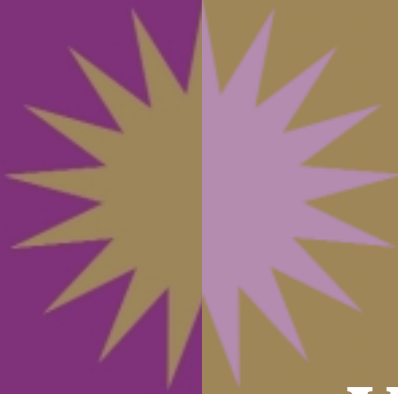


FEDERAL ENERGY MANAGEMENT



YEAR
IN REVIEW
2001

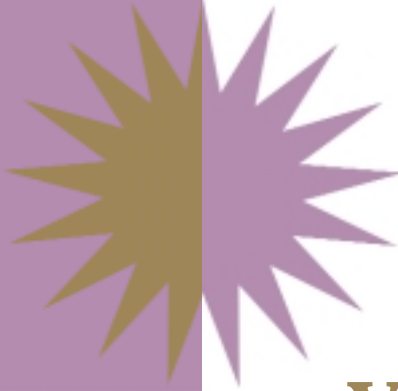
United States
Department of Energy

Office of Energy Efficiency
and Renewable Energy

Federal Energy
Management Program



FEDERAL ENERGY MANAGEMENT



**YEAR
IN REVIEW
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Management Program**



From the Director

Federal Agencies in the military and civilian branches of government are on a mission to ensure reliable, affordable, and environmentally sound energy supplies for the Nation. This mission, however, will not be achieved quickly or easily. It will require time to comply with laws and Executive Orders and perseverance to overcome significant obstacles in the path to success. It will require innovation in technology and engineering. It will demand new ways of doing business in a continually changing energy environment.

Challenges like these nevertheless bring out the best qualities in Federal workers and offer the greatest rewards for life in public service — a stronger government, a more secure Nation, and a healthier environment.

Reducing energy consumption is not only the work of engineers, operations personnel, and budget analysts. Every Federal worker shares the mission to save energy. Each has the personal authority and responsibility to do so — by raising productivity, by reducing waste, and by doing the simple things day after day that result in tremendous positive change.

This publication demonstrates how the coordinated efforts of Federal Agencies support this mission, recently articulated in the President's National Energy Policy. It highlights the efforts of many dedicated Federal employees who are providing Leadership by Example to reach the objectives set forth in that policy.

We pledge to accelerate our efforts to reduce energy consumption, increase energy efficiency, and harness our natural resources for a strong and secure America. We hope you will join us.

Sincerely,

A handwritten signature in cursive script that reads "Beth Shearer".

Beth Shearer

Director

Federal Energy Management Program

Office of Energy Efficiency and Renewable Energy

OVERVIEW

The Federal government's energy challenge begins with America's expanding economy, growing population, and rising standard of living. America's tremendous prosperity and quality of life is sustained by the availability of affordable energy.

The good news is that since 1973, the U. S. economy has grown nearly five times faster than energy use (126 percent vs. 26 percent). The bad news is that over the next 20 years U.S. oil consumption is projected to increase by 33 percent, natural gas consumption by 50 percent, and electricity demand by 45 percent; yet America produces 39 percent less oil today than in 1973. If we stay on the present course, America will import two of every three barrels of oil it consumes.

To reverse these trends, the government significantly reduced energy use in Federal buildings in the 1990s by installing energy efficient technologies. Still, in 1999 the government spent nearly \$8 billion to power its vehicles, operations, and nearly 500,000 buildings. Clearly there is much more work to be done. As the largest energy consumer in the Nation, the U. S. government's energy-saving opportunity is enormous.

Conservation and efficiency are important elements of sound energy and water management. Federal agencies are promoting efficiency and conservation by disseminating timely and accurate information regarding energy use, setting standards for the purchase of energy efficient products, encouraging industry to develop more efficient equipment, and deploying more advanced technologies through up-front private investment in Federal facilities.

Sound energy and water management also includes a clean and diverse portfolio of domestic energy supplies. Through improved technology, the Federal government is leading in the development of clean, natural, renewable, and alternative energy.

The President has directed heads of executive departments and agencies to take appropriate actions to conserve energy use. The National Energy Policy lays out the framework for achieving America's energy management goals. As the examples in this document clearly illustrate, those objectives are now being implemented with coordinated action and shared responsibility.

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TECHNICAL ASSISTANCE

While energy efficiency and conservation are still bedrock values, ensuring energy security and reliability have been added to the foundation of Federal energy management. In FY 2001, volatile energy prices, electricity supply shortages, and the requirements of environmental stewardship required new types of technical assistance and training services to meet new challenges of Federal energy managers.

