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United States Department of Energy
Office of Energy Efficiency and Renewable Energy
Federal Energy Management Program

1997

Federal Energy Management Program
REPORT

The Challenge

Leadership in the Federal Sector

Partnering with the Private Sector

Purchasing to Save

Assistance, Training, and Tools to Succeed

Outreach

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Leadership in the Federal Sector

In these times of declining fiscal and human resources, Federal agencies must maximize limited appropriations and budgets. Effective energy management in Federal buildings has reduced the Government's energy costs by more than 24% from fiscal year 1985. Between 1985 and 1996, investments of approximately \$2 billion for energy efficiency in buildings and facilities contributed to a cumulative cost avoidance of nearly \$6.3 billion.

FEMP is spearheading the formidable task of reducing total energy use by the Federal Government.

FEMP's leadership and accomplishments for FY 1997 have helped Federal agencies meet their challenges and attain many of their goals by:

- Increasing partnerships with the private sector,
- Providing cost-effective quality services and tools,
- Integrating energy efficiency into procurement,
- Increasing Federal employee energy awareness,
- Influencing outcomes by promoting good energy habits, and
- Increasing the number and scope of energy efficiency projects.

By fostering responsible energy management and institutionalizing energy efficiency as a good business practice, FEMP enhances the economic vitality and productivity of Federal agencies, reduces damage to the environment, and contributes to a secure national defense.

FEMP has established effective working partnerships for Federal agencies and State

governments with utilities, energy service companies, and product manufacturers to achieve the savings mandated by EPACT. These partnerships help the Federal Government meet energy efficiency requirements, streamline procurement, improve operations, and provide financial incentives. Private sector partnerships actually leverage Federal needs and requirements to create new opportunities for, and new ways of doing business with, the private sector.

To reach the Federal energy efficiency goal, an investment of approximately \$6 billion is required. Leading utilities and private sector companies willing to help make front-end investments in retrofits and energy-efficient technologies are offered long-term contracts that allow them to share in savings. These partnerships not only help the Federal sector achieve their energy efficiency goals, they will create as many as 200,000 new jobs in the private sector. This win-win strategy designed by FEMP is setting standards in agencies and industry around the world.

Utilities Incentives

FEMP is aggressively pursuing utility energy services, financing, procurement, and incentives to support Federal projects in a new utility environment. The Federal Utility Partnership Working Group builds partnerships and develops communications channels between Federal agencies and utilities to transfer success stories, challenges, and lessons learned. Thirty-five utilities belong to the Working Group and have established staffed Resource Centers across the country to provide Federal energy managers with convenient, localized support and access to FEMP software, publications, and training.

Partnering with the Private Sector

Energy Savings Performance Contracts

Energy Savings Performance Contracts (ESPCs) allow Federal agencies to improve energy efficiency in their facilities at no direct capital cost to the Federal treasury. Energy service companies finance the capital cost and install the retrofits. In return they receive a share of the savings. Several contracts have been awarded, and two new ESPCs were signed in FY 1997. FEMP also pre-qualified more than 125 energy service companies who are eligible to compete for ESPCs.

FEMP also initiated a new type of ESPC (Super ESPC) to centralize the complex contracting functions and accelerate the introduction of privately-financed energy efficiency measures into the Federal sector. FEMP awarded the first regional Super ESPC for the Western Region in 1997. Contracts worth up to \$750 million were awarded to five energy service companies to provide energy saving improvements at Federal facilities in Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington, and the Pacific Territories.

Winners of Super ESPCs in the Western Region include:

- ERI Services, Inc.
- Honeywell, Inc.
- Johnson Controls, Inc.
- Energy Pacific, a joint venture of Enova and Pacific Enterprise
- A joint venture of the Bentley Group / BMP Team, Puget Sound Energy and MacDonald Miller Company

Additional contract awards for DOE's five other regions — Southeast, Central, Midwest, Mid-Atlantic, and Northeast — are expected in the next 12 to 18 months.

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s the world's largest customer, the Federal Government can greatly affect the availability and cost of products and technologies that save energy and conserve our natural resources. Federal facility managers and purchasing officers buy \$10-20 billion dollars of energy-related products annually. Their decisions dramatically affect the types of products created, manufactured and marketed by a wide range of businesses. For this reason, EPACT and E.O. 12902 direct all Federal employees to select products which are among the 25% most energy-efficient in their class, or at least 10% more efficient than required by Federal standards.

FEMP worked with the Office of Management and Budget and the White House Council on Environmental Quality to initiate the Federal Procurement Challenge, designed to:

- Reduce building operating costs
- Conserve energy and water
- Reduce greenhouse gas emissions
- Provide market leadership
- Stimulate technology innovation.

More than 22 Federal agencies, representing over 95% of Federal purchasing power, have signed the Challenge. They have committed to specify and purchase "best-practice" energy and water saving products that will reduce agency operating costs. Federal employees, citizens, and taxpayers benefit from Federal cost savings by as much as \$900 million per year, and from reduced greenhouse gas emissions by as much as 11 million metric tons of carbon dioxide.

