

# Charting a Course to Energy Independence

**Providence, RI**  
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# Mission Statement



**FEMP facilitates** the federal government's

implementation of sound, cost-effective energy

management & **investment practices** to enhance the

nation's energy security & environmental stewardship



# Federal Procurement of Energy-Efficient Products (EEP)



**Benefits**

**Requirements**



**Resources**



# EEP Procurement Benefits

- Help meet federal energy reduction goals
- Prevent pollution
- Encourage the EEP market
- Reduce operating costs





# Federal Sector Statistics

<b>Annual Statistics</b>	<b>Trillion BTUs</b>	<b>Million \$</b>
Energy Consumption	~ 400	~ 5,600
Purchases of Products	-	~ 4,000
Potential Savings from Procurement of EEP	~ 15	~ 210



# Policy Requirements

- Energy Policy Act of 2005
- Energy Independence & Security Act of 2007
- 10 CFR 436, Subpart C
- Federal Acquisition Regulations Part 23 & 52
- Executive Order 13423





# Energy Policy Act of 2005: Section 104

Agencies shall:

- buy only ENERGY STAR<sup>®</sup>-qualified or FEMP-designated products
- incorporate ENERGY STAR<sup>®</sup> and FEMP performance criteria into project specifications and contracts
- provide written justification for exception



# Energy Independence & Security Act of 2007: Section 524

- Agencies shall buy products with low standby
- DOE shall provide list of eligible products



**Standby Power  
Data Center**





# 10 CFR 436, Subpart C

- §436.40 – Purpose and scope
- §436.41 – Definitions
- §436.42 – Evaluation of life-cycle cost effectiveness
- §436.43 – Procurement planning



# Federal Acquisition Regulations

## Parts 23 & 52

- Agencies shall purchase ENERGY STAR<sup>®</sup>-qualified or FEMP-designated products
- Standard contract clause for all procurements





# Executive Order 13423

Includes procurement practices that incorporate sustainable environmental practices:

- biobased,
- environmentally preferable,
- energy-efficient,
- water-efficient, and
- recycled-content





# Purchasing Tools

- ENERGY STAR® and FEMP
  - Performance requirements
  - Model contract language
  - Energy cost calculators
  - Additional information
- Quantity Quotes
- Standby Power Data Center





# ENERGY STAR<sup>®</sup> and FEMP

Both programs:

- Analyze the market for energy-consuming products
- Identify efficient products in each product category
- Verify cost-effectiveness and market availability of qualifying products





# ENERGY STAR®

- Government backed symbol for energy efficiency
- Available from federal and commercial sources
- Label on product, packaging, or in manual





# FEMP Purchasing Specifications

# FEMP

## Federal Energy Management Program

FEMP Designated Product:  
**Commercial Boilers**

### Performance Requirement for Federal Purchases

Type	Rated Capacity (Btu/h)	Thermal Efficiency <sup>a</sup>
Gas / Water	300,000 - 10,000,000	80% E <sub>t</sub>
Gas / Steam	300,000 - 10,000,000	79% E <sub>t</sub>
#2 Oil / Water	300,000 - 10,000,000	83% E <sub>t</sub>
#2 Oil / Steam	300,000 -	

### Cost-Effectiveness Example (5,000,000 Btu/h Gas-fired Water Boiler)

Performance	Base Model	Required Level	Best Available <sup>a</sup>
Thermal Efficiency (E <sub>t</sub> )	78.0%	80.0%	86.5%
Annual Energy Use (therms)	96,200	93,700	86,700
Annual Energy Cost	\$57,700	\$56,250	\$52,000
Lifetime Energy Cost	\$856,000	\$835,000	\$775,000
Lifetime Energy Cost Savings	-	\$21,000	\$81,000



# Covered Products

## Federal Energy Management Program Energy-Efficient, Water Conserving and Low Standby Power Products

### Lighting:

Compact Fluorescent Lamps<sup>1,2</sup>  
Residential Light Fixtures<sup>1</sup>  
Fluorescent Lamps & Ballasts<sup>2</sup>  
Fluorescent Luminaires<sup>2</sup>  
Downlight Luminaires<sup>2</sup>  
Industrial Luminaires<sup>2</sup>  
Exit Signs<sup>1,2</sup>  
Ceiling Fans<sup>1</sup>