DISTRIBUTED ENERGY RESOURCES

Distributed energy resources (DER)—modular, decentralized, grid-connected or off-grid generating technologies located in or near the place where energy is used—have great potential to meet the Federal government's urgent need for reliable, affordable electric power. In FY 2001, DER systems such as photovoltaics, microturbines, fuel cells, wind generation, and combined heat and power (CHP) helped agencies reduce peak operating costs and improve the reliability of their electric power. FEMP worked with the Office of Power Technologies to provide \$958,000 in DER equipment upgrades, subsidies, and technical assistance to 20 Federal sites. In FY 2001, FEMP's ADD CHP (Accelerated Development & Deployment of CHP at Federal Sites) teams provided design, technical assistance, and financing guidance for several important new CHP projects.

ENERGY-INTENSIVE BUILDINGS

Federal agencies are now making a special effort to reduce energy usage in energy-intensive facilities. The Industrial Facilities Program, a collaboration between FEMP and DOE's Office of Industrial Technologies, recently began offering energy assessments and best practices advice to help manage process loads at Federal facilities. As the most recent examples, two Federal sites are now reaping immediate rewards. Improvements to a U.S. Postal Service facility in Atlanta will reduce energy use by 12%, yielding savings of \$74,000 a year. Improvements to the Bureau of Engraving and Printing in Washington, D.C. will reduce utility costs by 15% and save \$725,000 a year.

Laboratories for the 21st Century (Labs21), an EPA/DOE initiative, helps laboratories improve energy and water efficiency and implement renewable energy technologies. In FY 2001, this popular program delivered a successful series of one-day training workshops targeted for architects, engineers, and operations personnel.

ENERGY EFFICIENT STANDBY POWER

Executive Order 13221 issued on July 31, 2001 directed Federal agencies to reduce energy consumption by selecting products that use as little as 1 Watt in standby mode. Many products—including computers, printers, and all devices with remote controls, external power supplies, continuous digital displays, and rechargeable batteries—use electricity even when they are switched off. FEMP, in collaboration with the General Services Administration, Defense Logistics Agency, and the ENERGY STAR® program, is developing a current list of products that use less power in the standby mode.

FEMP ALERT TEAMS

All Federal agencies, but especially those located in the West, faced severe electricity supply shortages and price volatility. On May 3, 2001, the President directed Federal facilities to conserve energy and reduce peak demand. In response, FEMP mobilized ALERT (Assessment of Load- and Energy-Reduction Techniques) teams to conduct assessments at 25 Federal sites in California between May 3 and July 31. The teams identified low- and no-cost conservation opportunities to implement quickly. These measures resulted in average potential savings of 9.2% reduction in peak demand, 10.4% in cost savings, and 10.6% reduction in electricity consumption. Lessons learned were then communicated to a broad Federal audience through a live Internet broadcast. Follow-up assistance was provided to the 25 sites to ensure fulfillment of the recommendations.

RENEWABLE POWER

In response to E.O. 13123 Federal agencies are striving to purchase 2.5% of their electricity from new renewable sources by 2005. FEMP is now providing project implementation and procurement support to help agencies meet this goal. In FY 2001, FEMP worked with GSA, EPA, and the Air Force to find potential suppliers, explore purchasing options, and assist with putting contracts for renewable power in place. FEMP also published *Purchasing Renewable Energy: A Guidebook for Federal Agencies*, and expanded its renewable energy training programs.



TECHNICAL ASSISTANCE

Managing energy data with advanced technologies cuts peak loads and energy costs for Federal agencies.

To identify, design, and implement new construction and facility improvement projects, Federal agencies receive assistance in areas such as:

- Energy and water audits for buildings and industrial facilities
- Peak load management
- Whole-building design and sustainability
- Renewable energy technologies
- Distributed energy resources
- Combined heat and power technologies
- Energy efficient products
- New technology deployment

FINANCING

President Bush, through the National Energy Policy, has mandated that the Federal government achieve significant savings in energy use to enhance energy security and reduce the cost of government to the taxpayer. Secretary of Energy Spencer Abraham has said that innovative energy financing through public/private partnerships is one of the best ways to help the Federal government meet President Bush's goals to save energy and money.

Super Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs) are practical and flexible vehicles that allow for private sector up-front financing of long-term energy saving projects. Contractors are paid from the savings resulting from the projects. Agencies using Super ESPCs and UESCs pay only for the services they choose, fine-tune the performance guarantees, and assign responsibilities to suit their own in-house resources, capabilities, and priorities. In FY 2001, Federal agencies expanded their use of these contracts, as FEMP continued to streamline and improve upon Super ESPC and UESC services.

ESPCs

In FY 2001, 31 Super ESPC delivery orders totalling \$120.4 million exceeded FEMP's goals. Since the first ESPCs were awarded, the total value of private sector investment is \$230.7 million, covering 72 awarded delivery orders for 14 Federal agencies. The cumulative guaranteed cost savings from these projects is estimated to be \$482.1 million.

