



# FEDERAL ENERGY MANAGEMENT PROGRAM YEAR IN REVIEW 2004

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




The federal government must lead the way in reducing its energy consumption and related environmental impacts so that the rest of the country will follow our example. 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 crop of federal facility managers. 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 reflect 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

---

## YEAR IN REVIEW 2004

## INTRODUCTION

Now more than ever before, the future of our economy, environment, and national security depend on our energy independence. Our government has a vital role to play to secure this goal for our country. In fact, in the National Energy Policy report, President Bush has asked the federal government to set the example for the rest of the country by using energy and water resources wisely and to conserve energy wherever feasible.

The government is making considerable progress in this effort. Federal building-related energy use has dropped more than 25 percent per square foot since 1985, thanks largely to the 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.

The first section of this report outlines how FEMP's four service areas – Technical Assistance, Financing, Policy, and Outreach – are helping agencies achieve greater energy efficiency and cost-effectiveness in the following areas:

- New construction
- Building retrofits
- Equipment procurements
- Operations and maintenance (O&M)
- Utility management

The remainder of the document honors the winners of the Presidential, Federal Energy and Water Management, and Showcase awards. These awards recognize individuals and groups who are developing successful energy technology solutions and applying them to the goal of a more secure and independent energy future for America.

In addition to federal energy management, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) has a host of other conservation and efficiency programs underway to strengthen America's energy security, environmental quality, and economic vitality. To learn more about these programs, visit the EERE Web site at [www.eere.energy.gov](http://www.eere.energy.gov).

# FEDERAL ENERGY MANAGEMENT

---

## YEAR IN REVIEW 2004

### TABLE OF CONTENTS

FEDERAL ENERGY MANAGEMENT 2004	
Technical Assistance	4
Financing	8
Policy	9
Outreach	11
Presidential Awards for Leadership in Federal Energy Management	13
Federal Energy and Water Management Awards	20
Showcase Awards	51



## TECHNICAL ASSISTANCE



The Seattle Terminal Radar Approach Control (TRACON) facility operates 24/7 at one of the busiest airports in the world. It is the Department of Transportation's first building to achieve Gold LEED™ certification. Above is a sunny view of the atrium lobby area with skylights, vision glass and translucent structural glazing for the walkways and stairs.

### TECHNICAL ASSISTANCE

The number of federal agencies purchasing renewable power continues to grow rapidly with the increased activity and savvy of federal buyers, making renewable power purchase both easier and less expensive. For example, the Defense Energy Support Center has expanded into purchasing Renewable Energy Credits (REC) or Green Tags as well as renewable power. The General Services Administration also continues to make large competitive purchases, with many more renewable power and REC products available across the country.

Federal agencies also continue to incorporate sustainable design features in new buildings. The recently published *Business Case for Sustainable Design in Federal Facilities* provides significant evidence that sustainable design is a smart business choice yielding economic, social, and environmental benefits to both building owners and society. At least nine federal agencies are currently using the U.S. Green Buildings Council's Leadership in Energy and Environmental Design (LEED™) rating system to foster sustainability in new construction.

### DISTRIBUTED ENERGY RESOURCES

In FY 2004, FEMP responded to federal energy managers' increased interest in energy security. FEMP worked to develop energy security plan guidelines and templates, completing 18 combined heat and power (CHP) initial screening reports. These projects have a total capacity of 86 megawatts (MW), an implementation cost of \$77.8 million, and annual facilities savings of approximately \$10.5 million.

FEMP also provided support to 16 Army installations in the Southeast Region, developing tools for use in creating energy security plans required by Army headquarters. These tools included an energy security checklist, an energy security plan template, and template guides. FEMP also assisted in developing the plans, which include an energy vulnerability assessment, energy emergency preparedness and operations plan, and a remedial action plan.

In addition, FEMP provided direct technical assistance to five sites. Notable highlights include the Marine Corps Air Station Beaufort, South Carolina, where fifteen 100 kilowatt microturbines will be installed in the existing central heating plant and the waste heat used to heat water for heating and domestic hot water. A 5-MW CHP plant was installed at Fort Bragg that features dual use of turbine exhaust modulating between exhaust-firing and absorption chiller to produce chilled water for air conditioning and feeding a heat recovery steam generator for serving heat loads. The system's advanced control software optimizes individual component operation and overall system response to time-varying energy rates and electric, chilled water, and steam loads. By recycling the waste heat, the effective efficiency of power generation rises to 70 percent—about double the efficiency of central station power plants—and the project will save about \$1.8 million per year.

## TECHNICAL ASSISTANCE



### ALERTS

Demand for natural gas in the U.S. has been steadily rising over the past decade, fueled in part by the rapid growth in use of natural gas for electricity generation. At the same time, domestic production has declined since its peak in the mid-1970's, and recent efforts to dramatically ramp-up drilling activity have had limited impact. These factors led to a tightening in the demand and supply balance and record low levels of stored natural gas in the fall of 2003. Through the Assessment of Load and Energy Reduction Techniques (ALERTS), FEMP provides technical services for reducing natural gas demand through gas and electric conservation, efficiency, load management, and fuel switching. Accomplishments in FY 2004 included using ALERT methodologies, protocols, and reporting to address natural gas consumption in two areas: generation of electricity to satisfy peak loads and consumption necessary to satisfy heating loads. ALERT teams assessed 26 sites for the Air Force, Navy, Army, DOE, U.S. Coast Guard, Environmental Protection Agency (EPA), National Institute of Standards and Technology, NGA, National Park Service, and the National Aeronautics and Space Administration.

### SAVEnergy AUDITS

E.O 13123 requires agencies to conduct audits to identify energy efficiency and water conservation improvements on 10 percent of their facilities each year. FEMP's SAVEnergy Program continues to provide agencies with audits of federal buildings. During FY 2004, SAVEnergy awarded 29 audits (four fully or partially funded by agencies) of over 4.3 million square feet. Audits are expected to identify about 200 billion Btu and \$2 million in annual savings with an investment of about \$7.5 million. Also during FY 2004, FEMP issued the Request for Quotes for new five year contracts to perform SAVEnergy services, with award expected before the end of 2004.

### Labs21

A highlight of the EPA/DOE Laboratories for the 21st Century (Labs21) program in FY 2004 was the announcement of the winners of the student design competition in partnership with the Association of Collegiate Schools of Architecture and the Department of Public Works, Canada. More than 200 designs from across the United States and Canada were received for a sustainable laboratory incorporating energy efficiency, renewable energy, and water conservation technologies. Labs21 also experienced continued growth in FY 2004, with its network soaring to 2,600 people from around the globe. Partners with demonstration projects grew to 26, while supporters more than doubled to 71. The program saw the creation of two Labs21 Centers of Excellence, at Virginia Tech and the University of Hawaii, each working to spread the Labs21 message to different types of laboratories (Kindergarten through 12th grade learning environments and marine-based laboratories, respectively). In addition, the program worked with more than a dozen private sector experts to begin documenting best practices for laboratory design.

## TECHNICAL ASSISTANCE



*Marine Corps Base Camp Pendleton, CA, installed more than 200 photovoltaic-powered streetlights and traffic beacons in FY 2003—one of the largest applications of solar lighting in the federal government. The solar lighting project was originally initiated to improve visibility along a remote and dangerous stretch of road, and was later expanded to include overall base security and safety needs. The project avoided almost \$2 million necessary for grid-connected lighting.*

### OPERATIONS AND MAINTENANCE

FEMP's Operations and Maintenance program can help agencies save 5 to 20 percent on energy bills with a relatively small capital investment. Prior to FY 2004, the O&M program produced a number of tools to help agencies improve energy-using systems, such as the Whole Building Diagnostic tool. In FY 2004, a private sector facilities management software developer began test marketing this tool at a number of their existing customer's facilities. The O&M team updated the O&M *Best Practices Guide* to include sections on advanced metering and lighting, and also began work on a *Commissioning Best Practices Guidebook* that will be published in FY 2005. Energy managers can also learn more about Resource Energy Managers from a newly published booklet on "Contracting for a Resource Efficiency Manager," or from the popular workshops offered by FEMP, attended by more than 100 people in FY 2004.

Additionally, the O&M program completed nine technical assistance efforts for federal agencies during FY 2004. FEMP's O&M training reached about 300 people, with record attendance at the O&M sessions offered at the Energy 2004 conference and exposition held in Rochester, New York. Lastly, FEMP developed an O&M E-learning pilot that attracted 85 students. These students collectively completed more than 400 courses related to improving their on-site energy efficiency through better operations and maintenance.

### RENEWABLE POWER

In FY 2004, FEMP's renewable energy program supported and celebrated federal agencies' great strides in purchasing renewable energy. Conservative estimates show that as of September 30, 2004, the federal government is purchasing 768 gigawatt-hours (GWh) of renewable energy, contributing more than half of the progress to the 2005 goal of the equivalent of 2.5 percent of federal facility electric use, or 1334 GWh. Overall, federal agencies are almost to the goal, using 1312 GWh.

To help agencies make the final push to reach the Executive Order 13123 renewable energy goal, the Western and the Mid-Atlantic Regions hosted two successful workshops on "How to Meet the Renewable Goal." These one-day workshops helped to facilitate renewable power and REC purchases by agencies. Given the remaining time available to reach the goal, the workshops stressed these options, which have the shortest lead times to procure and are often the easiest, most cost-effective way for facilities to obtain a significant amount of renewable energy.

In FY 2004, FEMP assisted 30 agency renewable energy projects, seventeen of which analyzed solar projects at Department of Defense (DOD) bases in support of DOD's assessment of renewable opportunities. FEMP provided in-depth programmatic assistance to the Air Force, assisting them in becoming the single largest purchaser of green power in the country. The Air Force received recognition from the EPA Green Power Partnership for

## TECHNICAL ASSISTANCE



*Environmentally benign construction practices make the Parker River Visitor Center and Administrative Headquarters, Plum Island, Newburyport, MA, an exemplary model of sustainable design. Special care is being taken at the site to restore disturbed land to natural habitats of wetland, field, woods, and coastal areas. The overall building orientation, as well as the height, ventilation, and geometry of the roof and windows, provide an excellent model of energy efficiency and high building performance.*

having three facilities ranking in the top ten purchasers of green power in the country including Edwards AFB, the largest purchaser in the country. FEMP also provided in-depth green power assistance to the EPA, now purchasing approximately 50 percent of its electricity from renewable resources and ranking second in the nation behind the Air Force among purchasers of green power.