Purchasing to Save

FEMP also worked with the DOE Office of Defense Programs and the General Services Administration to develop a streamlined procurement mechanism for large-scale capital equipment called a "Basic Ordering Agreement" (BOA). Designed initially for environmentally-friendly, CFC-free chillers, the BOA will save agencies significant time and money compared to

traditional procurement methods. This is just one more example of the many ways that FEMP provides valuable procurement assistance to Federal agencies around the country.

*By increasing
demand for
energy-efficient
products...*

*Federal workers
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for all consumers.*

In FY 1997 FEMP also developed the first set of 14 Product Energy Efficiency Recommendations for residential appliances and equipment, water saving technologies, lighting technologies, and commercial appliances and equipment. The Recommendations are presented in the first edition of a one-stop shopping-guide entitled, "Buying Energy Efficient Products," which will ultimately contain recommendations for 50 to 60 products. The Recommendations help Federal buyers make intelligent decisions about the efficiency level for products that comply with the man-

dates. They also provide information on cost effectiveness, buyer tips, and where to find additional information. By increasing demand for energy-efficient products in a large, reliable market, Federal workers help lower the costs of these products for all consumers and provide a model for other levels of government and for corporate and institutional buyers as well.

In Federal energy and facility management, agencies must comply with rules, regulations, and standards from many sources that can make it difficult to grasp the wide array of solutions available. Even more critical and difficult are the monetary and financing issues associated with change. To help Federal workers make intelligent decisions, FEMP provides direct technical assistance through a broad range of services, such as the SAVEnergy Program, the New Technology Demonstration Program, project design assistance, and technical training.

FEMP is developing strong working relationships with all energy sector participants, including manufacturers, utilities, trade associations, community organizations, professional societies, universities, and state and local governments. FEMP's Regional Energy Action Project (REAP) teams include experts that provide Federal energy managers with local technical and financial assistance to make energy efficiency improvements to their buildings and operations.

FEMP builds and strengthens cost reduction capabilities by offering technical courses, workshops, and symposia on how to achieve energy efficiency and water conservation at Federal facilities. FEMP's high quality training programs offer a way to change the behavior of a wide range of people involved in the management of Federal real estate. The training is interesting, relevant, up-to-date, and tailored to specific audiences. It is also action-oriented and hands-on whenever possible.

SAVEnergy is an audit program available to all Federal facilities and installations. This program:

- Screens and evaluates sites,
- Develops and customizes action plans,
- Suggests funding mechanisms and partnerships, and
- Recommends follow-up data collection.

SAVEnergy action plans were developed for more than 50 sites in 1997.

Assistance, Training, and Tools to Succeed

FEMP's New Technology Demonstration Program partners with industry through Cooperative Research and Development Agreements to evaluate advanced, U.S. manufactured technologies.

*Training is
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and hands-on
whenever
possible*

The Program:

- Reduces energy and operations and maintenance costs,
- Introduces new, energy-efficient technologies,
- Creates jobs in the manufacturing sector, and
- Helps agencies implement strategies to prevent pollution.

Two demonstration projects were underway in 1997: Desiccant Cooling/Dehumidification System at Naval Air Stations in Willow Grove, Pennsylvania and Jacksonville, Florida; and a Dinh Heat Pipe at the Kennedy Space Center.

FEMP's Design Assistance efforts in 1997 also increased the number of showcase renewable energy projects at many agencies, including the National Park Service, Environmental Protection Agency, Department of Agriculture, Department of Defense, Department of State, and NASA. As part of its "greening" projects the first demonstration of building-integrated photovoltaics in a Federal building was presented at the Thoreau Center for Sustainability at Presidio National Park in San Francisco, California. FEMP also sponsored a "Greening of Yellowstone" workshop, held in West Yellowstone, Montana.

In FY 1997 FEMP offered four training courses by satellite to meet agencies' needs and reduce travel and per diem costs. FEMP trained more than 2,300 energy managers— up from 1,700 in FY 1996. FEMP's training program includes everything from basic principles, such as how to perform life-cycle cost analyses, to specialized training, such as the use of FEMP-developed software tools. FEMP technical assistance programs provide the "know-how" to get the job done.

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ue to the size of the federal workforce, including military personnel, the Federal Government has an enormous responsibility and opportunity to implement energy-saving measures for the benefit of the tax-payers. FEMP's message, that saving energy saves money, speaks directly to the Federal employee who is being asked to do more with less.

FEMP relies on strong communications and outreach programs to provide Federal energy managers with up-to-date information and to heighten Federal employees' awareness of the economic and environmental benefits of improved energy efficiency. In addition to its Federal customers, FEMP partners with technology developers, manufacturers, trade associations, and energy consulting firms to better inform them of Federal agency needs for new technologies and services, and to increase the range of market-ready technologies considered for application by Federal workers.

FEMP's outreach efforts are designed to appeal to a broad range of Federal managers and employees. They inspire and challenge individuals in the Federal Government, encourage wise energy habits, and recognize exemplary energy leadership.