Federal customers in FY 2001 were able to benefit from a recently consolidated Super ESPC format. Contracting officers, project facilitators, technical team leads, and energy service companies worked together to consolidate DOE's six sets of regional

Super ESPCs encompass:

- Boiler/Chiller Improvements
- Building/Energy Automation Systems
- Lighting Improvements
- Building Envelope Modifications
- Electric Motors & Drives
- HVAC/Refrigeration
- Electrical Distribution or Cogeneration Systems
- Renewable Energy Systems
- Water & Sewer Systems
- Rate Reduction/Audits

Super ESPCs into one. The new uniform contract format eliminates unnecessary administration, reduces costs associated with contract variations, and requires fewer and less costly training workshops. Now that the format of all Super ESPC contracts are identical, Federal customers benefit from delivery order documents developed at other sites without the need for significant change, reducing the time and cost to implement projects.

To further expedite the Super ESPC process, experienced Project Facilitators guide agency customers through the entire process of developing projects, awarding delivery orders, and verifying savings. Project Facilitators attend two workshops each year to improve project management and team-building skills and refine tools that help agencies quickly and effectively implement Super ESPCs.

UESCs

FEMP also pursues utility energy services, financing, procurement, and incentives to support Federal projects in a new and changing utility environment. More than 60 electric and gas utilities have implemented energy projects and upgrades at Federal facilities around the country, investing more than \$675 million through UESCs. \$180 million invested in FY 2001 will save \$39 million each year.

UESCs encompass:

- Lighting and Mechanical Systems Upgrades
- Cogeneration
- Boiler/Chiller Retrofits
- Steam System Improvements
- Controls
- Energy and Water Combined Projects
- Heat Pumps

Through the Federal Utility Partnership Working Group, more than 100 utility and energy-related organizations share best practices and enhance communications with Federal agencies. In addition, 20 Utility Partner Resource Centers across the country provide Federal energy managers with convenient, localized support and access to energy saving opportunities.

Even with numerous guidance documents, training programs, and related technical assistance, the use of Super ESPCs and UESCs needs to expand across all Federal sectors. Both Federal and private sector parties agree that an increase in participation is needed to meet the mandated energy saving goals set for 2005.



FINANCING

Agencies need dollars to make projects happen. They seek project financing through:

- Energy Savings Performance Contracts (ESPCs)
- Utility Energy Savings Contracts (UESCs)
- Rebates
- Public benefits funds

Alternative financing strategies help agencies install innovative technologies, such as this 1 MW fuel cell system delivering green power to the Anchorage, Alaska Post Office.

POLICY

Unanticipated world events and major electricity supply problems brought a re-emphasis on energy security and reliability in Federal energy management policy. The new Administration focused specifically on these issues with a Presidential Directive and a new Executive Order. The Administration also continued implementation of Executive Order 13123, building on its policy framework and including energy conservation in Federal facilities as a component of the National Energy Policy, developed by the Vice President's National Energy Policy Development Group. Throughout FY 2001, the Interagency Energy Management Task Force closely coordinated policy implementation and associated reporting requirements with the Federal community.

IMPLEMENTING THE PRESIDENT'S NATIONAL ENERGY POLICY

Based on a recommendation from the National Energy Policy Development Group, President Bush issued a directive on May 3, 2001 to the heads of executive departments and agencies to take appropriate actions to conserve energy use at Federal facilities. In particular, President Bush called on agencies located in regions where electricity shortages were likely to conserve energy use during peak hours. The directive required agencies to report on their conservation actions within 30 days.

To assist agencies in meeting this directive, FEMP issued reporting guidance to the agencies and developed a schedule for preparing a summary report for the Secretary of Energy to present to the President. The guidance included a model Action Plan for agencies to draw upon and answers to questions they might have had regarding the reporting process. The agencies' information was compiled into the *Secretary of Energy's Report to the President: Energy Conservation Actions Taken at Federal Government Facilities*, delivered in June.

Federal agencies also updated their energy management implementation plans. These addressed a wide range of energy management activities, including use of alternative financing for energy improvements, purchase of ENERGY STAR® products, and use of sustainable design in new construction. As a specific focus, agencies reported on measures taken to reduce electrical demand, particularly during peak hours.

FEMP distributed information about the State of California's public benefits programs and encouraged agencies to take advantage of these incentive programs. These programs are designed to encourage electricity end users to improve the energy efficiency of their operations, shift load away from peak periods, and expand the use of distributed generation technologies.

REPORTING ON ENERGY MANAGEMENT

FY 2000 was the first full reporting year after the signing of Executive Order 13123. Federal agencies included numerous enhancements and additional information in their reports to address new requirements. This included isolating and reporting energy consumption data for Laboratory/Industrial/Energy-Intensive Facilities. The *FY 2000 Annual Report to Congress on Federal Government Energy Management* also employs the methodology developed by Task Force working groups for estimating carbon emissions from electricity consumption on a regional basis. Major findings of the report include:

- The government surpassed the 20% reduction goal for 2000 by reducing the energy intensity of its standard buildings by 23.6 %.
- Carbon emissions from energy used in non-exempt Federal facilities declined 13.6 % in FY 2000 compared to FY 1990.

FEMP also worked closely with the Office of Management and Budget during FY 2001 to prepare a summary report of the Federal agencies' energy scorecards for the FY 2000 reporting period, required by Executive Order 13123.