Also, in conjunction with EPA's Green Power Partnership, World Resources Institute, and the Center for Resource Solutions, FEMP led an effort to develop a joint *Guide to Purchasing Green Power*, which replaces outdated individual guides by each organization. The guide is posted at [www.eere.energy.gov/femp/pdfs/purchase\\_green\\_power.pdf](http://www.eere.energy.gov/femp/pdfs/purchase_green_power.pdf).

Lastly, in FY 2004 FEMP updated the renewable energy portion of their Web site at [www.eere.energy.gov/femp/technologies/renewable\\_energy.cfm](http://www.eere.energy.gov/femp/technologies/renewable_energy.cfm) to include a new section called 'Renewable Energy Basics,' which provides introductory information about biomass, geothermal, solar, and wind, the renewable resources covered under Executive Order 13123.

### SUSTAINABLE BUILDINGS

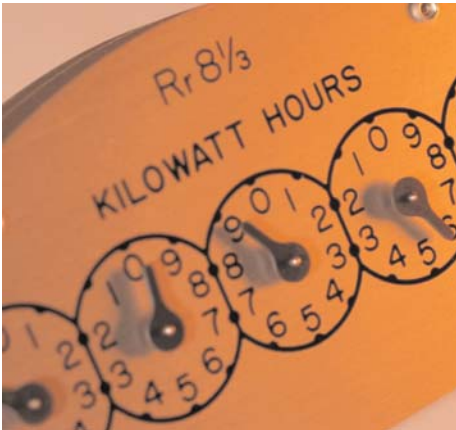
In FY 2004, FEMP worked cooperatively with the Office of Management and Budget (OMB) to include language on sustainable design into Section 300 of OMB Circular A-11 and Section 25-5 to bring the issue of sustainability to the attention of federal agency budget managers.

Collaborating with Interagency Sustainability Working Group members from DOE's Building Technologies Office, Pacific Northwest Laboratory, National Renewable Energy Laboratory (NREL), the Army, Navy, and GSA, FEMP initiated a pilot project to develop protocols and indicators to measure the performance of green buildings at Fort Lewis Army Base, Washington. FEMP also supported the Western Regional Office and the West Coast Federal Network for Sustainability to initiate a project that will contribute to federal case studies on green buildings. The FEMP-led working group grew from 20 federal members in 2001 to 226 in 2004.

FEMP also compiled, assessed, and maintained an on-line data base of federal agency policies, guidelines, and technical criteria for sustainable, energy efficient, and high-performance buildings, including the adoption and use of the LEED™ rating system by federal agencies. This database resides on the Whole Building Design Guide Web site ([www.wbdg.org](http://www.wbdg.org)), which also links back to the newly enhanced FEMP Sustainability Web site at [www.eere.energy.gov/femp/technologies/sustainable.cfm](http://www.eere.energy.gov/femp/technologies/sustainable.cfm).



## FINANCING



Budget constraints continue to play a dominant role affecting issues and decision-making in federal energy management. As a result, energy savings performance contracting (ESPC) and utility energy service contracts continue to be important as agencies struggle to balance facility improvements and energy efficiency, environmental, and energy security goals. During the past four years, almost 70 percent of federal energy retrofit projects were funded through alternative financing. To date, more than \$600 million DOE Super ESPC contracts have been awarded.

Federal agency projects experienced a hiatus in FY 2004 when ESPC authority expired on October 1, 2003. FY 2004 also witnessed increasing involvement and review of the ESPC program by oversight agencies such as the Office of Management and Budget. However, although no new projects were started and only minimal modifications to existing delivery orders were awarded, FY 2004 proved to be an extraordinarily busy and productive year.

While waiting for ESPC authority to return, FEMP held numerous discussions with oversight agencies to address issues such as proper agency facility monitoring of ESPC projects, verification of energy savings, the cost of financing in ESPC transactions, and use of agency in-house resources to ensure project integrity. As a result, FEMP focused its energy and efforts on improvements to the ESPC program, working with agencies and energy service company partners to update or develop contract tools that address the quality assurance and implementation of ESPC projects.

Programmatic improvements included developing an advanced ESPC workshop to address a stronger level of education and understanding of the technical issues and financial aspects of ESPC projects. FEMP completed an analysis of steps that can be undertaken to achieve better financing; developed standardization of measurement and verification tools; awarded projects containing advanced efficiency and renewable energy technologies; and developed guidelines for building commissioning activities.

With the recent renewal of ESPC authority, FEMP continues to strongly encourage agencies to use Project Facilitators to implement ESPC projects in order to take advantage of their depth and breadth of experience. In the coming year, agencies will face additional scrutiny in award of ESPC projects and, more than ever, will need to ensure quality assurance for all of their alternative financed projects. FEMP stands ready to help agencies implement technically and financially excellent alternatively-financed projects.

## POLICY



In FY 2004, 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.

The Interagency Energy Management Task Force, chaired by FEMP, continued to closely coordinate policy implementation and associated reporting requirements with the federal community. Issues highlighted in the meetings of the Task Force during the year included the following:

- Contribution of operations and maintenance best practices and large green power purchasers toward meeting the 2005 goals,
- Sustainable design in new federal construction,
- Role of combined heat and power and distributed generation in energy security, and
- Updates on the progress of comprehensive energy legislation in Congress, including the reauthorization of federal energy savings performance contracting.

Working group activity under the Task Force included revising the Executive Order Section 502(e) Guidance Providing Credit Toward Energy Efficiency Goals for Cost-Effective Projects Where Source Energy Use Declines But Site Energy Use Increases. The Guidance was revised to ensure that cost-effective combined heat and power (CHP) projects would receive proper credit under energy reduction goals, which measure progress according to site-delivered energy per square foot. CHP, also known as cogeneration, is an important strategy for ensuring the nation's energy security, so it is important that these projects be encouraged under the requirements of Executive Order 13123.

### REPORTING ON ENERGY MANAGEMENT

During 2004, FEMP changed the way it reports on the energy management activities of the federal government. In an effort to streamline the approval process for the *Annual Report to Congress on Federal Government Energy Management and Conservation Programs*, the 200-page report was split into two reports that separately address Congressionally-mandated statutory requirements and Executive Order directed activities. The Congressional report will keep the old name. *The Report on Federal Agency Activities Under Executive Order 13123, Efficient Energy Management* will contain more detailed information on agency-specific progress toward the seven major goals of the Order.

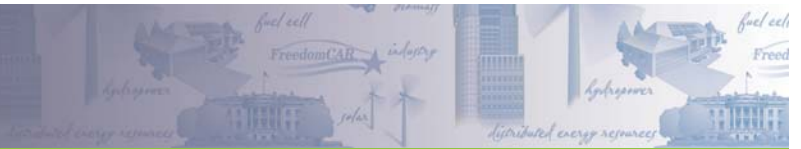
## POLICY

---

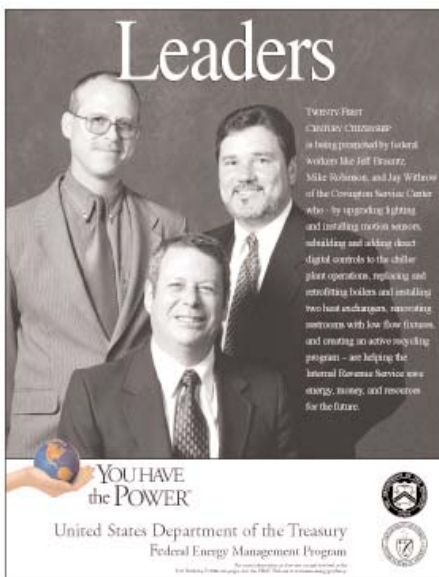
Preliminary findings from the reports include:

- The federal government spent almost \$4.4 billion for buildings and facilities energy during FY 2003, a 0.9 percent decrease (\$38.4 million) from FY 2002 expenditures.
- The government reduced the energy intensity of its standard buildings by 24.8 percent in FY 2003 versus the FY 1985 baseline year.
- Seven agencies, the Departments of 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 3.0 trillion Btu (877.1 GWh) of new renewable energy in FY 2003, equivalent to 1.6 percent of the government's electricity use. This puts the federal government 64 percent of the way to the goal of 2.5 percent by FY 2005. Consumption of new renewable energy increased 32.3 percent over the amount of new renewable energy the federal government used in FY 2002.
- Carbon emissions from energy used in federal facilities declined 19.0 percent in FY 2003 as compared to FY 1990.

FEMP also worked closely with the Office of Management and Budget during FY 2004 to prepare a summary report of the federal agencies' energy scorecards for the FY 2003 reporting period, required by Executive Order 13123.



## OUTREACH



In FY 2004, federal energy managers continued to face challenges to increase our nation's energy security through the deployment of renewable energy technologies while also extracting additional value and productivity from our conventional energy sources. In FY 2004, through a variety of education and awareness programs, federal agencies promoted themes of smart, renewable energy choices as a way to expand our energy supply, improve our economy, and promote energy independence. At the same time, agencies continued to recognize individuals and teams for their exceptional efforts to conserve energy resources and reduce the environmental impact of energy use at federal sites. Participation in expositions, meetings, and conferences brought federal workers together to share success stories, promote partnerships, and honor achievements.

## RECOGNITION

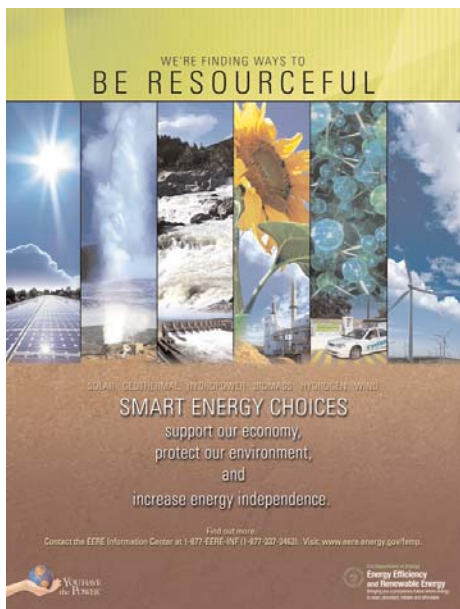
Agencies recognized exemplary leadership through annual energy management award programs. On July 15, 2004 the White House presented the Presidential Awards for Leadership in Federal Energy Management as part of a joint ceremony with the Office of the Environmental Executive's Closing the Circle Awards. Six outstanding teams were selected for their exemplary dedication and federal leadership in energy efficiency and implementation of Executive order 13123.

