,  
Douglas Faulkner, Nina Rose Hatfield

The U.S. Geological Survey's (USGS) Office of Management Services developed a highly successful energy program that has resulted in a 31 percent reduction in energy consumption at the USGS National Center as compared to the FY 1985 baseline. Their successful program focuses on project implementation, operations and maintenance (O&M) improvements, and employee participation. Using O&M and utility energy services contracts, USGS implemented numerous measures to offset increased energy use from new construction. These measures included developing stringent standard operating procedures and minimizing equipment run-time hours, upgrading equipment and lighting with high-efficiency units, and installing a solar thermal heating system and solar outdoor lighting. In FY 2004 alone, USGS completed energy and water efficiency projects resulting in savings of \$56,000 and 9 billion Btu—a 5 percent decrease from FY 2003. These projects included installation of a plate-and-frame heat exchanger to provide free cooling during temperate and winter months, replacement of leaky underground steam and condensate piping, and replacement of air handling unit chilled water coils.



**ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS  
TO ORGANIZATIONS**

**FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS**

DEPARTMENT OF THE NAVY  
PORTSMOUTH NAVAL SHIPYARD  
PORTSMOUTH, NEW HAMPSHIRE



In FY 2004, Portsmouth Naval Shipyard reduced energy consumption by more than 12 percent from the previous year. This was accomplished largely through the second phase of an energy savings performance contract project to modernize the existing central steam plant. Three major power plant components were installed: a 5.5-megawatt dual-fuel combustion turbine cogeneration system, two boilers, and two 2-megawatt diesel generators. The project also included consolidation of the Shipyard's heating system, a complete decommissioning of the existing boiler plant system, repairs to the compressed air system, and Shipyard-wide lighting upgrades. Additionally, two solar photovoltaic panels were installed to provide backup power to the emergency communication system. These measures saved \$4.4 million and almost 118 billion Btu in FY 2004, as well as increasing overall efficiency and streamlined plant operations, decreasing maintenance costs, improving reliability of existing power systems, and eliminating more than \$19 million in future repair and replacement of old systems.

*(l to r)* David Garman, Commander Frank Madia, Sharon Parshley, Captain Ralph Snow, and Douglas Faulkner

**FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS**



**ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS  
TO ORGANIZATIONS**

U.S. DEPARTMENT OF VETERANS AFFAIRS  
VA MIDWEST HEALTH CARE NETWORK  
MINNEAPOLIS, MINNESOTA



*(l to r)* David Garman, Peter Yacowicz,  
and Douglas Faulkner

The Veterans Integrated Service Network 23 service area used a two-phased energy savings performance contract to fund \$14 million in capital improvements for energy and water efficiency, replacement of aging infrastructure, and enhanced energy security in three VA Medical Centers in South Dakota and Minnesota. The first phase of the contract completed in FY 2003 implemented necessary infrastructure improvements including replacing hundreds of windows and light fixtures and installing 40 efficient boilers. The second phase upgraded the building management system and modified the HVAC system, and included recommissioning the energy systems, installing direct digital controls and variable frequency drives, and replacing steam traps. Additionally, a 2-megawatt generator installed at the Sioux Falls facility is cutting peak load costs and providing secure back-up power for the medical center. These projects saved \$1.3 million and more than 151 billion Btu in FY 2004, and will yield total guaranteed savings of \$26.8 million over the life of the projects.

**ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS  
TO SMALL GROUPS**

FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS

U.S. GENERAL SERVICES ADMINISTRATION  
NORTHWEST/ARCTIC REGION  
SEATTLE, WASHINGTON

CHRIS HELMER  
ARUN JHAVERI  
MICHAEL OKORO  
RICK THOMAS  
JEFF TRUAX



*(l to r) David Garman, Jeff Truax, Arun Jhaveri, Cheri Sayer, and Douglas Faulkner*