P O L I C Y

Federal agencies must reduce energy use by 35 percent by 2010 in comparison to 1985 levels. Effective coordination and sound guidance will help them meet this mandate. Policy efforts include:

- Annual Report to Congress and the President
- Interagency Federal Energy Management Task Force
- Policy guidance
- Legislative updates and tracking
- Federal Energy Management Advisory Committee

Not only are legislators taking the lead on establishing energy efficient policies, they also recently conducted an audit of Capitol Hill facilities to identify energy-saving opportunities.

OUTREACH

With power outages, energy price hikes, and security issues challenging Federal agencies in FY 2001, it was especially important to have strong and coordinated outreach and awareness programs. Leaders were given the responsibility to provide time-sensitive guidance to their staff and to their customers on new energy management policies, issues, and strategies. Agencies participated in a number of education and awareness programs, through which this timely guidance and information was disseminated widely to Federal employees. Agencies also participated in meetings, conferences, and expositions to share and receive information. Such activities helped keep Federal agencies apprised of new initiatives while providing them with opportunities to share their success stories.

RECOGNITION

One way agencies recognized exemplary leadership was through annual energy management award programs. This year, 64 individuals, groups, and organizations were honored at DOE's Federal Energy and Water Management Awards ceremony. Four groups were recognized for comprehensive programs through the second annual Presidential Awards for Leadership in Federal Energy Management, hosted at the White House on October 18 by Vice President Dick Cheney. In addition, 18 Federal buildings were designated as Energy Saver Showcases. (Read more about these programs and honorees in the special awards sections).

Twenty of the largest Federal agencies participate in FEMP's YOU HAVE the POWER campaign to help reach their energy management goals. 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 2001, 19 individuals were recognized, increasing the total number of Energy Champions to 315 since 1997. As a new addition to the campaign, agencies also recognized eleven important energy and water conservation projects through a campaign poster program. These projects are excellent examples that can be used as models for future projects.

AWARENESS

Energy managers, financial officers, and administrators received guidance on time-sensitive issues through the FEMP Web site at www.eren.doe.gov/femp. In September 2001, the Web site received 373,586 hits, a 14 percent increase from the same month in FY 2000.

In-depth information was also available through the *FEMP Focus* published eight times in FY 2001. *FEMP Focus* covers topics of national importance and highlights success stories and critical achievements of Federal agencies and their private sector partners. Special issues of the *FEMP Focus* provided information on natural gas shortages and actions taken by Federal agencies to conserve energy use in response to the May 2001 Presidential memorandum.

Agency heads, facilities managers, and Federal employees were alerted to issues of critical importance through FEMP's "Lead By Example" series. "Hot Topics" in FY 2001 included natural gas price hikes, power outages, and the ever-growing need to conserve water. Federal agencies helped to educate employees on the power of individual actions they could take to save energy, money, and resources for the future.

To further increase awareness of general energy conservation and environmental issues, agencies sponsored and participated in local, regional, and national Earth Day and Energy Awareness Month activities. Agencies sponsored recognition ceremonies and trade shows, set up displays, organized contests, produced hand-out materials, and developed learning activities for children. FEMP supplemented these programs by producing and distributing colorful posters and other outreach materials containing memorable and useful energy-saving tips and messages.

CONFERENCE AND EXPOSITION

To help educate their own employees, as well as share information about their own energy management activities and programs, agencies participated in a number of Federal conferences and expositions, the largest being Energy 2001 in Kansas City, Missouri. The three-day conference sponsored by FEMP and co-sponsored by the General Services Administration and the Department of Defense was attended by nearly 1,150 public and private sector participants. More than 60 sessions featured 170 speakers from a variety of government agencies and private companies. Topics included case studies, new products, trends and strategies for energy efficiency, and current events affecting Federal energy managers. This year's exposition was the biggest yet with 100 companies staffing 124 exhibit booths.

LEAD by EXAMPLE

SAVE WATER, SAVE ENERGY, SAVE THE FUTURE.

IT'S A FEDERAL MANDATE.

IT'S A FISCAL RESPONSIBILITY.

IT'S AN ENVIRONMENTAL NECESSITY.

The availability and cost of clean water — it's one of the greatest challenges energy management professionals will face over the next 30 years. With moderate efforts, the Federal government can save 46% of its water use — equal to 121 million gallons of water a day, enough for 1.8 million people.

EVERY DROP COUNTS... YOUR EFFORTS CAN CREATE A RIPPLE EFFECT.

