



## Leading by Example with Smart Energy Management

### Implementing Smart Solutions

The Federal Government, as the nation's largest energy consumer, has a tremendous opportunity and acknowledged responsibility to lead by example. The Department of Energy's (DOE) Federal Energy Management Program (FEMP) plays a critical role in this effort.

FEMP facilitates the Federal Government's implementation of sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship. FEMP does this by focusing on the needs of its Federal customers, delivering an array of products grouped into project transaction services, applied technology services, and decision support services.

### Project Transaction Services

**Financing energy efficiency and renewable energy projects:** Implementing energy efficiency, renewable energy, and water conservation projects requires significant funding. FEMP supports Federal agencies through the entire project development process, offering assistance in identifying, obtaining, and implementing alternative financing mechanisms. These alternative

The Department of Energy's (DOE) Forrestal Headquarters building includes a 205-kilowatt photovoltaic (PV) system, providing up to 8% of the building's electrical demand. The building uses 40% less energy than the average office building and saves 28 million pounds of CO<sub>2</sub> emissions and thousands of taxpayer dollars each year

financing tools include Energy Savings Performance Contracts (ESPCs), Utility Energy Services Contracts (UESCs), Power Purchasing Agreements (PPAs), and various Federal and State Energy Incentives Programs.

With assistance from FEMP, the Federal Government's commitment to improving energy efficiency has accelerated and grown in recent years. Federal ESPCs facilitated by DOE now exceed \$1 billion for the first time in the program's history. The current pipeline is more than triple its February 2007 size, and continues to grow.

### Applied Technology Services

**Designing, operating, and maintaining high-performance buildings:** FEMP helps Federal agencies create and implement sustainable design, operation, and maintenance practices that incorporate energy efficiency, renewable energy, and water-conservation technologies. These practices span new construction and retrofit projects. FEMP services include energy audits, operations and maintenance assessments, laboratory design protocols, new technology reports, advanced metering, and guidance for procuring energy-efficient and renewable energy products.

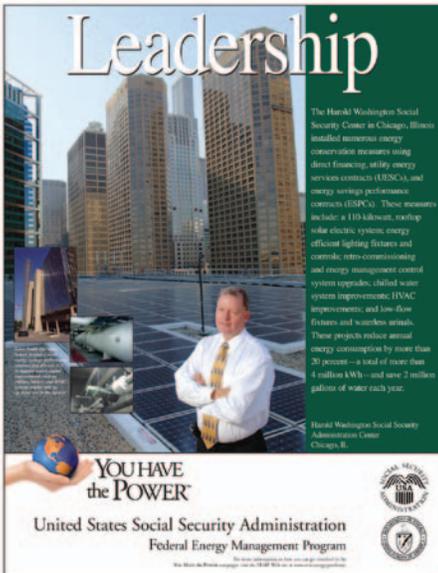
One program example is FEMP's Laboratories for the 21st Century (Labs21) partnership with the Environmental Protection Agency (EPA), which reduces Federal laboratory energy use by \$18 million annually. Another is the first-ever White House Memorandum of Understanding on Federal Leadership in High Performance and Sustainable Buildings and the issuance of the Guiding Principles for Sustainable Buildings.

**Evaluating and implementing energy-efficient products:** The Federal Government can reduce energy consumption and achieve enormous cost savings by purchasing energy-efficient products. FEMP provides energy efficiency requirements, guidance, and cost calculators that help Federal agencies offset energy consumption costs through energy-efficient product implementation.

Federal buyers are required by the Energy Policy Act of 2005 (EPA Act 2005) to purchase products that are ENERGY STAR®-qualified or FEMP-designated for energy-efficiency and low standby power. These products are in the upper 25% of energy efficiency in their class.



# Federal Energy Management Program



Larry Smith at the Harold Washington Social Security Center in Chicago used a combination of UESCs and ESPCs to install a solar electric system, upgrade lighting and HVAC systems, and install low-flow fixtures to reduce energy use by 20% and save 2 million gallons of water annually

## Implementing renewable energy

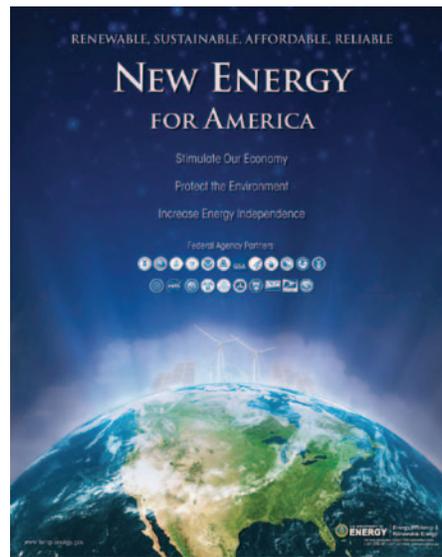
**technologies:** Renewable energy from solar, wind, incremental hydro, ocean, biomass, and geothermal sources can provide energy for heating, cooling, and electricity. FEMP assists Federal agencies in developing and implementing these clean, secure energy resources to meet energy management regulations and goals.

By using renewable energy resources, Federal agencies can meet energy management regulations, help conserve our natural resources, and increase the nation's energy independence and security.

## Managing energy-efficient/alternative-

**fuel vehicles:** The Federal fleet currently consists of about 600,000 domestic vehicles. While 20% (121,778 vehicles) can be powered by alternative fuel, legislation mandates ongoing reductions in fleet petroleum use through energy-efficient and alternative-fuel vehicles.

FEMP provides guidance on and assistance for implementing and managing energy-efficient and alternative-fuel vehicle fleets. This includes helping Federal agencies meet new fleet management mandates, such as recent requirements for agencies to reduce petroleum consumption by 2% per year through fiscal year (FY) 2015 relative to a FY 2005 baseline and to increase alternative fuel use by 10% per year relative to the previous year.



The 2009 Earth Day theme showcases “New Energy for America” as a means to stimulate our economy, protect the environment, and increase energy independence

## Decision Support Services

### Complying with energy legislation and

**regulations:** FEMP regularly analyzes energy legislation and regulations to help Federal agencies comply with all applicable requirements.

This assistance is delivered through interagency coordination, development of guidance documents, and assistance with annual reporting requirements.

Executive Order (E.O.) 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, set new goals for the Federal Government, including a 30% reduction in energy intensity, a significant increase in the use of

renewable energy resources, and a 16% reduction in water consumption by 2015. The Energy Independence and Security Act (EISA) of 2007 codified the stricter goals of E.O. 13423 into statute.

To lead by example, DOE set aggressive goals in energy efficiency, renewable energy, and water conservation for its facilities to either meet or exceed Federal energy management legislation and mandates.

## Education and training on energy

**management:** Federal agencies learn to implement energy-saving strategies, gain recognition for outstanding achievements, and keep current on the government's progress in meeting energy management goals through FEMP training, services, and outreach. Programs include the FEMP Focus newsletter, the FEMP Web site, the EERE Information Center, “You Have the Power” awareness campaign, as well as training and events such as the annual GovEnergy conference. Recognition programs include the Federal Energy and Water Management Awards and the Presidential Awards for Leadership in Federal Energy Management, which have honored more than 1,000 Federal employees for outstanding initiative, perseverance, and creativity.

## For More Information

Contact the EERE Information Center 1-877-EERE-INF or 1-877-337-3463 or visit [www.femp.energy.gov](http://www.femp.energy.gov).



U.S. DEPARTMENT OF  
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Energy Efficiency &  
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