At DOE's Federal Energy and Water Management Awards ceremony on October 28, 2004, 27 individuals, groups, and organizations were honored for saving almost \$39 million dollars in energy expenses at federal facilities in America, Germany, and Korea. The awards were presented by Deputy Secretary of Energy Kyle McSlarrow and Acting Under Secretary and Assistant Secretary of Energy Efficiency and Renewable Energy David Garman. In addition, three federal buildings were designated Federal Energy Saver Showcases and one was awarded the ENERGY STAR® Building Award for Superior Performance. (Read more about these programs and honorees in the special awards section).

Twenty 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 2004, 24 individuals were recognized, increasing the total number of Energy Champions to 382 since 1997. In addition, 9 agencies developed new 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 solar hot water heating, recycled and low-VOC

# YEAR IN REVIEW 2004

## OUTREACH



August 14-17, 2005  
Long Beach, California

construction materials, super-insulation, direct digital controls, geothermal heating systems, 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 [www.eere.energy.gov/femp](http://www.eere.energy.gov/femp). In September 2004 alone, there were more than 77,000 visits to the FEMP Web site, a more than 12 percent increase from the same month in FY 2003. In-depth information was also available through the *FEMP Focus* newsletter, which is now a quarterly publication. *FEMP Focus* provides information about successful federal energy-saving projects and partnerships, conferences and workshops, innovative financing strategies, 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. Participants distributed posters, bookmarks, and other awareness materials conveying the message that smart energy choices, including the use of energy efficiency and renewable energy technologies, expand our energy supply, create a healthier environment, support our economy, and increase national security.

### 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 2004: "The Solutions Network" held August 8-11, 2004 in Rochester, New York. The seventh annual gathering of federal, state, local and private sector energy managers, energy service companies, utilities, procurement officials, engineers, and other energy professionals was sponsored by FEMP and co-sponsored by the General Services Administration and the Department of Defense. The workshop featured 63 sessions in specialized learning tracks on Acquisition; Alternative Financing; Operations & Maintenance; Energy Security; New Technologies; Policy, Planning, and Leadership; Renewable Energy; and Sustainability. A trade show featured more than 120 vendors exhibiting the latest products and services. FEMP's next annual workshop will be held August 14-17, 2005 in Long Beach, California. Visit [www.energy2005.ee.doe.gov](http://www.energy2005.ee.doe.gov) for more information.

**PRESIDENTIAL  
AWARDS**  
*for*  
**LEADERSHIP**  
*in*  
**FEDERAL  
ENERGY  
MANAGEMENT**

---

Established under Executive Order 13123, the Presidential Awards for Leadership in Federal Energy Management are the most prestigious awards given to agency teams for demonstrated excellence in the management of energy and water resources in federal facilities. Now in its fifth year, the Awards were presented at a ceremony at the U.S. Department of State to recognize the very best efforts of federal agencies.

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, six winning teams demonstrated excellence in a wide range of energy management activities including: renewable energy purchases and projects; highly-efficient, secure, clean electricity generation; building commissioning and operations and maintenance strategies; use of alternative financing; public outreach; and water conservation. Through cutting-edge projects and innovative approaches, the winning teams are responsible for annually-recurring energy savings of \$50 million and 1.8 trillion Btu—enough energy for 17,400 typical households.

The awards program, presented in July 2004 as part of a joint ceremony with the Office of the Federal Environmental Executive's Closing the Circle Awards, was hosted by and included remarks from Clay Johnson, Deputy Director for Management, Office of Management and Budget; David Garman, Acting Under Secretary of Energy and Assistant Secretary, Energy Efficiency and Renewable Energy; Maureen Koetz, Deputy Assistant Secretary of the Air Force for Environment, Safety and Occupational Health; and Edwin Piñero, Federal Environmental Executive.

President Bush and Vice President Cheney extended their congratulations and gratitude to the agency teams recognized for their outstanding contributions to make the federal government's energy management program an inspiration for the nation.

# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

U.S. DEPARTMENT OF ENERGY  
Pacific Northwest National Laboratory (PNNL)  
Hanford, Washington

*(l to r): David Garman, Acting Undersecretary of Energy; Mike Moran; Jeff McCullough; Larry Maples; Juan Alvarez; Mark Berman; Clay Johnson, Deputy Director for Management, OMB; Bill Sandusky; Frank Brown (BPA Official); Ron Underhill; Len Peters; Jud Virden*



Awarded to the PNNL for its outstanding efforts to efficiently manage energy use, including the use of alternative financing, energy conservation, renewable energy, and ENERGY STAR® standards. PNNL's Plug into Savings energy conservation project saved almost 3.0 million kilowatt hours (\$118,728) in 2003, which represents almost 3.6 percent of PNNL's total 2003 electricity use. PNNL has institutionalized its efforts in policies and practices by incorporating energy efficiency goals into the Facilities and Operation Directorate's long-term strategic plan and into the performance measures used to determine the operating contractor's annual award fee from the Department of Energy. To facilitate similar energy and water conservation efforts by others, PNNL has participated in local sustainability workshops, contributed energy conservation material to local schools, created a Web site and monthly newsletter to disseminate best practices, and presented elements of its energy conservation approach at three conferences.

# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

*(l to r): David Garman, Acting Undersecretary of Energy; Robert High; Clarence Dukes; Diana Hirshfeld; Jagdish Sarpal; Scott Waldman; Clay Johnson, Deputy Director for Management, OMB; Kevin Stover; Ted Hyatt; William Stamper*

## U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES (HHS) Energy Program Washington, DC



Awarded to HHS and Accent Designs Inc. (a federal contractor) for their aggressive and continuing pursuit of greater energy conservation and savings over the last 10 years. Employing the tools of Executive Order 13123, the HHS Energy Program used facility energy audits, highly efficient systems, alternative financing contracts, sustainable building design, and ENERGY STAR® standards to implement energy conservation. In 2003, the National Institutes of Health's Bethesda Campus began receiving its power from a new 23-megawatt cogeneration unit with an efficiency rating of 85 percent that will save more than 640 billion Btu and \$3.6 million per year. Two more Indian Health Service hospitals reached ENERGY STAR® efficiency goals in 2003 and have submitted applications for official certification. Since its inception in 1990, the HHS Energy Program has cumulatively saved \$166 million and 16 trillion Btu of energy. These savings translate into the elimination of 312,000 metric tons of greenhouse gas emissions, equivalent to removing 11,400 cars from the road for each of the 13 years of the program's existence. Outreach tools include seminars, newsletters, electronic mail notices, Web site and after-hours energy audits that notify individual employees of their energy saving performance. Operational division design policies and guidelines require life-cycle cost analyses, incorporation of sustainable design principles, procurement of ENERGY STAR® equipment, and investigation of potential installation of renewable energy technologies.



# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

(l to r): David Garman, Acting Undersecretary of Energy; Gueta Mezzetti; Mike Warwick; Maj Allen Erickson; Gary Seifert; Al Day; Tom Denslow; Clay Johnson, Deputy Director for Management, OMB; Paul Weaver; Craig Miller; Mike Santoro; Garland Scott; Maureen Koetz, Deputy Assistant Secretary for Environment, Safety, and Occupational Health, US Department of the Air Force; Willis Barrow; Brian Lally; Col Neil Kanno

## U.S. DEPARTMENT OF DEFENSE U.S. Air Force Renewable Energy Team California, Colorado, Florida, Idaho, Oregon, Texas, Virginia



Awarded to the Air Force Renewable Energy Team for energy cost savings and reduced environmental impact attained by obtaining as much of its energy as possible from renewable sources. With the support of Air Force Commanders, the Air Force Renewable Energy Team procured renewable energy in 2003 that amounted to 207 million kilowatt hours, approximately 40 percent of the entire federal government's renewable energy acquisitions. As a result of these renewable energy purchases by the Air Force, the environment benefited from reduced emissions of 41,000 metric tons of carbon equivalent, as well as 463 metric tons of sulfur dioxide and 454 metric tons of nitrous oxide. This is equivalent to removing almost 20,000 cars from the road for a year. A five-year renewable energy contract signed by Edwards Air Force Base in June 2001 will save approximately \$46 million because the renewable electricity actually costs less than the conventional fossil fuel-generated electricity. Following a successful 900-kilowatt wind farm project on Ascension Island in 2001, the project was expanded to triple the energy production capacity in 2003. This expansion is projected to save 7 million kilowatt hours per year and \$750,000 annually in fuel costs on top of the original 3.5 million kilowatt hours per year and \$350,000 in annual savings from the initial phase.

# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

*(l to r): Acting Under Secretary of Energy  
David Garman; Sarah Wenninger;  
Brian Wong; Manny Neves; Clay Johnson,  
Deputy Director for Management, OMB;  
Kevin McGill; James Devir; Ken Shutika*

## U.S. GENERAL SERVICES ADMINISTRATION NEW ENGLAND "Team Save" Connecticut, Maine, Massachusetts



Awarded to GSA New England Team Save for its numerous successes in executing energy conservation plans across New England. In total, Team Save's efforts cut utility costs for the New England GSA by almost \$676,000 or 5.5 percent from 2001 to 2003, even while market prices of utilities increased eight percent. At the J.J. Ribicoff Federal Building in Hartford, Connecticut, the GSA used highly efficient systems, such as a new steam-piping scheme, steam-condensate heat recovery system, and steam-trap maintenance program, to reduce the building's energy intensity by 23 percent, a decrease of 23,671 Btu per square foot and 709.8 metric tons of carbon (equivalent to the carbon emissions from 126 typical households). As a result, operating costs decreased from \$3.00 per square foot in 2001 to \$2.28 per square foot in 2003. Along with these successes, the GSA focused on creating greater awareness of energy conservation and savings by promoting conservation discussions at monthly tenant meetings, sending daily electronic bulletins, and encouraging further education and training for managers on best practices.

# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

(l to r): Acting Under Secretary of Energy David Garman; John Nelson; Beth Shearer; Andrea Kincaid; Judy Ray; Amy Hudson; Chandra Shah; Ken Shutika; Bucky Green; James Foley; Clay Johnson, Deputy Director for Management, OMB; Norman Boyle; Justin Spenillo; Rich Lemley; James White; David Lloyd

## U.S. ENVIRONMENTAL PROTECTION AGENCY

### Green Power Purchase Program

California, Colorado, Ohio, Massachusetts, New Jersey, New York, North Carolina, Texas, Washington, and Washington, DC



Awarded to EPA's Green Power Purchase Program for working aggressively to acquire electricity from renewable sources over the last five years. EPA's efforts were assisted by the Department of Energy's National Renewable Energy Laboratory, the General Services Administration, Department of Defense's Defense Energy Support Center, Department of Energy's Federal Energy Management Program, and the Western Area Power Administration. As a result of these partnerships, EPA purchases approximately 122 million kilowatt hours of green power per year, amounting to roughly 44 percent of its electricity needs—the highest percentage of any federal agency. These purchases reduce EPA's greenhouse gas emissions by 28,700 metric tons of carbon per year, equivalent to the annual emissions of 5,100 typical households. In addition to the environmental benefits, the program also increased the green power procurement expertise of EPA and its partners through information sharing, which will facilitate future federal purchases. By the end of 2003, EPA had secured sufficient renewable energy sources to provide nine of its facilities with 100 percent of their electricity needs. To get its message out to employees and visitors, EPA developed window "clings" that attach to windows and doors alerting people that they are entering a green-powered building. Further outreach efforts include an animated online presentation available on the EPA Web site and numerous articles in the *Energizing EPA* newsletter.

# YEAR IN REVIEW 2004

## PRESIDENTIAL AWARDS FOR LEADERSHIP IN FEDERAL ENERGY MANAGEMENT

*(l to r): Acting Under Secretary of Energy  
David Garman; Jerald T. Rowlands;  
Robert C. Brinton; Isaac D. Burr;  
Scott P. Houldsworth;  
BGen Willie J. Williams;  
Jeffrey S. Allen; Clay Johnson,  
Deputy Director for Management, OMB;  
Paul J. Bouley; Stephen A. Vines;  
Carl F. Zeigler; Wayne Army*

## U.S. DEPARTMENT OF DEFENSE Marine Corps Energy Management Team Nationwide and Overseas



Awarded to the Marine Corps Energy Management Team for its impressive investments in energy efficiency both domestically and overseas. The Team employed water conservation audits, self-generation of electricity, ENERGY STAR® standards, institutionalization of sustainable design, and alternative financing in realizing its goals. The Team used utility cost reports to set priorities for the bases that had the most to gain from a comprehensive audit on water use. The resulting audits and corresponding fixes to leaks reduced water use by 486.5 million gallons per year in 2003 and identified cost-effective projects worth \$15 million for future implementation. In total, the Marine Corps' conservation efforts reduced energy use in 2003 by 341.8 billion Btu, realizing savings of \$25.6 million. This annual savings provides enough energy for almost 3,400 typical households. The Team broadened its impact via its Web site, an annual awards program providing monetary awards, and continuing education. Perhaps the most innovative aspect of the outreach effort is the Energy Education Program for elementary and secondary students at Camp LeJeune's schools in North Carolina, where students, teachers, school administration, and base personnel work together to audit and implement energy conservation improvement projects. This program resulted in a 5.8 percent reduction in energy spending at Camp Lejeune schools from 2002 to 2003 or a savings of \$34,555.

# FEDERAL ENERGY *and* WATER MANAGEMENT AWARDS

---

2004 marked the 23rd Anniversary of the Federal Energy and Water Management awards, presented each year by the Department of Energy and the Federal Interagency Energy Policy Committee. These awards recognize federal government facility and resource managers for their exceptional efforts to conserve energy resources, use renewable technologies, increase energy security, and reduce the environmental impact of energy use at federal sites, as directed by Executive Order 13123.

President Bush has asked the federal government to set the example for the rest of the country by using energy and water resources wisely and to conserve wherever feasible. In FY 2004, 27 awards were presented to deserving individuals, small groups, and organizations who met this challenge through hard work, innovation, and forward-thinking actions. The awardees used various tools in arriving at their energy solutions, including conventional methods such as lighting retrofits, chiller replacements, HVAC improvements, and energy management control systems, as well as innovative techniques such as heating buildings with inexpensive landfill gas, reliable electricity and thermal energy from a fuel cell installation, and large-scale photovoltaic installations. Collectively, the efforts of these teams and individuals resulted in savings of almost \$39 million dollars in energy expenses in FY 2003 alone.

The federal employees and projects honored here show how hard work, innovation, and vision can help overcome the many challenges in our complex society and economy. The 2004 award winners represent the kind of thinking and actions that will help maintain federal energy efficiency, security, and reliability in the 21st Century and beyond. FEMP is proud to salute these winners, their contributions, and inspirational actions.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## WATER CONSERVATION AWARD TO AN INDIVIDUAL

**RICK DREISCH**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
ENVIRONMENTAL SCIENCE CENTER  
FORT MEADE, MARYLAND**



*Rick Dreisch*

During FY 2003, Mr. Dreisch implemented an innovative, two-pronged approach to achieve exceptional water savings at the EPA's Environmental Science Center (ESC). The ESC laboratories conduct tests on soil, air, and water to determine the presence of pollutants and other contaminants. Some of these tests require use of potable or highly-purified deionized water. Through careful monitoring and analysis, Mr. Dreisch optimized the reverse osmosis system used in generating the deionized water for ESC's laboratories, saving water that would have otherwise been rejected to the sewer. Mr. Dreisch brought the same analytical approach to cooling tower management, reducing the quantity of cooling tower blowdown and total water use by controlling water chemistry and increasing reuse cycles. His recommendation for installing an improved conductivity controller on the cooling tower blowdown system is currently reaping additional savings. Along with native plant landscaping approaches to reduce irrigation and maintenance, these measures resulted in savings of more than 2 million gallons of water and approximately \$3,000 in water and sewage fees in FY 2003—a 32 percent reduction from FY 2002. Because these projects involved optimizing existing systems, there were no upfront costs and the savings go directly back to the facility.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

### RENEWABLE ENERGY AWARD TO AN ORGANIZATION

#### GODDARD SPACE FLIGHT CENTER

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GREENBELT, MARYLAND



*Barry Green*

In FY 2003, NASA's Goddard Space Flight Center (GSFC) became the first federal facility to heat its buildings with landfill gas. This outstanding achievement was made possible through an innovative public-private partnership between NASA, the U.S. Environmental Protection Agency, Maryland's Prince George's County, and Toro Energy, Inc. The 6 million tons of waste held by Sandy Hill Landfill in Bowie, Maryland generates about 2,300 cubic feet per minute of landfill gas. Investigation of the technical and functional requirements and legal feasibility of harnessing this renewable resource for productive use culminated in the award of a 10-year utility energy services contract with Toro Energy. The project supplied the infrastructure and utility service agreement needed to collect methane gas from the landfill, transport it 5 miles to GSFC, and burn it in a central heating plant that serves 31 buildings on the Center's 1,270-acre campus. The landfill gas will supply 80 percent or more of the energy needed to heat the Center at a lower cost than conventional natural gas service. In FY 2003, this project saved GSFC more than \$1 million in energy costs and contributed more than 270 billion Btu toward the federal renewable energy goal. With experience gained during the first year of operations, the project is now expected to save \$1.3 million and 365 billion Btu annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

### RENEWABLE ENERGY AWARD TO AN INDIVIDUAL

DANIEL GREENE

DEPARTMENT OF THE ARMY  
DIRECTORATE OF PUBLIC WORKS, AREA II  
SEOUL, KOREA



*Daniel Greene*

While serving as the Utilities Chief for Area II Directorate of Public Works, Daniel Greene initiated several programs to improve the heating, ventilation, and air conditioning (HVAC) systems in the aging buildings at Yongsan Garrison, Korea as well as the overall energy efficiency of the entire community. Mr. Greene implemented an energy savings performance contract (ESPC) to replace the out-dated HVAC systems with geothermal heat pumps—the first-ever installation of this technology for the U.S. Army in Korea. His hard work paved the way for the implementation of additional ESPCs in the Far East area. Additionally, Mr. Greene replaced inefficient, vulnerable overhead power lines with state-of-the-art underground cable distribution systems, vastly improving system efficiency and reliability. He also spearheaded the installation of a natural gas line, which allowed the conversion of over 60 conventional fuel oil burners to gas burners. The conversion saved more than 1.5 million gallons of fuel oil in FY 2003 and eliminated 80 underground fuel tanks, along with the potential for fuel spills and ground contamination. These and other projects resulted in energy reductions that saved more than \$870,000 in FY 2003. Just as important, these efforts have significantly improved the quality of life for soldiers and their families.



# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## MOBILITY ENERGY EFFICIENCY AWARDS TO ORGANIZATIONS

### DEPARTMENT OF THE NAVY STRIKE FIGHTER SQUADRON FOUR ONE



*Dr. Alan Roberts*

Strike Fighter Squadron FOUR ONE (VFA-41) was the first to apply several gas-saving strategies in aerial refueling of fighter jets that will become the standard practice for future operations. Normally, before a jet can recover aboard an aircraft carrier, it must expend enough fuel to be under the maximum allowable weight. This often requires dumping thousands of pounds of fuel overboard just before recovery. To avoid this waste, VFA-41 implemented strategies that allowed a tanker jet to consolidate its gas with other airborne jets or with the tanker being used for the next flight cycle. This strategy alone was estimated to save more than 126,000 gallons of fuel. To further maximize gas usage, VFA-41 switched the launching schedule of tanker jets, allowing the tankers time to fill in for other training or mission requirements that would normally call for an additional maneuver. The Squadron also scheduled multiple qualification flights for the same event, providing the same level of training, but reducing the total number of exercises required. Together, these approaches were estimated to save more than \$885,000 in fuel costs, \$8,100 in electricity costs, and more than 130 billion Btu in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## MOBILITY ENERGY EFFICIENCY AWARDS TO ORGANIZATIONS

### DEPARTMENT OF THE NAVY USS COWPENS



*Hasan Pehlivan*

To achieve its aggressive energy management goals in FY 2003, USS COWPENS rigorously maintained a fuel-efficient plant, a high level of crew awareness, continuous monitoring of machinery to ensure economical operation, and strict adherence to sound and proven engineering management practices. COWPENS' energy management program included constant training of deck and engineering watch officers on the most efficient plant configurations and system alignment to maximize fuel economy while supporting operational requirements. Energy use was reduced both underway and in port through regular scheduling and completion of necessary maintenance. Several quality control programs were implemented to ensure that equipment repairs and adjustments were conducted before any energy was wasted or a casualty occurred. Additionally, well-planned equipment usage and rotation schedules reduced the number of starts and stops required, limiting stress on the engineering plant and saving the fuel required to start engines. In spite of a very demanding deployment schedule in support of national security goals and the ongoing war on terrorism in FY 2003, these practices resulted in savings of \$569,000 in fuel costs and 88 billion Btu.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## MOBILITY ENERGY EFFICIENCY AWARDS TO ORGANIZATIONS