INDOORS

- Promptly report and repair leaks
- Replace old plumbing equipment such as toilets, faucets, and showerheads with efficient, low-flow fixtures
- Shut off faucets completely, repair leaky faucets immediately
- Avoid flushing toilets unnecessarily
- Insulate water pipes, chillers, and storage tanks
- Replace old dishwashers and clothes washers with new efficient models and run only when fully loaded

OUTDOORS

- Plant native, climate-appropriate ground covers, shrubs, and trees
- Water lawns sparingly and only in the early morning
- Position sprinklers to water the lawn — not the pavement
- Recirculate water in decorative fountains, ponds, and waterfalls
- Collect and use water from non-potable sources and other systems where appropriate
- Check sprinkler and timing devices regularly to ensure proper operation
- Verify that irrigation systems are suited to plants, climate, soil conditions, and seasons
- Reduce grassy areas to only those needed, such as courtyards and play areas



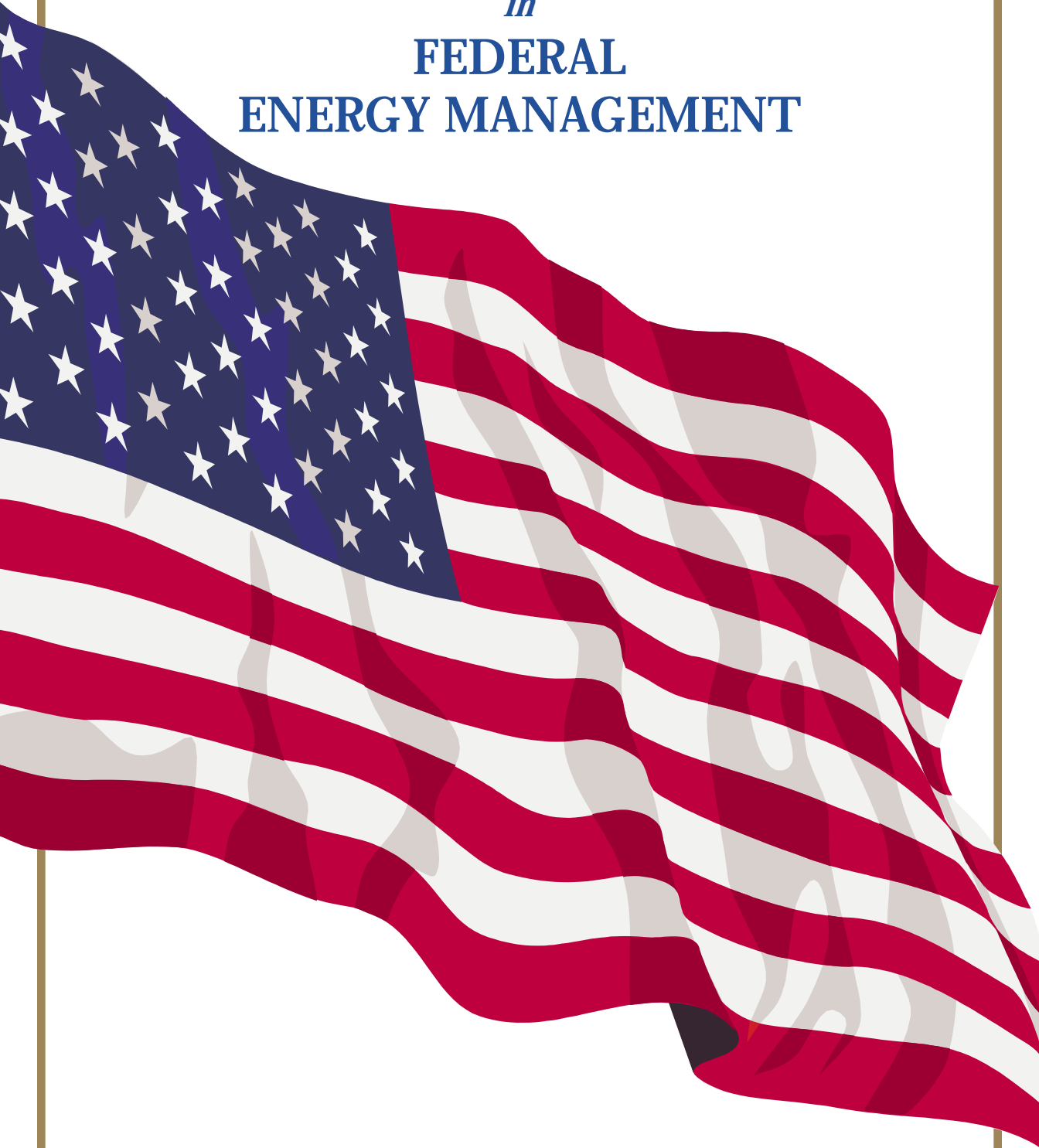
O U T R E A C H

Communications and recognition programs heighten awareness of the benefits of energy efficiency and reward exemplary leadership.

- Newsletters and Web sites
- Awareness and recognition campaigns
- Annual Awards ceremonies
- Conferences and expositions

Outreach materials increase Federal awareness of energy and water conservation issues and alert employees about items of critical importance.

AWARDS *for* EXCELLENCE
in
**FEDERAL
ENERGY MANAGEMENT**





PRESIDENTIAL AWARDS

for

LEADERSHIP

in

FEDERAL ENERGY MANAGEMENT

One of the greatest challenges facing our Nation is ensuring that energy resources are available for the future. Adequate supplies of energy are needed for the security and prosperity of the Nation. To help address this challenge, President Bush asked Vice President Cheney to assemble a team to develop a National Energy Policy that will help the private sector, and government at all levels, promote dependable, affordable, and environmentally sound production and distribution of energy for the future.