### Commercial & Industrial Equipment:

Unitary (Packaged) Air Conditioners<sup>1,2</sup>  
Air-Cooled Electric Chillers<sup>2</sup>  
Water-Cooled Electric Chillers<sup>2</sup>  
Air & Water-Source Heat Pumps<sup>2</sup>  
Ground-Source Heat Pumps<sup>2</sup>  
Commercial Boilers<sup>2</sup>  
Electric Motors<sup>2</sup>  
Distribution Transformers<sup>2</sup>

### Food Service Equipment:

Solid Door Refrigerators & Freezers<sup>1,2</sup>  
Gas Griddles<sup>2</sup>  
Fryers<sup>1,2</sup>  
Hot Food Holding Cabinets<sup>1,2</sup>  
Steam Cookers<sup>1,2</sup>  
Commercial Dishwashers<sup>1</sup>  
Beverage Vending Machines<sup>1,2</sup>  
Water Coolers<sup>1</sup>  
Ice Machines<sup>1,2</sup>  
Pre-Rinse Spray Valve<sup>2</sup>

### Office Equipment:

Desktop Computers<sup>1,4</sup>  
Computer Monitors<sup>1,4</sup>  
Laptop Computers<sup>1,4</sup>  
Docking Stations<sup>1,4</sup>  
Printers<sup>1,4</sup>  
Fax Machines<sup>1,4</sup>  
Copiers<sup>1,4</sup>  
Scanners<sup>1,4</sup>  
Multifunction Devices<sup>1,4</sup>  
Mailing Machines<sup>1</sup>  
External Power Adapters<sup>1</sup>

### Home Electronics:

Televisions (TV)<sup>1,4</sup>  
Video Cassette Recorders (VCR)<sup>1,4</sup>  
Digital Video Display (DVD) Players<sup>1,4</sup>  
Combination TV & VCR/DVD<sup>1,4</sup>  
Cordless Telephones<sup>1</sup>  
Answering Machines<sup>1</sup>  
Combination Telephone/Answering Machines<sup>1</sup>  
Home Audio<sup>1,4</sup>

### Appliances:

Refrigerators<sup>1,2</sup>  
Freezers<sup>1,2</sup>  
Residential Dishwashers<sup>1,2</sup>  
Clothes Washers<sup>1,2</sup>  
Room Air Conditioners<sup>1,2</sup>  
Dehumidifiers<sup>1</sup>  
Room Air Cleaners<sup>1,2</sup>  
Microwave Ovens<sup>4</sup>

### Residential Equipment:

Central Air Conditioners<sup>1,2</sup>  
Air-Source Heat Pumps<sup>1,2</sup>  
Ground-Source Heat Pumps<sup>1,2</sup>  
Gas Furnaces<sup>1,2</sup>  
Residential Boilers<sup>1</sup>  
Electric Water Heaters<sup>2</sup>  
Gas Water Heaters<sup>2</sup>  
Ventilation Fans<sup>1</sup>  
Programmable Thermostats<sup>1</sup>

### Plumbing:

Faucets<sup>2,3</sup>  
Showerheads<sup>2</sup>  
Urinals<sup>2</sup>  
High Efficiency Toilets<sup>3</sup>

### Building Envelope:

Residential Windows, Doors & Skylights<sup>1,2</sup>  
Roof Products<sup>1,2</sup>

### Legend:

1 = ENERGY STAR-qualified  
2 = FEMP-designated  
3 = WaterSense-labeled  
4 = Standby Power requirements

- Over 70 product types
- Residential
- Commercial
- Industrial
- Energy-efficient
- Water-efficient
- Low standby



# Additional Activities

- Listen to federal buyers to provide relevant information and assistance
- Work with GSA and DLA to improve labeling of products in federal supply systems
- Maintain current performance requirements
- Identify new efficiency opportunities





# Additional Tools

Quantity Quotes – [www.quantityquotes.net](http://www.quantityquotes.net)

- Procure bulk quantities of ENERGY STAR-qualified products
- Submit purchase requests
- Get multiple quotes from suppliers
- Negotiate discount prices





# Additional Tools

## Standby Power Data Center

- Find products with low standby power
- [www.eere.energy.gov/femp/technologies/standby\\_power.html](http://www.eere.energy.gov/femp/technologies/standby_power.html)



## Standby Power Data Center



# Program Contact Information

## ENERGY STAR Program

888-STAR-YES (888-782-7937)

[www.energystar.gov/products/](http://www.energystar.gov/products/)

## Federal Energy Management Program

800-363-3732

[www.eere.energy.gov/femp/procurement/](http://www.eere.energy.gov/femp/procurement/)



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