Outreach

In addition to initiating and expanding several important outreach initiatives, in 1997, FEMP:

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- Designated 28 new facilities as Energy Saver Showcases in 18 states involving 22 technologies, including sulfur lamps, capacitors, and radiant hydronic heating.
- Announced 73 winners of the Federal Energy and Water Management Awards, who through a combination of public and private partnerships saved more than \$100 million, 10.8 trillion Btu, and almost 700 million gallons of water.
- Published seven issues of *FEMP Focus* and increased readership to more than 8,000 Federal energy managers and stakeholders.
- Organized five "TeleFEMP" video teleconferences which reached 5500 Federal employees.
- Realized 56,821 web site hits, an 826% increase from FY 1996. The web site was expanded to include Super ESPC information and the "Greening Federal Facilities Resources Guide", and a special section for the new FEMP five-year initiative, the "You Have the Power" campaign.

U.S. Department of the Navy
Fleet Energy Management Program

YOU HAVE the POWER

Champion

U.S. Postal Service
Fleet Energy Management Program

YOU HAVE the POWER

Visionary

U.S. Department of Energy
Fleet Energy Management Program

YOU HAVE the POWER

Champion

U.S. Department of Labor
Fleet Energy Management Program

YOU HAVE the POWER

Champion

SAVE the ENERGY FUTURE

U.S. Department of the Treasury
Fleet Energy Management Program

YOU HAVE the POWER

Champions

U.S. Department of the Navy
Fleet Energy Management Program

YOU HAVE the POWER

Leader

U.S. Department of the Air Force
Fleet Energy Management Program

YOU HAVE the POWER

Innovator

U.S. Department of the Treasury
Fleet Energy Management Program

YOU HAVE the POWER

Leaders

U.S. Department of Commerce
Fleet Energy Management Program

YOU HAVE the POWER

Explorer

U.S. Department of Commerce
Fleet Energy Management Program

YOU HAVE the POWER

Pioneer

U.S. Postal Service
Fleet Energy Management Program

YOU HAVE the POWER

Leader

U.S. Postal Service
Fleet Energy Management Program

YOU HAVE the POWER

Explorer

U.S. Department of the Army
Fleet Energy Management Program

YOU HAVE the POWER

Leader

U.S. General Services Administration
Fleet Energy Management Program

YOU HAVE the POWER

Leader

U.S. Environmental Protection Agency
Fleet Energy Management Program

YOU HAVE the POWER

Catalyst

U.S. General Services Administration
Fleet Energy Management Program

YOU HAVE the POWER

Pioneers

U.S. Department of the Army
Fleet Energy Management Program

YOU HAVE the POWER

Innovator

U.S. Department of Labor
Fleet Energy Management Program

YOU HAVE the POWER

Innovators

U.S. Department of Energy
Fleet Energy Management Program

YOU HAVE the POWER

Champion

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YOU HAVE the POWER

U.S. Department of Energy
Federal Energy Management Program

Pioneer

YOU HAVE the POWER

U.S. Department of Labor
Federal Energy Management Program

Futurists

YOU HAVE the POWER

U.S. Department of Commerce
Federal Energy Management Program

Pioneer

YOU HAVE the POWER

U.S. Department of the Army
Federal Energy Management Program

Pathfinder

YOU HAVE the POWER

U.S. Department of Commerce
Federal Energy Management Program

Explorer

YOU HAVE the POWER

U.S. General Services Administration
Federal Energy Management Program

Champion

YOU HAVE the POWER

U.S. Department of Commerce
Federal Energy Management Program

Innovators

YOU HAVE the POWER

U.S. Department of the Treasury
Federal Energy Management Program

Pathfinder

YOU HAVE the POWER

U.S. Environmental Protection Agency
Federal Energy Management Program

Champion

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Federal Energy Management Program

Leader

YOU HAVE the POWER

National Aeronautics and Space Administration
Federal Energy Management Program

Innovator

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U.S. Environmental Protection Agency
Federal Energy Management Program

Champion

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U.S. Department of the Army
Federal Energy Management Program

Champion

YOU HAVE the POWER

U.S. Department of the Navy
Federal Energy Management Program

Mentor

YOU HAVE the POWER

U.S. General Services Administration
Federal Energy Management Program

Futurist

YOU HAVE the POWER

U.S. General Services Administration
Federal Energy Management Program

Leader

YOU HAVE the POWER

U.S. Department of Energy
Federal Energy Management Program

Leader

YOU HAVE the POWER

U.S. Department of the Air Force
Federal Energy Management Program

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YOU HAVE the POWER

U.S. Department of the Air Force
Federal Energy Management Program

Trailblazer

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U.S. Department of the Navy
Federal Energy Management Program

Leader

YOU HAVE the POWER

U.S. Department of the Navy
Federal Energy Management Program

Pioneer

YOU HAVE the POWER

U.S. Department of the Army
Federal Energy Management Program

Innovator

YOU HAVE the POWER

U.S. Environmental Protection Agency
Federal Energy Management Program

Champion

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U.S. Department of the Air Force
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