Supporting the goals of the National Energy Policy are many dedicated Federal employees providing Leadership by Example. The efforts by Federal government energy teams to reduce energy demands and integrate new technologies into the existing energy system help achieve these goals.

Vice President Dick Cheney presented the second annual Presidential Awards for Leadership in Federal Energy Management at a White House ceremony on October 18, 2001. These awards honor Federal agency energy management teams for their exceptional leadership and efforts to promote and improve Federal energy and water management and conservation.

The President and Vice President extend their congratulations and gratitude to those Federal agency teams recognized for outstanding efforts to make the Federal government's energy management program a success.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Federal Energy Management Success

NASA's energy team is a well-integrated group comprised of key members of the agency-level Energy Efficiency Board that guides the planning and implementation of energy efficiency activities. NASA's successes include:

- **ENERGY POLICY.** NASA issued an Agencywide directive providing detailed procedures and guidelines for meeting the requirements and goals of Executive Order 13123, using alternative financing, and evaluating renewable energy and water conservation measures.
- **ALTERNATIVE FINANCING.** Over the past three years, NASA has awarded or participated in eight Energy Savings Performance Contract (ESPC) delivery orders and four Utility Energy Savings Contracts (UESCs) that resulted in over \$34 million in facility energy efficiency and water conservation improvements. In FY 2000 alone, NASA used alternative financing to implement \$2.7 million in energy and water projects that are saving \$375,000 annually. In addition to saving energy and money, the projects will save 8 million gallons of water annually and remove thousands of PCB-filled lighting ballasts.
- **RENEWABLE ENERGY.** NASA uses solar, geothermal, wind, and other renewable energy sources in innovative and cost-effective applications. A landfill gas supply contract awarded by Goddard Space Flight Center will reduce greenhouse gas emissions, enhance fuel supply reliability, and save at least \$330,000 annually in energy costs. A wind power project at Ames Research Center reduces facility maintenance costs and has a nine-year simple payback.
- **SHOWCASE FACILITIES.** In FY 2000, NASA installed a 2,500 square foot transpired solar wall and modular condensing gas-fired boilers in the Aircraft Support Facility at NASA Dryden Flight Research Center. The project reduced air emissions to the point that expensive air permitting is no longer required.
- **ENERGY STAR® BUILDINGS.** The Child Development Center at Kennedy Space Center and the Chief, Naval Meteorology and Oceanography Command Administration Facility at Stennis Space Center earned the prestigious DOE/EPA ENERGY STAR® Label for Buildings.
- **MANAGEMENT.** Energy efficiency and water conservation is an integral part of the agency's Environmental Strategy and Functional Leadership Plan. The team's achievements are an indication of strong management support for energy efficiency.
- **MANAGEMENT INFORMATION SYSTEMS.** NASA developed and implemented the NASA Environmental Tracking System, an electronic database for collecting, aggregating, analyzing, and reporting environmental and energy data, to aid in agency-level reporting and functional management.
- **AWARDS AND RECOGNITION.** The agency has named 19 of its employees and on-site support contractors as "Energy Champions" since DOE started this recognition program in 1997. NASA will establish its own internal awards program next year.



Receiving the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney are NASA team members (l to r) Mark Schoppet, John Villegas, Steve Frankel, Felix Rosiere, Jr., Gregory Spencer, Wayne Thalasinis, Cedrick Davis, Eric Ross, Don Lilly, Barry Green, Rich Wickman, Jeffrey Sutton, and Olga Dominguez.

UNITED STATES POSTAL SERVICE SOUTHEAST AREA



“Stamp Out Energy Waste”

The Southeast Area's Energy Steering Committee produced and implemented a Strategic Energy Management Plan that embraces many of the tools of Executive Order 13123. The results show that the Southeast Area's successful implementation of these tools has saved significant amounts of both energy and financial resources.

- **ALTERNATIVE FINANCING.** The USPS has negotiated shared energy savings contracts with six utilities covering 352 Postal Service facilities. The cumulative investment in energy efficiency improvement will total more than \$21 million over the next five years and generate annual energy cost savings of approximately \$4 million, for a simple payback of 5.2 years.
- **ENERGY CAPITAL IMPROVEMENTS.** The Southeast Area invested \$375,000 of its own capital towards energy efficiency improvements, generating annual energy cost savings of \$104,000. This investment is just the start of a comprehensive program aimed at energy capital improvements in small- and medium-sized postal facilities.