### U.S. DEPARTMENT OF THE NAVY USS RENTZ



*Hasan Pehlivan*

In FY 2003, USS RENTZ achieved outstanding operational readiness while integrating energy conservation awareness and consistent energy management practices. During 170 days of underway and auxiliary steaming, watch teams ensured that engines operated at the most economical speeds, while also monitoring fuel flow and system performance for early detection of excessive fuel consumption or required maintenance. An aggressive maintenance program assured the completion of 100 percent of maintenance actions, resulting in the most efficient operation of equipment. Additionally, RENTZ's energy program included training of engineering staff in oil spill prevention to protect the environment and avoid waste. These and other measures resulted in a 26 percent reduction in fuel consumption over the ship energy program baseline, equating to savings of more than \$444,000 and 73 billion Btu in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY SECURITY AND RELIABILITY AWARD TO A SMALL GROUP

STEVE ALLEN  
JIM CHRISTO  
DAVE CLEVELAND  
LCDR CHRIS LUND  
LCDR MIKE WALZ

U.S. DEPARTMENT OF HOMELAND SECURITY  
U.S. COAST GUARD AIR STATION CAPE COD  
FALMOUTH, MASSACHUSETTS



*(l to r): Don Bathurst, Juan Reyes, Steve Allen, LCDR Chris Lund, Paul Fennewald*

A distributed generation project was initiated at Air Station Cape Cod with installation of a fuel cell. This is part of the U.S. Coast Guard's ongoing efforts to explore energy production that will reduce reliance on foreign fuel and traditional commercial power sources, reduce environmental impacts, increase reliability, and maximize efficiency. Air Station Cape Cod was selected as a test site based on its electrical load requirements and ability to utilize the fuel cell's recovered exhaust heat for domestic hot water and galley dishwater. With grants from the U.S. Department of Energy and the Massachusetts Technology Collaborative, a 250 kilowatt combined heat and power system was brought on line in May of 2003. In the six remaining months of FY 2003, the fuel cell provided approximately 60 percent of the Air Station's demand, saving about \$30,000 in energy costs and more than 2 billion Btu in natural gas purchases. In the case of a catastrophic grid failure, the system is currently capable of providing almost 100 percent of base requirements when operated at full capacity. Additional benefits include reduced emissions, thermal pollution, and noise. This successful project has served as a benchmark for future public and private investments in fuel cell technology.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

### ENERGY SECURITY AND RELIABILITY AWARD TO AN INDIVIDUAL

HARRY DEBES

U.S. GENERAL SERVICES ADMINISTRATION  
COMBINED HEAT AND POWER FOR THE  
FOOD AND DRUG ADMINISTRATION OFFICE CONSOLIDATION  
WHITE OAK, MARYLAND



*(l to r) Phil Smith, Harry Debes,  
James Watson*

Under the leadership of Harry Debes, the General Services Administration designed a project for the Food and Drug Administration's White Oak, Maryland Campus that uses a sustainable approach to improve energy efficiency, security, and reliability. In FY 2003, Mr. Debes worked with Sempra Energy Solutions to implement an energy savings performance contract (ESPC) to install a 5.8 megawatt combined heat and power (CHP) facility as part of the first phase of the campus build-out. The plant provides reliable, uninterrupted on-site electricity generation capability for three facilities on campus—a laboratory, an office building, and a multi-use facility. Heat is recovered from the generating process to produce hot water and chilled water in absorption chillers, further increasing the thermal efficiency of the plant by 30 percent and significantly reducing pollution emissions. Furthermore, planned expansion of the CHP system will support 100 percent power generation for the entire campus after the remaining build-out is complete, keeping the local utility from having to accommodate the 25 megawatt load that would otherwise be required. The ESPC also covers installation of a photovoltaic array, lighting upgrades, glazing improvements, HVAC upgrades, and night set-back controls. Together these measures will save more than 37 million kilowatt-hours, \$1.4 million in energy costs, and \$2.1 million in operation and maintenance costs annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

### U.S. DEPARTMENT OF ENERGY NATIONAL RENEWABLE ENERGY LABORATORY GOLDEN, COLORADO



*Bob Westby*

In FY 2003, the National Renewable Energy Laboratory (NREL) demonstrated leadership in sustainability through the implementation of their comprehensive, laboratory-wide “Sustainable NREL” program. A considerable number of projects helped NREL achieve significant results in meeting and exceeding federal sustainability mandates. For example, several energy retrofit and water conservation projects resulted in savings of almost 3.9 million Btu and 1.1 million gallons of water. NREL purchased almost 2 million kilowatt-hours of green power, representing about 10 percent of their annual electricity usage in FY 2003. On-site wind and PV systems generated 120 megawatt-hours of electricity to further offset utility purchases. Seventy-five percent of NREL’s fleet are now alternative fuel vehicles, which reduced the fleet’s petroleum use by more than 2,000 gallons, a 19 percent improvement from FY 2002. Through an environmentally-preferable purchasing program, 100 percent of office paper, carpeting, and toner cartridges purchased contained recycled content. NREL also recycled over 230,000 pounds of office materials, a 12 percent increase from FY 2002. Finally, in FY 2003 NREL designed their National Wind Technology Center Site Entrance Building as a state-of-the-art, near zero energy building, with sustainable features such as daylighting, a good thermal envelope, passive solar heating, photovoltaics, and a wind turbine.

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*Keith Dempsey*

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

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

Oak Ridge National Laboratory (ORNL) has demonstrated energy and environmental leadership in the modernization of their 50-year-old campus facilities. The first component of the project, completed in FY 2003, was the modernization of the 300,000-square-foot East Campus, the largest portion of the revitalization of ORNL facilities. Several important energy savings measures were implemented including: reflective roof and additional roof insulation, high-performance glazing, additional wall insulation, higher-efficiency lighting, energy efficient motors, enthalpy economizers, high-efficiency chillers, primary-secondary chilled water loops, variable air volume systems, and perimeter induction units designed to minimize fan power. These renovations earned the East Campus Modernization project certification by the U.S. Green Buildings Council as a Leadership in Energy and Environmental Design (LEED™) Version 2 project. Only two months after completion of the renovations, ORNL already saved \$80,000 and more than 5.5 billion Btu. Additionally, the modernization of the East Campus initiated important changes to established practices that now allow all new building projects to proceed using sustainable, integrated design principles.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

U.S. DEPARTMENT OF ENERGY,  
U.S. ENVIRONMENTAL PROTECTION AGENCY, AND  
U.S. GENERAL SERVICES ADMINISTRATION  
ENERGY STAR® PROJECT  
SAM NUNN ATLANTA FEDERAL CENTER  
ATLANTA, GEORGIA



*(l to r): Stan Meiburg, Ed Fielder,  
Bill Waldrop, Albert Rouse, Tim Wisner,  
John Adams, Danny Orlando, Jim Powell*

In FY 2003, the General Services Administration, Department of Energy, and Environmental Protection Agency worked together to establish a comprehensive program to address high energy usage in the 1.6 million-square-foot Sam Nunn Atlanta Federal Center. The partnership leveraged resources and skills to implement a holistic recommissioning effort based on the ENERGY STAR® Building Program, with the goal of having the building qualify for ENERGY STAR® certification after 12 months of demonstrated savings. The team met regularly to analyze building energy, resulting in ongoing metering and evaluation, pilot projects for motion sensor installation, occupant-focused energy awareness programs, and building systems recommissioning. A whole-building evaluation was performed to identify simple, low-cost modifications to dramatically reduce energy use. Just a few of these measures included de-lamping excessively lit areas, installing motion sensors, repairing improperly installed or broken equipment, and devising an after-hours setback mode so that air-handlers will no longer run around the clock, but only when heat is required. The recommissioning effort reduced cooling loads, increasing efficiency of the central plant and saving almost 12 billion Btu in FY 2003—enough energy to power 228 homes over a one-year period. The team is now commissioning additional buildings based on the successful Atlanta Federal Center model.



# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

U.S. DEPARTMENT OF THE NAVY  
NAVAL STATION PEARL HARBOR  
PEARL HARBOR, HAWAII



*LCDR Chuck Lewis, Kevin Saito*

To better coordinate the effects of Navy's energy projects in the Pearl Harbor region, in FY 2003 Naval Station Pearl Harbor developed *Hawaii Navy Energy Vision 2020*, a strategic view of the Pearl Harbor region's energy requirements. Through the implementation of the plan, the region was able to implement effective energy policies and projects, such as procuring more ENERGY STAR® lighting products and equipment, improving data collection, and reviewing all new projects for sustainability features. The program also investigated strategies to enhance energy security, such as acquiring landfill gas from a local landfill, improving efficiency of the chiller plant through combined heat and power equipment, and using off-peak thermal storage, sea water air conditioning, and deep well chilled water production. The "Take Charge Hawaii" program used Regional Energy Managers to audit building occupant energy use and behavior. By the end of FY 2003, the program audited over 7 million square feet of facilities, uncovering numerous "energy self-help" projects that saved more than \$262,000. In one of the largest self-help projects, sailors living in various barracks replaced more than 10,000 incandescent light bulbs with compact fluorescent lamps. Along with a rigorous energy awareness and training program, these measures helped Naval Station Pearl Harbor save more than \$4 million in energy costs and 58.7 billion Btu in FY 2003.