The design of the new United States Courthouse in Seattle, Washington includes many energy efficient and sustainable design features. The building's southern orientation brings in natural light, reducing the need for artificial lighting. The design also incorporates energy efficient lamps and ballasts, a natural ventilation system, low-flow plumbing fixtures, high-performance glazing, and low-maintenance landscaping. An additional \$1.5 million in funding was provided through an energy savings performance contract to incorporate high performance equipment and energy systems that would not otherwise have been included. Upgrades included direct digital controls for HVAC, lighting, alarm, and life safety systems; lighting occupancy sensors; variable frequency drives; and chiller plant improvements. The U.S. General Services Administration also partnered with Seattle City Light, the Department of Energy, and the Bonneville Power Administration to install a 1.5-kilowatt photovoltaic system on the building's lower roof as part of a demonstration project funded by the City of Seattle. Annual savings from the base design features and ESPC upgrades are estimated at \$300,000 and 16.5 billion Btu.



**ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS  
TO SMALL GROUPS**

DEPARTMENT OF THE NAVY  
NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT  
NEWPORT, RHODE ISLAND

GUY BORGES  
RHONDA STEWART  
BRAD WHEELER



*(l to r)* David Garman, Brad Wheeler,  
Rhonda Stewart, Dan Magro,  
and Douglas Faulkner

The Naval Undersea Warfare Center Division Newport implemented two new projects in FY 2004 that helped reduce energy use by 7 percent since FY 2003 and 54 percent below the FY 1985 baseline. Variable frequency drives were installed on motors for variable torque loads to reduce energy demand for ventilation. The project also links air handler operation to building occupant load measurements, improving indoor air quality. An HVAC upgrades project consisted of controls upgrades, elimination of heat-cool conflicts, and installation of new technology chillers. Together these projects will produce annual savings of almost \$135,000 and 4 billion Btu. Initiatives funded by the Center included free cooling, variable frequency drives, and lighting control systems, which will save an additional \$118,000 and 3.5 billion Btu annually. Newport reduced its electrical load and petroleum use by installing direct digital control systems, implementing temperature setbacks, and reducing heating/cooling system conflicts. They also conducted surveys of facility infrastructure and energy-intensive functions, identifying potential projects that will save an additional \$256,000.

**EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS**

UNITED STATES AIR FORCE  
TYNDALL AIR FORCE BASE, FLORIDA

ALVIN DAY

FEDERAL ENERGY  
AND WATER MANAGEMENT  
AWARDS



By developing innovative strategies and motivating energy managers, Al Day has had a profound effect on the Air Force Renewable Energy Program, currently leading the Federal government in procuring renewable electricity. In 2003 he spearheaded the purchase of 40 percent of the Government's renewable power—more than 207 gigawatt-hours. Continued efforts in 2004 resulted in contracts for 342 gigawatt-hours. He has been instrumental in encouraging contracts with renewable options, including assisting two Air Force Bases in purchasing renewable power for 100 percent of their electric consumption. Mr. Day also developed regional acquisition strategies, guided development of two wind generation projects, and promoted renewable energy use through government and industry meetings and publications. Additionally, Mr. Day has established forward-thinking programs and provided energy managers with the tools and direction to enhance their capabilities. During FY 2004, Mr. Day developed a new energy savings performance contract guidance module on the Air Force Civil Engineer Support Agency Web site and helped the Air Force award five task orders worth in excess of \$9 million. He also developed its first Air Force-wide energy newsletter and initiated the first energy awards program.

*(l to r) David Garman, Alvin Day,  
and Douglas Faulkner*



(l to r) David Garman, Ellie Sexton,  
and Douglas Faulkner

### EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS

NAVAL FACILITIES ENGINEERING SERVICE CENTER  
PORT HUENEME, CALIFORNIA

ELLIE SEXTON



Ellie Sexton single-handedly revitalized the Navy's energy awareness and awards program, which is now flourishing like never before. In order to properly educate and inform Navy personnel about energy efficiency, Ms. Sexton expanded the program and enhanced its visibility through her innovation and creativity. New compact disks provide policy, publications, and program execution tips for energy managers, as well as materials to involve and educate youth. The program hosts numerous awareness events on and off Base, with promotional materials and an exhibit summarizing Navy accomplishments. Ms. Sexton was involved in developing new campaign themes and messages that ultimately were responsible for cementing energy awareness as a vital part of the Navy's overall program. She has managed the Secretary of the Navy Energy Awards program for the past seven years, expanding the program to increase participation and provide additional levels of recognition. Ms. Sexton also maintains the Navy's energy Web site, which includes their energy business plan, information and tips for accomplishing a successful energy program, technical information, on-line progress reporting, energy project status, and recognition of award winners. In addition to her outreach efforts, Ms. Sexton helped the Navy establish its 1975 and 1985 energy baselines and has managed quality assurance and coordination of Navy energy reporting for more than 10 years.