Moreover, the Steering Committee has launched several of its own initiatives to increase energy efficiency. These include:

- **METERING.** The USPS established a database that tracks energy use and cost at the 3,800 facilities in the Southeast Area. A statistical model was developed to help the Committee use the information in the database to determine which energy programs (from awareness to capital improvements) are best suited to achieve improved energy efficiency.
- **ENERGY DATA WEB PAGE.** The page is a quick tool that Energy Managers can use to acquire energy usage and cost data at the facility, district, or area level.
- **DISTRICT ENERGY ACTION PLANS.** All nine districts in the Southeast Area have completed (or will soon complete) plans that identify specific energy conservation actions that will be taken over the next five years, the expected savings, and specific strategies for documenting and reporting results annually.
- **PARTNERING ALLIANCES.** The Southeast Area partnered with the Florida Energy Office and a consulting firm to establish a Resource Energy Manager (REM) Pilot Project. The resulting \$100,000 grant used to hire the first REM led to overall documented savings of \$290,000 in less than a year. The USPS also utilized the expertise of DOE's SAVEnergy program and the Florida Energy Office to identify energy conservation measures requiring a \$106,000 investment, yielding cost savings of more than \$18,000 per year.
- **ENERGY AWARENESS.** The Southeast Area launched an energy awareness campaign with the slogan, “You Have the Power to Stamp Out Energy Waste.” The program goal is to have at least half of its employees sign an energy conservation pledge card within a year. The pledge card commits employees to be good stewards of energy conservation by taking basic actions (e.g., turning off lights and computers when not in use, etc.).



Receiving the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney are USPS team members (l to r) Jim MacKenzie, Jim Nails, Chris Hosford, Dianne Shoaf, Mike Fahlmark, Anne Cazares, Phil Edwards, Bob Thoensen, Carroll Burgess, Doug Haines, David Taylor, Melinda Edwards, Asif Ansari, and Roosevelt Allen.



U.S. DEPARTMENT OF DEFENSE UNITED STATES MARINE CORPS

U.S. MARINE CORPS AIR STATION — IWAKUNI, JAPAN

“Energy Conservation Program 2000”

The Iwakuni Air Station implemented a comprehensive and inspiring energy management program under the leadership of James L. Trocke. They assembled a highly efficient Energy Conservation Planning Group, chaired by the Executive Officer of the Station, and a group of energy monitors throughout the Air Station. Their accomplishments include:

- **UTILITY RATE NEGOTIATION.** The Planning Group modified and enhanced existing orders and policies governing energy programs at the Air Station and negotiated a new billing rate structure which resulted in savings of \$1.5 million annually in electricity charges and more than 50,000 MBTUs.
- **“GREEN-OUT.”** This is an innovative, voluntary, cost-free method of shaving high peak electrical consumption demands. The Green-out program saved the Air Station from raising its contract power peak level and paying high penalty charges for exceeding it, helped reduce metered energy consumption, and elevated energy conservation awareness of all Station residents.
- **WATER CONSERVATION PROGRAM.** The program will result in 30 percent water savings, equating to a projected savings of \$800,000 annually.
- **STEAM CYCLING.** The energy team determined a way to cycle waste steam in buildings throughout the Station in the heating season to dramatically reduce boiler loads. It saves approximately \$340,000 a year in fuel costs.
- **ENERGY AWARENESS WEEK.** The team orchestrated a full week of Energy Awareness events at the Station, including a 10K run, school field trips, poster and essay contests, a “car jam,” and a barbeque. The events included everyone from the Base, were well attended, and had an energy conservation theme.

Other small projects implemented include:

- A proactive program to ensure lights on the Air Station were secured every night, saving more than \$25,000 per year in electricity.
- Nighttime inspections to identify unneeded street and parking lot lights. More than 40 unnecessary lights were found and secured saving about \$6,000 per year in electricity costs.
- A water conservation initiative to reduce water pressure in housing, saving approximately \$25,000 annually.
- Replacement of lighting with energy-efficient compact fluorescent lighting, saving \$10,000 per year in electricity costs.
- A program to reduce the temperature in all hot water heaters, saving about 50,000 gallons of heating fuel each year.



Receiving the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney are Marine Corps team members (l to r) BGen (Sel) Ronald S. Coleman, Cmdr Tony Ermovick, and Chief James Trocke.

U.S. DEPARTMENT OF DEFENSE DEPARTMENT OF THE NAVY SOUTHWEST REGION



“Demand-Side Management”

Navy Region Southwest (NRSW) formed a Regional Energy Program Office (REPO) in response to spiraling electricity prices and electricity shortages in Southern California. The demand-side management initiatives spearheaded by the REPO helped the local utility avert Stage 3 alerts and regional rolling outages.