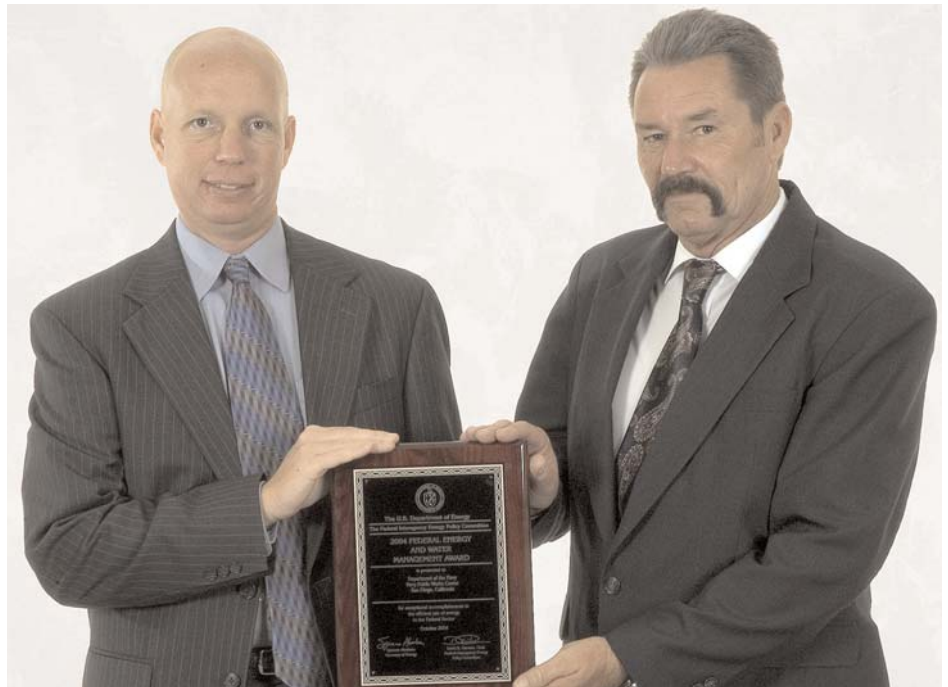
# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

DEPARTMENT OF THE NAVY  
NAVY PUBLIC WORKS CENTER  
SAN DIEGO, CALIFORNIA

*Jim Mugg and Bill Gage*



In FY 2003, the Navy Public Works Center, San Diego (PWCS D) completed \$3 million in comprehensive energy upgrades on six central compressor plants at four Naval and Marine Corps bases to provide high quality compressed air at the lowest possible energy cost. The project implemented state-of-the-art compressor technology, which enabled PWCS D to take two of the six existing compressor plants offline while improving the overall quality of the compressed air and the efficiency of the systems. At Naval Base Coronado and Naval Base San Diego, the PWCS D tied two independent compressor plants together, allowing for greater efficiency and reliability. At Naval Base Point Loma and Marine Corps Air Station Miramar, PWCS D implemented energy upgrades that greatly reduced compressor energy use while improving system reliability. These projects reduced energy use by more than 19 billion Btu in FY 2003, saving \$560,000 in compressed air production costs and reducing Navy peak electrical demand on the taxed California power grid by 1.6 megawatts.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

UNITED STATES MARINE CORPS  
MARINE CORPS BASE CAMP PENDLETON  
CAMP PENDLETON, CALIFORNIA



*Dave Maceck, Jeff Allen, Randy Monahan,  
Ed Rogers, John Wallace*

During FY 2003, Marine Corps Base Camp Pendleton used financing strategies identified in Executive Order 13123 to save energy, reduce pollution, and improve the quality of life for base residents and personnel. To achieve these goals, the base implemented a utility energy services contract (UESC) and an energy savings performance contract (ESPC). The UESC financed \$11.7 million worth of energy efficiency projects including replacing inefficient and obsolete heating and air-conditioning units, upgrading lighting in industrial warehouses and integrating daylighting systems, and installing more than 200 photovoltaic streetlights and caution lights throughout the base—one of the largest applications of solar-powered streetlights in the federal government. The \$5.7 million ESPC for the Camp Pendleton Air Station merged high-efficiency lighting with daylighting in seven aircraft hangars and replaced several inefficient heating and air conditioning units along with energy management systems. In FY 2003, these projects saved more than 121 billion Btu and more than \$2 million in energy costs, helping the base reach mandated energy reduction goals two years early.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARDS TO ORGANIZATIONS

U.S. SOCIAL SECURITY ADMINISTRATION  
ANNEX BUILDING  
BALTIMORE, MARYLAND



*Deborah Paul, John Shryock*

In FY 2003, the Social Security Administration (SSA) worked with the General Services Administration to renovate its 477,000-square-foot Annex Building on SSA's Main Campus in Baltimore, Maryland. The renovation project used numerous sustainable design strategies, resulting in an environmentally-sensitive facility that earned a Leadership in Energy and Environmental Design (LEED™) 2.0 Certification from the U.S. Green Building Council. Rather than erect a new building, the project team reused the existing structure, saving \$25 million in construction costs. In addition, the team worked aggressively to salvage over 75 percent of building and construction materials, preventing over 4,000 tons of material from entering the landfill and saving an additional \$310,000. Energy saving features such as natural daylighting, high efficiency lighting, thermal ice storage, economizers, high performance windows, revolving doors, reflective roofing, energy efficient HVAC equipment, and low-maintenance landscaping reduce energy use by 13 percent over a conventional building. The lighting retrofits alone are estimated to save more than 5 million kilowatt-hours and more than \$380,000 annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

GARY EMERY  
KERRY D'HEMECOURT  
CHRISTOPHER WHEELER  
UNITED STATES AIR FORCE  
SEYMOUR JOHNSON AIR FORCE BASE, NORTH CAROLINA



*MAJ Scott Griffin, Gary Emery,  
Kerry D'Hemencourt, Christopher Wheeler,  
Steve Dumont*

In FY 2003, Seymour Johnson Air Force Base's Energy Management Team planned, managed, and executed an initiative to substantially reduce energy consumption at a mission critical medical facility. The Koritz Medical Clinic, comprised of 100,000 square feet of administrative, clinical, and patient care areas, is served by over 400 tons of cooling and 17 air handler units. Prior to this project, there was no operation to disable air handlers during unoccupied hours, use economizers, or disable heating equipment during summer months. The team partnered with the contracted maintenance personnel to upgrade the antiquated HVAC control system. They began with a comprehensive check-up of the system, worked to solve apparent mechanical problems, installed new system controls, and conducted thorough training for hospital personnel. The final step in the upgrade was to incorporate an "anthrax shutdown" plan to safeguard patients and staff. Within two minutes of notification, all airflow to the facility can be disengaged to prevent transfer of airborne particles. The new control system also allows for shut-down during unoccupied hours, which saves over 70,000 hours of run-time a year, increases the equipment's life expectancy, and reduces wear and tear on the system. After one year, the project saved more than \$35,000 in energy costs and 1.8 billion Btu.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

STEVE DRIVER  
PAUL LeBLOND  
DONALD MICHAUD  
DEPARTMENT OF THE ARMY  
UNITED STATES MILITARY ACADEMY  
WEST POINT, NEW YORK



*Paul LeBlond, Steve Driver,  
Donald Michaud, COL Brian Crawford*

The United States Military Academy Energy Team has implemented ten successful energy projects at West Point since an energy savings performance contract (ESPC) was established through the U.S. Army Corps of Engineers Huntsville Support Center in 1995. In FY 2003, the team completed the largest project with the most savings potential to-date, replacing two central power plant boilers dedicated to providing steam and hot water to more than half of the buildings at the Academy. The steam is also used to generate electricity and chilled water via steam absorption. A new natural gas pipeline was installed and the boiler's primary fuel was converted from fuel oil to natural gas, reducing air emissions by 190 tons annually and eliminating the need to store 1.5 million gallons of fuel oil and the associated environmental risks of handling large volumes of fuel oil along the shores of the Hudson River. The natural gas conversion increased boiler steam efficiency to 80 percent, a 15 percent increase from the old system. The boiler conversion, along with the other ESPC projects, saved more than 194 billion Btu and \$2.4 million in energy costs in FY 2003, and is expected to save an additional \$1.1 million annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

ROBERT BAKER                      CAROL LAUTZENHEISER  
KEVIN MYLES                      ROBERT SEIFFERT  
MARK TRIMARCHI

NEW MEXICO AND WEST TEXAS ESPC PROJECT  
U.S. GENERAL SERVICES ADMINISTRATION  
FORT WORTH, TEXAS



*Mark Trimarchi, Kevin Myles,  
Carol Lautzenheiser, Robert Seiffert,  
Robert Baker*

In FY 2003, GSA's Greater Southwest Region Energy Team implemented an energy savings performance contract in 36 federal office buildings, courthouses, parking garages, and border stations located throughout New Mexico and West Texas consisting of approximately 2.2 million square feet of floor space. The ESPC covered implementation of four energy conservation measures: lighting upgrades, control system upgrades, water conservation upgrades, and a photovoltaic solar system installation. The team retrofitted a total of 14,000 fluorescent fixtures with high efficiency lighting in all 36 facilities. The control upgrade included new direct digital controls to provide better scheduling of the HVAC equipment at each facility. In 28 buildings, the team upgraded toilets, urinals, and faucets with new water-conserving equipment to reduce annual water and energy charges and reduce maintenance and repair costs. During daylight hours, a new photovoltaic system will power equipment at the Roswell Federal Building. A major accomplishment of the project was the team's partnership with the Public Utility Commission of Texas (PUCT) and El Paso Electric, resulting in almost \$300,000 in financial incentives and rebates for installation of energy efficient equipment resulting in air quality improvements—the largest energy incentive grant awarded by PUCT to-date. Project investments of \$2.7 million will save more than 16 billion Btu, 4 million gallons of water, and \$300,000 annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

ALAN KIRBY  
MANNY NEVES  
VERN STUMP

DONNA MAFFEO  
ALINE POULIN

PORTLAND MAINE CUSTOMHOUSE  
U.S. GENERAL SERVICES ADMINISTRATION  
AUGUSTA, MAINE



*Roman Piaskoski, Alan Kirby, Aline Poulin,  
Vern Stump, Manny Neves, Dennis Smith,  
James Devir*

When the U.S. Custom House in Portland, Maine, built in 1878, required an HVAC upgrade, the team worked hard to find a solution that would maintain the building's historic architecture, save energy, and address the site's environmental and indoor air quality issues. The building's 30-year old HVAC system used an underground 6,000-gallon steel oil tank—an environmental liability. Furthermore, the system's fresh air intake louver was located at the ground level, drawing car and bus exhaust fumes into the building. After investigating several options, it was determined that the life-cycle cost of installing a geothermal heat pump would result in savings of \$80,000. Additionally, the system would realize potential energy savings of approximately 30 percent over a traditional chiller/boiler HVAC system, with lower maintenance and fuel costs. As part of the installation, the building's interior ventilation system was refurbished to assure high indoor air quality. Health risks posed by the original HVAC system were eliminated and carbon emissions at the historic site were reduced by almost 250,000 metric tons annually. As a result of the geothermal installation and an electrical service upgrade, energy consumption in FY 2003 actually decreased by more than 1.1 billion Btu, or 49 percent.



# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

PHIL BESTE  
JERRY GRAY  
MARK HALVORSEN

DEPARTMENT OF THE NAVY  
NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT  
KEYPORT, WASHINGTON



*Tom Klima, Rhonda Stewart,  
Phil Beste, Jerry Gray*

In FY 2003, the facilities energy management team at Naval Undersea Warfare Center (NUWC) Keyport developed a variety of innovative and non-traditional initiatives to achieve energy reduction goals. A Resource Efficiency Manager (REM) program, implemented with Puget Sound Energy, identified and achieved significant energy and cost savings opportunities on the base. NUWC Keyport also participated in the Western Power Grid Peak Demand and Energy Reduction Program, which resulted in an energy survey at no cost to NUWC Keyport and identified energy savings improvements in 10 buildings comprising 106,000-square-feet of space. Base-wide facility energy improvements and lighting upgrades were conducted, utilizing the most efficient systems and eliminating all incandescent and older fluorescent lamps. NUWC Keyport also modified the base's main boilers to include automatic operation and remote monitoring, and installed cellular transmitters on all electric meters, transformers, and natural gas meters via a Web-based application, which allowed the base to obtain daily reports on consumption for individual facilities. Additional projects included installing occupancy sensors and setting back heating and cooling temperature during evenings, weekends, and holidays. The energy program also provided extensive training to technical and engineering personnel in energy-efficient technologies, engineering applications, and life-cycle costing. Together, these measures saved NUWC Keyport more than 31 billion Btu and more than \$630,000 in energy costs in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*Rhonda Stewart*

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

**GUY BORGES  
RHONDA STEWART  
BRAD WHEELER**

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

The Naval Undersea Warfare Center Division Newport executed several energy and cost saving initiatives in FY 2003 that helped achieve a 51 percent reduction in energy use from the FY 1990 baseline. Lighting retrofits and occupancy controls were installed in hallways and in 40,000 square feet of office space, reducing lighting use between 30 and 50 percent in these areas. In two buildings, moveable, dimmable, daylight- and occupancy-sensing lights were installed over staff workspaces. These advanced, employee-controlled lighting systems significantly enhanced occupant comfort and averaged savings of more than 50 percent. Staff took personal responsibility for energy use through the assignment of building energy monitors, who watched out for inefficient operations in their designated areas. Newport also implemented a comprehensive steam trap maintenance and monitoring program that, despite a cold winter, reduced steam costs by over \$100,000. These efforts, along with installation of heating and cooling setback controls, energy efficient motors, and HVAC maintenance and repairs, saved more than 50 billion Btu and reduced energy costs by over \$730,000 in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

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

DON BADER                      RUBIN CARTER  
ROBERT SHELDON            RHONDA STEWART  
JIM SURA

DEPARTMENT OF THE NAVY  
PUGET SOUND NAVAL SHIPYARD &  
INTERMEDIATE MAINTENANCE FACILITY  
BREMERTON, WASHINGTON

*Tom Klima, Rhonda Stewart,  
Robert Sheldon*



The Puget Sound Naval Shipyard and Intermediate Maintenance Facility invested over \$2.6 million in numerous projects in FY 2003 that produced significant cost and energy savings for the base. Energy reduction initiatives included a light-emitting diode (LED) upgrade of all fire alarm boxes, lighting retrofits, boiler efficiency improvements, installation of a photovoltaic panel, improved steam trap maintenance and repairs, summertime steam heating shutdowns, and HVAC rescheduling. The Shipyard awarded a contract for a compressed air repair project that is expected to save 13 gigawatt-hours per year over the original system, and initiated several other projects such as LED streetlight retrofits, occupancy sensor controls, a heat recovery water reclamation project, and wind power installation. Along with implementation of basic energy management practices and water management best practices, extensive training in energy-efficient design strategies, and a revitalized awareness program, these efforts resulted in savings of more than 100 billion Btu and almost \$800,000 in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## ENERGY EFFICIENCY/ENERGY PROGRAM MANAGEMENT AWARD TO AN INDIVIDUAL

**REX PICKETT**

**UNITED STATES AIR FORCE  
RAMSTEIN AIR BASE, GERMANY**



*Rex Pickett*

In FY 2003, Rex Pickett achieved two major energy conservation milestones for the Kaiserslautern Military Community (KMC). Under his leadership and direction, the KMC energy team awarded an \$83 million energy savings contract and issued the first energy conservation project delivery order for three facilities. The first facility received extensive air conditioning modifications, involving installing a single air conditioning and ventilation system and eliminating 17 separate window air-conditioning units and split air conditioning systems. Additionally, the energy management control system (EMCS) was upgraded and 196 lamps were replaced with T-5 lamps with occupancy sensors. Similar improvements were made to a warehouse facility where, in addition to a new EMCS and lighting retrofits to more than 1,200 lamps, 93 single-glazed windows were modified and insulated to improve efficiency of the building envelope. A third site received a new 790 kilowatt condensing, gas-fired boiler with direct digital controls and hydronic balancing, as well as anti-terrorist/force protection windows, which serve a dual function of improving energy efficiency and protecting the facility against a blast force from the adjacent, busy civilian street. Projects from the first delivery order alone will result in annual savings of \$209,000 and 8 billion Btu. Mr. Pickett's innovative thinking and vision have paved the way for nine new projects that are estimated to save an additional \$2 million and 80 billion Btu annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*Michael Santoro*

## EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS

### MICHAEL J. SANTORO

#### UNITED STATES AIR FORCE TYNDALL AIR FORCE BASE, FLORIDA

As the Air Force technical expert in acquisition of gas and electricity, Michael Santoro is recognized for his tireless efforts and dedication to help Air Force installations identify the most cost effective options for purchasing energy. In particular, he has had a profound effect on the Air Force renewable energy program by developing strategies and motivating energy managers to use renewable energy. In 2000, when electricity costs in California were on the rise, Mr. Santoro worked with Edwards Air Force Base to award a contract that encouraged renewable development over a five year contract period. The contract will deliver 100 percent renewable energy in 2004, saving \$46 million over the life of the contract. Since then, he has been instrumental in encouraging a number of additional contracts with renewable options for the Air Force, including a 100 percent wind power purchase at Dyess AFB in 2002 that made them the largest retail wind power purchaser in the United States. Under Mr. Santoro's guidance, Fairchild AFB became the second Air Force base to go 100 percent renewable in 2003. Throughout this time, Mr. Santoro worked to develop important regional acquisition strategies; led a renewable energy study for the Department of Defense (DOD) that included site assessments for 900 DOD installations; and generated influence and encouragement through government and industry meetings and publications. Through his efforts, the Air Force purchased over 40 percent of the government's renewable power in 2003, equal to more than 207 gigawatt-hours. The resulting benefits of these purchases include reductions of over 166,000 tons of CO<sub>2</sub>, 510 tons of SO<sub>2</sub>, 500 tons of NO<sub>x</sub>, and natural gas savings of over 1.4 trillion cubic feet. Contracts are now in development or in place for an additional 135 gigawatt-hours in 2004.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS

### HARRY CARPENTER

#### U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE TWENTYNINE PALMS, CALIFORNIA



*Phyllis and Harry Carpenter*

Harry Carpenter is recognized for his dedication to sustainable practices at Joshua Tree National Park over the past ten years. His hard work and determination transformed the Park into a benchmark for green policies throughout the National Park Service. Mr. Carpenter creatively implemented numerous sustainable projects through a variety of programs, including private sector rebates, repair and rehabilitation funding, general operational upgrades, and technical assistance grants from the Federal Energy Management Program. During his tenure at Joshua Tree National Park, eight diesel-powered generators have been replaced with nine solar photovoltaic (PV) systems. Two additional grid-tied PV systems now provide 60 percent of the electricity requirements of the Park Headquarters. Construction of a new sustainable operation office complex is underway, complete with a covered parking area roofed with photovoltaic panels. This PV array, along with the 64 kilowatt system already in place, is projected to meet more than 90 percent of the Park's electrical demand. Two brand new facilities utilize sustainable building materials such as recycled glass, tire, lumber, and concrete, while also incorporating energy-saving technologies such as double-paned windows, high efficiency appliances and lighting, and motion sensors. To further reduce pollutants, the Park now operates eight compressed natural gas (CNG) re-fueling stations serving eight CNG vehicles. Ten electric vehicles are used in the management of nine campgrounds, all of which power up via PV power generation. Finally, the Joshua Tree National Park volunteer recycling program has recycled over 100 tons of recyclables since it was established in 1996. Taken together, all of the practices put in place by Mr. Carpenter are saving approximately \$44,000 annually in energy costs.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS

NOEL FENLON

U.S. DEPARTMENT OF JUSTICE  
BUREAU OF PRISONS  
WASHINGTON, DC



*Sheila Fenlon, Noel Fenlon,  
Paul Keller, Valerie McDonald*

Noel Fenlon is recognized for his sustained leadership, dedication, and continuous efforts as National Energy Programs Manager for the Federal Bureau of Prisons. Mr. Fenlon was instrumental in the development of an interagency agreement with DOE for energy savings performance contracts and other technical services and assistance resources. In addition to implementing ESPCs, Mr. Fenlon has implemented projects under utility incentive and rebate programs and utility energy services contracts. Recently Mr. Fenlon managed the initial stages of an ESPC to incorporate renewable energy opportunities into a Federal Correctional Institution (FCI) in Ray Brook, New York. Mr. Fenlon was also instrumental in developing a renewable energy project involving the retrieval of methane landfill gas for use in the operation of retrofitted boilers at the Federal Correctional Complex in Allenwood, Pennsylvania, and is evaluating expansion of the solar hot water ESPC project at FCI Phoenix, Arizona to include additional equipment. Mr. Fenlon's most recent achievement has been the implementation of an ESPC at FCI Victorville, California awarded in FY 2003, which includes the installation of a 75 kilowatt photovoltaic carport array and a 750 kilowatt wind turbine—the first utility-scale turbine to be installed under California's Self-Generation Incentive Program. Together these projects qualify for up to \$2 million in incentives from the State of California. Through Mr. Fenlon's outstanding achievements, the Bureau of Prisons has achieved a 63 percent reduction in energy consumption from its baseline and met both its FY 2005 and FY 2010 energy reduction goals.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

## EXCEPTIONAL SERVICE AWARDS TO INDIVIDUALS

KURT JOHNSON

U.S. ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC



*Matt Clouse, Kurt Johnson*

Kurt Johnson has demonstrated exceptional leadership and vision in federal green power procurement policy and program development. Starting in late 1997, while working as a climate change analyst in EPA's Policy Office, Mr. Johnson identified the restructuring of electricity markets (allowing customers to choose their source of electricity) as an important opportunity for federal procurement leadership. Working in coordination with staff from the Federal Energy Management Program and EPA, Mr. Johnson prepared language, ultimately issued in June of 1999 as part of Executive Order 13123, calling upon the federal government to purchase renewable energy. Upon moving to EPA's Air Office in 2000, Mr. Johnson led the development of a new EPA voluntary program, the Green Power Partnership, which provides technical assistance and public recognition to organizations that make a commitment to buying green power. The Green Power Partnership now includes over 350 partners including 20 federal entities, with a combined total commitment to purchase over 1,200 gigawatt-hours of green power annually. Through Mr. Johnson's hard work and dedication to this program, EPA now purchases approximately 44 percent of its electricity from green power sources.



# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

### LOUIS R. HARRIS, JR. AWARDS

DAVID DYKES

SOUTHERN COMPANY  
ATLANTA, GEORGIA

*Shirley Harris, David Dykes*



As a large part of his 27 year tenure with Southern Company, David Dykes has been responsible for the oversight of programs, services, and contracts with all federal government customers within the utility's service territory. During this time, Mr. Dykes has actively participated in FEMP's Utility Partnership Working Group as a meeting participant and member of the steering committee since its inception in 1994. In the early years of the FUPWG group, Mr. Dykes worked closely with Lou Harris to establish much of the strategic vision that is still followed today. Under his direction, Southern Company placed the very first delivery order for a utility energy services contract under the Southern Division Navy Facility Engineering Command's Basic Ordering Agreement. The utility has since executed over 100 energy projects totaling more than \$98 million in investments, saving the federal government \$11 million annually. Recognized by his peers as an industry leader and a valuable resource for information on federal issues, Mr. Dykes was recently appointed to serve on the Federal Energy Management Advisory Committee. He is also active in the Association of the United States Army and other professional trade organizations, and assists in fundraising for charitable organizations.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

### LOUIS R. HARRIS, JR. AWARDS

EDMUND ROGERS  
UNITED STATES MARINE CORPS  
MARINE CORPS BASE CAMP PENDLETON  
CAMP PENDLETON, CALIFORNIA

*Shirley Harris, Ed Rogers*



For more than a decade, Ed Rogers has demonstrated exemplary leadership in his successful management of all electric, natural gas, water, wastewater, and communication utilities at Marine Corps Base Camp Pendleton. As the Director of Facilities, Mr. Rogers has effectively implemented more than \$70 million in energy efficiency projects at the base using utility energy service contracts. In 1993, Mr. Rogers was the driving force behind the execution of the very first Basic Ordering Agreement with the local utility, and used the vehicle to implement lighting retrofit projects across Camp Pendleton. Two subsequent agreements will allow the base to eventually complete a total of \$90 million in energy projects. Under these agreements, he continued to upgrade the energy management control system and end-use systems by installing new direct digital controls, providing the foundation for sustained and improved energy management for decades to come. These projects have enabled Camp Pendleton to achieve annual savings of more than \$7 million in energy and maintenance costs, while dramatically improving the quality of life for service members and their families. Mr. Rogers continues his tireless dedication to improve the welfare of military service members by donating countless hours in support of local community activities. As a volunteer on San Diego County Water Authority Board of Directors, he also worked with regional water municipalities, government agencies, water consumer and environmental interest groups to develop and implement a joint, multi-million dollar regional sustainable water-recycling project with regional water utility districts.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*Thomas Santoianni*

## ENERGY STAR® BUILDING AWARD FOR SUPERIOR PERFORMANCE

ENERGY STAR® is a symbol of energy efficiency established by the U.S. Environmental Protection Agency and U.S. Department of Energy. Buildings that are among the top 25 percent nationwide in terms of energy performance (earning a bench marking score of 75 or greater) and maintain an indoor environment that conforms to industry standards can qualify to receive the ENERGY STAR® label for buildings. One building is recognized this year as an outstanding example of energy efficiency in the federal sector.

### NBVC WELCOME CENTER NAVAL BASE VENTURA COUNTY DEPARTMENT OF THE NAVY PORT HUENEME, CALIFORNIA

Originally built in the 1960's for use as the Base's Navy Exchange, the recently renovated NBVC Welcome Center at Naval Base Ventura County now serves as a "one-stop" center for a variety of military services. The unique new energy efficient design creates an interior space unlike any seen before at a U.S. Naval facility. The building has an open floor plan with sculptural walls painted a variety of bright colors, open ceilings, skylights, and exposed ventilation system ductwork. The building employs energy saving equipment, including energy efficient lighting and HVAC. Together, these features earned the building an outstanding ENERGY STAR® bench marking score of 96.



## FEDERAL ENERGY SAVER SHOWCASE FACILITY AWARDS

---

Federal agencies are charged with identifying showcase facilities in accordance with Executive Order 13123 in order to highlight the energy and water efficiency and renewable energy improvements at those facilities. In 2004, FEMP chose three outstanding federal facilities to receive Federal Energy Saver Showcase designations. These three buildings take a comprehensive approach to energy management, and stand out as exceptional models of energy efficiency, innovation, and sustainable design.

Since 1995, FEMP has recognized more than 100 facilities across the country and the globe as Federal Energy Saver Showcases. The three facilities chosen this year represent exemplary efforts of the Department of the Interior, Department of the Navy, and the Environmental Protection Agency. The buildings were constructed using sustainable design techniques, technologies, and 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 showcase facility features energy efficiency, renewable energy, and water conserving technologies designed to save natural resources and reduce operating costs for the American taxpayer. Another important part of being a Federal Energy Saver Showcase—the building managers are also making concerted efforts to educate visitors about the benefits of the featured energy-efficient and renewable energy technologies and sustainable design principles.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*David Guthrie, Janet Kennedy,  
Bill Hartwig, Pamela Rooney*

## ENERGY SAVER SHOWCASE FACILITY AWARDS

**PARKER RIVER VISITOR CENTER & ADMINISTRATIVE HEADQUARTERS**  
**U.S. DEPARTMENT OF THE INTERIOR**  
**U.S. FISH AND WILDLIFE SERVICE**  
**PARKER RIVER NATIONAL WILDLIFE REFUGE**  
**NEWBURYPORT, MASSACHUSETTS**



Environmentally benign construction practices make the Parker River Visitor Center and Administrative Headquarters an exemplary model of sustainable design. Special care was taken at the site to restore disturbed land to natural habitats of wetland, field, woods, and coastal areas by planting native species of trees, shrubs, forbs, and grasses and utilizing soil excavated from storm runoff cleansing basins as loam throughout the site. Green building construction incorporated the use of recycled building materials and low-VOC building materials, including engineered wood, plastic lumber, linoleum flooring, fiberboard, sheetrock, exterior decking, tile, deck piers, and carpet with high recycled content. Water conservation technologies, including directing roof runoff to groundwater recharge, recirculating geothermal well water, installing low-flush toilets, and implementing other best water management practices, save more than 500,000 gallons of water per year. Passive solar techniques such as southeast building orientation and daylighting, along with super insulation of the building envelope; high-efficiency lighting with self-adjusting dimmers; and a geothermal heat exchange system for heating and cooling, reduce energy use by 41 percent over a traditional office building. The geothermal heat exchange system for heating and cooling is calculated to save \$9,000 in energy costs annually.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*CAPT Derek Kemp, CDR Christine Lonie,  
Fred Speece*

## ENERGY SAVER SHOWCASE FACILITY AWARDS

### ADMIRAL PROUT FIELD HOUSE AND POOL

DEPARTMENT OF THE NAVY  
NAVAL BASE SAN DIEGO  
SAN DIEGO, CALIFORNIA



At Naval Base San Diego, the Admiral Prout Field House and Pool showcase solar technologies to 200,000 personnel who use the facility each year. On the rooftop of the gymnasium, a 10,000-square foot solar energy system comprised of 200 thermal solar collectors provides more than 60 percent of the energy needed to heat the facility's large swimming pool. A control system collects data on the pool temperature, solar water temperature and ambient sunlight, allowing the system to use either the solar panels or boiler to adjust the pool's water temperature. High output, high efficiency lighting fixtures are controlled by photocells, which turn on and off depending on the amount of ambient light entering through skylights, which allow for the lights to be turned off for much of the daylight period. Two levels of zoned lighting allows for even greater control when less lighting is needed. Additionally, a thermal solar heating project was installed using a utility energy services contract. Together, these measures reduced energy consumption by 48 percent in FY 2003.

# YEAR IN REVIEW 2004

## FEDERAL ENERGY AND WATER MANAGEMENT AWARDS



*Doug Benton, Dennis Clemons,  
Leslye Werner, Raynaldo Daniels,  
Abbas Keshavarz*

## ENERGY SAVER SHOWCASE FACILITY AWARDS

### KANSAS CITY SCIENCE AND TECHNOLOGY CENTER

### U.S. ENVIRONMENTAL PROTECTION AGENCY KANSAS CITY, KANSAS



EPA's Kansas City Science and Technology Center is a state-of-the-art laboratory devoted to environmental testing, research, and analysis. Developed on a former brownfield site, the facility was constructed to preserve natural resources, ensure occupancy health, and serve as a sustainable model for future laboratory design. A unique rooftop rainwater recovery system captures and filters rainwater used for flushing toilets and make-up water for the building's cooling towers. The system reduces stormwater runoff by 40 percent and saves 735,000 gallons per year. Low-flow plumbing fixtures and water-efficient landscaping also minimize water use. Environmentally-preferable products such as recycled content flooring, carpet, ceiling tiles, and building materials were used throughout construction. Energy efficient features incorporated into the laboratory's design and operation include a mechanical system with variable air volume (VAV) fume hoods, VAV office ventilation, zoned carbon dioxide sensors, plate and frame heat exchange recovery, and a combination of variable frequency drive and conventional chiller system. These features, along with reflective roofing, high-efficiency lighting, daylighting, low-e windows, and motion detectors helped reduce the facility's energy use by more than 24 percent over a typical EPA VAV laboratory, earning the facility a LEED™ Version 2 Gold rating. Based on energy utilization during the first year of operation, this facility is the best performing new EPA laboratory.

**FEMP**



January 2005



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

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