## FEDERAL ENERGY SAVER SHOWCASE FACILITY AWARDS

### Federal Energy Saver Showcase Facility Awards

In accordance with Executive Order 13123, Federal agencies nominate showcase facilities to highlight the energy efficiency, water conservation, and renewable energy improvements at those facilities. In 2005, the awards panel selected four outstanding Federal facilities to receive the prestigious Federal Energy Saver Showcase designations. Each of these facilities takes a holistic approach to energy management, and each stands out as exceptional models of sustainable design.

Since 1995, the Federal Energy Management Program has recognized more than 100 facilities across the country as Federal Energy Saver Showcases. The facilities chosen in 2005 represent the exemplary efforts of NASA, the Department of Energy's Oak Ridge National Laboratory, and the Department of the Interior's Bureau of Land Management and Fish and Wildlife Service. These Federal facilities used best practices that include optimizing site potential; minimizing energy consumption; protecting and conserving water; using environmentally preferable products; enhancing indoor air quality; and optimizing operational and maintenance practices.

Additionally, each award winner features renewable energy and water conservation technologies designed to save natural resources and reduce operating costs. Moreover, in order to advance the goals of the program, the building managers at these facilities also make outstanding efforts to educate visitors about the benefits of energy-efficient and renewable energy technologies and sustainable design principles.

## FEDERAL ENERGY SAVER SHOWCASE FACILITY AWARDS



(l to r) David Garman,  
Keith Dempsey,  
and Douglas Faulkner

## ENERGY SAVER SHOWCASE FACILITY AWARDS

EAST CAMPUS COMPLEX  
U.S. DEPARTMENT OF ENERGY  
OAK RIDGE NATIONAL LABORATORY  
OAK RIDGE, TENNESSEE



The newly constructed 376,000-square-foot East Campus Complex at Oak Ridge National Laboratory (ORNL) consists of laboratory and office space, as well as an efficient, automated central energy plant. The Leadership in Energy and Environmental Design (LEED™)-certified complex features sustainable and energy-saving measures such as: recycled and low-VOC materials, reflective roofing, roof and wall insulation, high-performance glazing, high-efficiency lighting, direct digital controls, energy efficient motors, high-efficiency chillers, and variable air volume systems. Built on a former brownfield site, the complex also includes rainwater-fed landscaping with native vegetation. The complex saves more than five million gallons of water and 10 million kilowatt-hours per year compared to baseline construction, and is about 32 percent more energy efficient than comparable older buildings at ORNL.



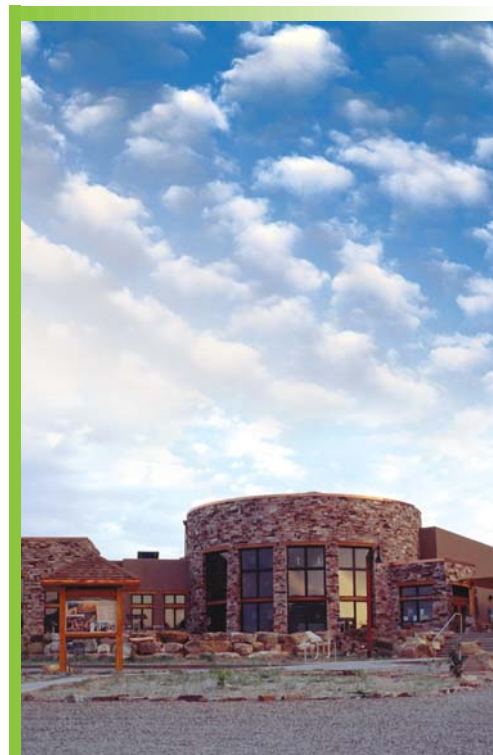
**ENERGY SAVER SHOWCASE FACILITY AWARDS**