- **UTILITY DEMAND REDUCTION.** This program to reduce both peak-load and base-load demand for electricity resulted in savings of \$1 million and 5 million kWh in just three months at the three NRSW bases in San Diego. Several NRSW bases reduced base-load demand by 12 to 18 percent.
- **ESPCS AND DEMAND-SIDE MANAGEMENT (DSM) PROJECTS.** A current investment of \$21 million is expected to yield \$4.5 million in annual savings. An additional investment of approximately \$35 million has anticipated annual savings of \$11 million. The large projects include everything from cogeneration plants to photovoltaic and microturbine systems.
- **RENEWABLE ENERGY.** A 21.6 kW photovoltaic system is being constructed in partnership with the local utility, the State of California, and private sector companies. The system will produce 39,420 kWh annually. More importantly, it will cut demand by more than 20 kW during mid-afternoon, when the local utility grid is struggling with peak usage. An additional benefit of the PV system is reduced emissions, which over its 20-year life will include: 1,111,644 lbs. of CO₂, 9,461 lbs. of SO₂, and 3,942 lbs. of Nox.
- **MANAGEMENT AND TEAMWORK.** REPO broadcasted daily energy updates and coordinated weekly electricity action meetings and several “Electricity Summits.” Eleven energy specialists were deployed to identify large consumers of energy in the NRSW. Load reduction measures (e.g., banning air conditioning, directing that office equipment be turned off at night) were issued from the highest level personnel in NRSW. Weekly load profiles were issued for each base. During severe electricity shortages, there was constant contact among the NRSW, DOE, and the California Energy Commission.
- **METERING.** REPO adopted MVWeb, a Web-based demand management system, to help identify activities and areas of high electricity usage. In several instances, usage spikes or other anomalies were traced to wasteful practices, which were modified or terminated.
- **RESOURCE EFFICIENCY MANAGEMENT (REM) PROGRAM.** The REM program establishes a position for a full-time, dedicated energy manager. Through energy cost savings and utility incentives, the program offers returns far above program costs.
- **AWARDS.** NRSW developed and implemented its own awards program to award top performers in effective energy management.



Receiving the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney are Navy team members (l to r) David Crouch, Matthew Kelly, Darryl Matshui, John Icenhower, Captain Jack Surash, John Thomas, Lt Cmdr Wade Wilhelm, and Ed Thibodo.



FEDERAL

ENERGY

and

WATER MANAGEMENT AWARDS

More than ever before, our energy future depends on our own energy independence and the energetic commitment of individuals within government to achieve a prosperous future. America can no longer rely on foreign sources to fuel our country's growing energy needs.

The success of the Federal government in reducing its energy consumption and related environmental impacts rests squarely on the shoulders of the Energy Champions who have led their agencies into a brighter energy future. This leadership often entails overcoming one challenge after another. Those who pursue energy efficiency must demonstrate hard work, innovation, persistence and vision. That is why the Department of Energy, Federal Energy Management Program is proud to salute the winners of the 2001 Federal Energy and Water Management Awards.

In one year, the winners—through a combination of public and private partnerships—have saved more than \$33.4 million and 2.7 trillion Btu by actively identifying and implementing energy efficiency, water conservation, and renewable energy projects. The award winners have also inspired others to increase their own efforts to save energy and water. FEMP is grateful for their pursuit of excellence in facility management.

Water Management Awards to Organizations

NAVSEA Keyport, Undersea Warfare Center Division Department of the Navy Keyport, Washington

The NAVSEA Keyport, Undersea Warfare Center Division developed and implemented an innovative water-wise landscaping program that is beautifying the Base and saved \$50,000 and 200,000 to 400,000 gallons of water during FY 2000. The program provides high visibility for water conservation near the main entrance, to base personnel and residents of Kitsap County and Western Washington. The success of the Keyport Innovative Landscaping Program is due entirely to extraordinary teamwork—an effort that has helped solidify the local community as well. Numerous organizations lent their support, including a landscape architecture class from a local community college that developed a detailed design package using indigenous plants and ground cover. The manpower for the project was provided by the Navy Transfer Personnel Unit (TPU) from Bangor Base. The TPU refurbished curbside and wooden planters, cleaned storm drains, removed unwanted vegetation and debris, planted shore pines, cleared and rehabilitated the nature trail, and reestablished the wetlands by planting native grasses and trees. Initially the project saved approximately \$50,000 annually in grounds maintenance costs. Subsequently, during a two-year period, the grounds maintenance contract was reduced by more than \$70,000.



*Captain Mary Townsend-Manning,
Jerry Gray, and Kevin Evans*

Water Management Awards to Organizations

NAVSEA Crane, Surface Warfare Center Division Department of the Navy Crane, Indiana

The NAVSEA Crane, Surface Warfare Center Division utilized innovative thinking in developing the Indiana Water Conservation Project. Previously, Crane's 175-mile water distribution system was antiquated and springing leaks, which sent water bills soaring. This forced the Base to rethink its water operations, from production and distribution to end use. One innovative idea that arose from this creative process and that has proven effective was to use scuba divers to clean water towers instead of draining the towers. This change alone saved 1.8 million gallons of water. Crane modernized the water production plant, improving its efficiency and effectiveness. This effort is saving 20 million gallons of water per year. The water consumption crisis in Crane's distribution system drove Crane to seek ways to improve the system through monitoring and analysis. As a result, Crane removed 26 miles of obsolete leaking piping in the water distribution system. In addition, they repaired the leaky swimming pool, saving 1.6 million gallons of water. By reexamining all operations, they were able to devise improvements that are saving \$90,000 a year and approximately 88 million gallons of water, representing a 30 percent reduction for the Division.



*Brent Storey and Captain Select
F. Frank Aucremanne*