ESCALANTE SCIENCE CENTER  
GRAND STAIRCASE-ESCALANTE NATIONAL MONUMENT  
U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
ESCALANTE, UTAH

**FEDERAL ENERGY SAVER  
SHOWCASE FACILITY  
AWARDS**



The Bureau of Land Management's Escalante Science Center at Grand Staircase-Escalante National Monument, nominated for Leadership in Energy and Environmental Design (LEED™) certification, was constructed to incorporate environmentally-sensitive, sustainable features throughout the facility. Daylight controls with dimmable ballasts, skylights, and interior and exterior light shelves reduce lighting output and control direct lighting for increased occupant comfort and productivity. Natural ventilation, operable windows, and low-VOC materials also contribute to a healthy indoor environment. Water-saving and reuse technologies reduce wastewater volume by 50 percent. A 7.5-kilowatt, grid-connected photovoltaic system generates 11 percent of annual electricity needs; the remaining 89 percent is met through a green power purchase. These features, along with occupancy sensors, increased insulation, and evaporative cooling make the facility more than 40 percent more energy efficient than a comparable building.



*( l to r )* David Garman,  
Debra Sonderman, Trent Duncan,  
Nina Rose Hatfield, and  
Douglas Faulkner

## FEDERAL ENERGY SAVER SHOWCASE FACILITY AWARDS



(l to r) David Garman,  
Debra Sonderman,  
Charlie Vandemoer, Pam Rooney,  
Nina Rose Hatfield, Jeffery Donahoe,  
and Douglas Faulkner

## ENERGY SAVER SHOWCASE FACILITY AWARDS

RHODE ISLAND NATIONAL WILDLIFE REFUGE  
HEADQUARTERS AND KETTLE POND VISITORS CENTER  
U.S. DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
CHARLESTOWN, RHODE ISLAND



The environmentally-sensitive and sustainable Rhode Island National Wildlife Refuge Headquarters and Kettle Pond Visitors Center is a result of a collaborative design effort between the Fish and Wildlife Service; the city of Charlestown, Rhode Island; Friends of the National Wildlife Refuges of Rhode Island; and William D. Warner Architects and Planners. Minimal site disturbance and careful site planning effectively integrate parking and roadways among sensitive and historic site features. Recycled and low-VOC building materials include engineered wood, plastic lumber, linoleum and bamboo flooring, sheetrock, fiberboard, and carpet with high recycled content. Super insulation of the building envelope, high efficient lighting, daylighting, and optimal building orientation will reduce energy use by 20 percent over a traditional office building, while a renewable geothermal heat exchange system will save \$7,000 in energy costs annually.

**ENERGY SAVER SHOWCASE FACILITY AWARDS**

BUILDING 4600  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GEORGE C. MARSHALL SPACE FLIGHT CENTER  
HUNTSVILLE, ALABAMA

**FEDERAL ENERGY SAVER  
SHOWCASE FACILITY  
AWARDS**



Environmentally sensitive construction practices make the 139,000-square-foot NASA Building 4600 at George C. Marshall Space Flight Center a model for sustainable design. The building's east-west orientation and sun shades minimize sun exposure, while an open floor plan allows for an abundance of natural light. Other energy-saving features include light sensors, photovoltaic roof panels, and a white, reflective ENERGY STAR® roof membrane. Waste water from the campus chiller plant is distributed to a retention pond for irrigation, saving 3.5 million gallons of potable water annually. More than 85 percent of construction waste was re-used or recycled, and 20 percent of the building material is made of recycled content. Low-VOC materials, efficient air flow, and greater access to daylight and views provide a healthy and productive interior work environment.

*( l to r )* David Garman,  
Olga Dominguez, Robert Mathis,  
Cedreck Davis, and Douglas Faulkner

FEMP



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U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**

Bringing you a prosperous future where energy  
is clean, abundant, reliable, and affordable